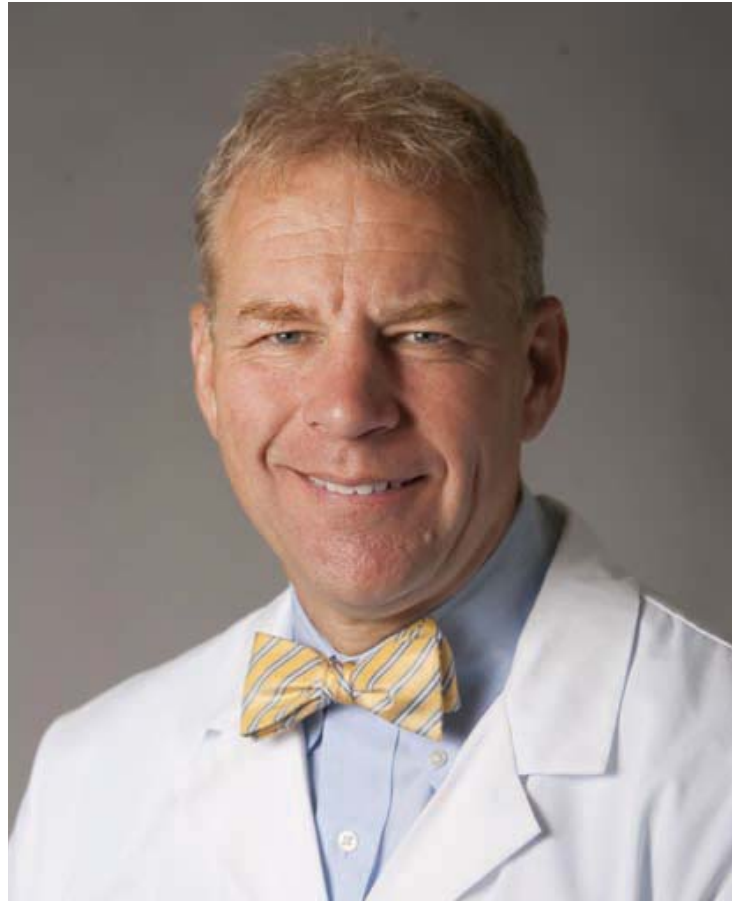


PROGRAM
FOR
THE ANNUAL MEETING
OF THE
New England Surgical Society

The Final Scientific Program, which begins on page 109, includes the abstracts of all accepted papers, brief reports, posters of distinction, and posters.

New England Surgical Society
Administrative Offices
500 Cummings Center, Suite 4400
Beverly, MA 01915

Tel: 978-927-8330
Email: admin@NESurgical.org
Website: NESurgical.org



RICHARD J. BARTH, JR., MD

Lebanon, New Hampshire

President, 2019

* These sections available on-site in Montreal, QC, Canada,
or by logging into the Members Only Area of the NESS Website
at nesurgical.org/MembersOnly.cgi.

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OFFICERS
NEW ENGLAND SURGICAL SOCIETY
2018–2019

President

Richard J. Barth, Jr., MD, Lebanon, New Hampshire

President-Elect

Walter E. Longo, MD, New Haven, Connecticut

Vice President

David E. Clark, MD, Portland, Maine

Secretary

James Whiting, MD, Portland, Maine

Treasurer

Peter J. Mazzaglia, MD, Providence, Rhode Island

Recorder

Kari Rosenkranz, MD, Lebanon, New Hampshire

Past President

Robert J. Touloukian, MD, New Haven, Connecticut

REPRESENTATIVES (with Dates of Retirement)

Kurt K. Rhynhart, MD (New Hampshire, 2019)

Edward C. Borrazzo, MD (Vermont, 2020)

Jeffrey L. Cohen, MD (Connecticut, 2021)

Giles F. Whalen, MD (Massachusetts, 2022)

M. Parker Roberts, III, MD (Maine, 2023)

Marlene Cutitar, MD (Rhode Island, 2024)

Representative to the American Board of Surgery

Anne C. Larkin, MD (2024)

Representative to the American College of Surgeons,

Board of Governors

David L. Berger, MD (2019)

Representative to the American College of Surgeons,

Advisory Council for General Surgery

Edward C. Borrazzo, MD (2020)

OFFICE OF THE EXECUTIVE DIRECTOR

500 Cummings Center, Suite 4400

Beverly, Massachusetts 01915

Telephone: (978) 927-8330

Facsimile: (978) 524-0498

E-Mail: admin@nesurgical.org

Web Site: nesurgical.org

COMMITTEES

NEW ENGLAND SURGICAL SOCIETY

NOMINATING COMMITTEE

David L. Berger, MD, Chair (2019)

Bruce J. Leavitt, MD (2020)

Robert J. Touloukian, MD (2021)

PROGRAM COMMITTEE

Matthew A. Conway, MD, Chair (Vermont, 2019)

Michael P. Vezeridis, MD (Rhode Island, 2020)

Peter S. Yoo, MD (Connecticut, 2021)

Ali Tavakkoli, MD (Massachusetts, 2022)

Baird Mallory, MD (Maine, 2023)

Christina V. Angeles, MD (New Hampshire, 2024)

Richard J. Barth, Jr., MD, President (2019)

Walter E. Longo, MD, President-Elect (2020)

James Whiting, MD, Secretary (2019)

Kari Rosenkranz, MD, Recorder (2019)

PUBLICATIONS COMMITTEE

Kari Rosenkranz, MD, Chair (2019)

Richard J. Barth, Jr., MD (2019)

Michael G. Caty, MD (2019)

David E. Clark, MD (2019)

Andrew J. Duffy, MD (2019)

Robert A. Fisher, MD (2020)

Anne C. Larkin, MD (2019)

Dougald C. MacGillivray, MD (2020)

Peter J. Mazzaglia, MD (2020)

David McAneny, MD (2020)

Thomas J. Miner, MD (2020)

Matthew A. Nehs, MD (2020)

Mitchell C. Norotsky, MD (2020)

Francis J. Podbielski, MD (2020)

John R. Romanelli, MD (2020)

Kevin M. Schuster, MD (2020)

Richard S. Swanson, MD (2019)

Giles F. Whalen, MD (2019)

Sandra L. Wong, MD (2020)

**GRADUATE MEDICAL EDUCATION &
CANDIDATE MEMBERSHIP COMMITTEE**

Walter E. Longo, MD, Chair (Connecticut, 2019)

Donald T. Hess, Jr., MD (Massachusetts, 2019)

Peter J. Mazzaglia, MD (Rhode Island, 2019)

Jesse S. Moore, MD (Vermont, 2019)

Kurt K. Rhynhart, MD (New Hampshire, 2019)

James Whiting, MD (Maine, 2019)

NEW MEMBERS COMMITTEE

Kurt K. Rhynhart, MD, Chair (New Hampshire, 2020)

Marlene Cutitar, MD (Rhode Island, 2021)

Peter S. Yoo, MD (Connecticut, 2022)

Carlos E. Marroquin, MD (Vermont, 2023)

Denise W. Gee, MD (Massachusetts, 2024)

Michelle E. Toder, MD (Maine, 2025)

ARCHIVES COMMITTEE

John P. Welch, MD, Chair (Connecticut, 2019)

James C. Hebert, MD (Vermont, 2020)

Richard H. Koehler, MD (Massachusetts, 2021)

David E. Clark, MD (Maine, 2022)

Thomas J. Miner, MD (Rhode Island, 2023)

Meredith J. Sorensen, MD (New Hampshire, 2024)

SCHOLARS FOUNDATION

BOARD OF DIRECTORS

Arlet G. Kurkchubasche, MD, President (2019) & RI Director (2019)

David McAneny, MD, Secretary and Treasurer (2019),
Massachusetts Director (2021)

Rocco Orlando, III, MD, Connecticut Director (2020)

Ronald F. Martin, MD, Maine Director (2022)

Christina V. Angeles, MD, New Hampshire Director (2023)

Catherine A. Schneider, MD, Vermont Director (2024)

Richard J. Barth, Jr., MD, Ex-officio (2019)

SCHOLARS RESEARCH GRANT REVIEWERS

Christina V. Angeles, MD (New Hampshire, 2019)

Jonathan Dreifus, MD (Maine, 2019)

Arlet G. Kurkchubasche, MD, (Rhode Island, 2019)

Alisa Savetamal, MD (Connecticut, 2019)

Catherine A. Schneider, MD (Vermont, 2019)

Michael V. Tirabassi, MD (Massachusetts, 2019)

FUTURE MEETINGS

2020 Annual Meeting, October 23–25, 2020

Gurney's Hotel, Newport, Rhode Island

2021 Annual Meeting, September 24–26, 2021

Foxwoods, Mashantucket, Connecticut

2022 Annual Meeting, September 16–18, 2022

Revere Hotel Boston Common, Boston, Massachusetts

LEARNING OBJECTIVES

At the end of this educational activity, participants will be able to . . .

- Better discuss the risks and benefits of surgical vs. nonoperative care strategies in appendicitis
- Better understand the importance of health maintenance among surgical trainees
- Discuss the long-term implications of postoperative narcotics prescribing on dependence risk
- Better understand the implications of trauma blood resuscitation protocols
- Analyze the use of ultrasound as an adjunct in clinical decision making across the spectrum of care
- Discuss advances in breast cancer surgery
- Describe the benefits and risks associated with hemi vs. total thyroidectomy in thyroid neoplasms
- Better understand predictors of choledocholithiasis
- Better understand outcome results following resection in pediatric Crohn's disease

CONTINUING MEDICAL EDUCATION CREDIT INFORMATION

Accreditation

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the American College of Surgeons and the New England Surgical Society. The American College of Surgeons is accredited by the ACCME to provide continuing medical education for physicians.

AMA PRA Category 1 Credits™

The American College of Surgeons designates this live activity for a maximum of 11.25 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.



AMERICAN COLLEGE OF SURGEONS
DIVISION OF EDUCATION

DISCLOSURE INFORMATION

In compliance with ACCME Accreditation Criteria, the American College of Surgeons, as the accredited provider of this activity, must ensure that anyone in a position to control the content of the educational activity has disclosed all relevant financial relationships with any commercial interest. All reported conflicts are managed by a designated official to ensure a bias-free presentation. Please see the insert to this program for the complete disclosure list.

AMERICANS WITH DISABILITIES ACT

If you require special accommodations to attend or participate in the CME activity, please provide information about your requirements to the *New England Surgical Society*, 500 Cummings Center, Suite 4400, Beverly, MA 01915; phone: (978) 927-8330; fax: (978) 524-0498; e-mail: meetings@nesurgical.org.

GENERAL INFORMATION/ ACKNOWLEDGMENTS

Registration Desk

The Registration Desk is located in the Ballroom Foyer during the following hours:

Friday, September 13, 9:00 am–5:00 pm

Saturday, September 14, 7:00 am–1:00 pm

Sunday, September 15, 7:00 am–11:00 am

Speaker Ready Room

Faculty and Authors are requested to present their PowerPoint presentation to the technician in the Speaker Ready Room, located in the Ballroom Foyer, upon arrival to the meeting, or at least 12 hours prior to the opening of the session in which they are scheduled to present. Single LCD projection (PowerPoint) from a single, dedicated PC or laptop will be provided. Individual laptop computers may not be used. All presentations must be submitted in PowerPoint format only, with a 16:9 slide size preferred. The Speaker Ready Room is open during the following hours:

Friday, September 13, 9:00 am–5:00 pm

Saturday, September 14, 7:00 am–1:00 pm

Sunday, September 15, 7:00 am–10:30 am

Member Business Meeting (*Members Only*)

On Sunday, September 15th, the Annual Business Meeting will be held from 7:30–8:15 am in the Salle De Bal Ballroom.

Welcome Reception

On Friday evening, September 13th, from 6:00–7:00 pm, there will be a Welcome Reception held in the Le Caf Conc Room of the hotel. Exhibitors are encouraged to attend this event. Badges will be required to attend the event.

Women in Surgery Pre-Reception

Join your fellow surgical female colleagues for a fun networking reception on Saturday, September 14th at 6:15 pm in the Mainsonneuve A Room. All are encouraged to attend.

President's Reception & Dinner

On Saturday, September 14th, the Society will hold its Annual President's Reception & Dinner. Dress is business attire, the reception will be held on the Ballroom Balcony and dinner will take place in the Grand Ballroom.

All registered physicians and spouses are required to wear badges to attend the event or present tickets if the event was purchased separately. Exhibitors may purchase additional tickets over and above their allotted two tickets. Additional tickets are available at the NESS Registration Desk.

Acknowledgments

Marketing & Exhibitor Support

The New England Surgical Society wishes to recognize and thank the following companies for their marketing support:

Ethicon

Takeda

Teleflex Medical

Tetra Phase Pharmaceuticals

The Exhibitor Program represents a valuable part of this meeting, and **the Society urges registrants to visit the exhibits during regularly scheduled breaks.**

Continental breakfast will be available on Saturday and Sunday, with continuous beverage service available during the scheduled Exhibit hours. Exhibits are located in Viger A-C Room on the lower level of the hotel, and are open during the following hours:

Friday, September 13, 12:00 pm–3:00 pm

Saturday, September 14, 7:00 am–10:45 am

Sunday, September 15, 7:00 am–10:00 am

PAST AND PRESENT OFFICERS OF THE NEW ENGLAND SURGICAL SOCIETY

PRESIDENTS

1916	Samuel J. Mixter, MD, Boston, Massachusetts
1917-19	John B. Wheeler, MD, Burlington, Vermont
1920	Homer Gage, MD, Worcester, Massachusetts
1921	John M. Gile, MD, Hanover, New Hampshire
1922	Charles A. Porter, MD, Boston, Massachusetts
1923	John F. Thompson, MD, Portland, Maine
1924	Fred B. Lund, MD, Boston, Massachusetts
1925	John W. Keefe, MD, Providence, Rhode Island
1926	William H. Bradford, MD, Portland, Maine
1927	Daniel F. Jones, MD, Boston, Massachusetts
1928	Robert B. Osgood, MD, Boston, Massachusetts
1929	Philemon E. Truesdale, MD, Fall River, Massachusetts
1930	David Cheever, MD, Boston, Massachusetts
1931	Alfred M. Rowley, MD, Hartford, Connecticut
1932	Frank H. Lahey, MD, Boston, Massachusetts
1933	Lyman Allen, MD, Burlington, Vermont
1934	Frederick B. Sweet, MD, Springfield, Massachusetts
1935	Peer P. Johnson, MD, Beverly, Massachusetts
1936	Daniel C. Patterson, MD, Bridgeport, Connecticut
1937	Lucius C. Kingman, MD, Providence, Rhode Island
1938	John M. Birnie, MD, Springfield, Massachusetts
1939	John Homans, MD, Boston, Massachusetts
1940	Carl M. Robinson, MD, Portland, Maine
1941	James B. Woodman, MD, Franklin, New Hampshire
1942-44	Walter G. Phippen, MD, Salem, Massachusetts
1945-46	James R. Miller, MD, West Hartford, Connecticut
1947	Thomas H. Lanman, MD, Boston, Massachusetts
1948	David W. Parker, MD, Manchester, New Hampshire
1949	Emery M. Porter, MD, Providence, Rhode Island
1950	Edward H. Risley, MD, Waterville, Maine
1951	W. Jason Mixter, MD, Boston, Massachusetts
1952	Charles P. Chandler, MD, Montpelier, Vermont
1953	John P. Bowler, MD, Hanover, New Hampshire
1954	Ashley W. Oughterson, MD, New Haven, Connecticut
1955	Irving J. Walker, MD, Boston, Massachusetts
1956	George W. Waterman, MD, Providence, Rhode Island
1957	Donald Munro, MD, Boston, Massachusetts
1958	Samuel R. Webber, MD, Calais, Maine
1959	Samuel F. Marshall, MD, Boston, Massachusetts
1960	Welles A. Standish, MD, Hartford, Connecticut
1961	Grantley W. Taylor, MD, Weston, Massachusetts
1962	M. Dawson Tyson, MD, Hanover, New Hampshire
1963	Leland S. McKittrick, MD, Boston, Massachusetts
1964	Albert G. Mackay, MD, Burlington, Vermont
1965	Francis A. Sutherland, MD, Torrington, Connecticut
1966	George R. Dunlop, MD, Worcester, Massachusetts
1967	Marshall K. Bartlett, MD, Boston, Massachusetts
1968	Mark Hayes, MD, New Haven, Connecticut

1969	Richard Warren, MD, Cambridge, Massachusetts
1970	Clinton R. Mullins, MD, Concord, New Hampshire
1971	Bentley P. Colcock, MD, Boston, Massachusetts
1972	William W. Babson, MD, Gloucester, Massachusetts
1973	J. Gordon Scannell, MD, Boston, Massachusetts
1974	Thomas Perry, Jr., MD, Providence, Rhode Island
1975	John J. Byrne, MD, Boston, Massachusetts
1976	Emerson H. Drake, MD, Portland, Maine
1977	Gordon A. Donaldson, MD, Boston, Massachusetts
1978	Frederick P. Ross, MD, Fitchburg, Massachusetts
1979	John R. Brooks, MD, Boston, Massachusetts
1980	John F. Reed, MD, Hartford, Connecticut
1981	Earle W. Wilkins, Jr., MD, Boston, Massachusetts
1982	Walter B. Crandell, MD, Hanover, New Hampshire
1983	Fiorindo A. Simeone, MD, Providence, Rhode Island
1984	William W.L. Glenn, MD, New Haven, Connecticut
1985	John W. Braasch, MD, Burlington, Massachusetts
1986	William V. McDermott, MD, Boston, Massachusetts
1987	Joseph E. Murray, MD, Wellesley Hills, Massachusetts
1988	Clement A. Hiebert, MD, Portland, Maine
1989	James H. Foster, MD, Farmington, Connecticut
1990	John F. Burke, MD, Boston, Massachusetts
1991	H. Brownell Wheeler, MD, Worcester, Massachusetts
1992	John H. Davis, MD, Burlington, Vermont
1993	W. Hardy Hendren, MD, Boston, Massachusetts
1994	Andrew L. Warshaw, MD, Boston, Massachusetts
1995	Robert W. Crichlow, MD, Lebanon, New Hampshire
1996	Blake Cady, MD, Boston, Massachusetts
1997	Paul Friedmann, MD, Springfield, Massachusetts
1998	Leslie W. Ottinger, MD, Boston, Massachusetts
1999	Peter J. Deckers, MD, Farmington, Connecticut
2000	Ashby C. Moncure, MD, Boston, Massachusetts
2001	H. David Crombie, MD, Hartford, Connecticut
2002	Roger S. Foster, Jr., MD, Shelburne, Vermont
2003	Albert W. Dibbins, MD, Portland, Maine
2004	Walter B. Goldfarb, MD, Portland, Maine
2005	A. Benedict Cosimi, MD, Boston, Massachusetts
2006	Robert M. Quinlan, MD, Worcester, Massachusetts
2007	John P. Welch, MD, Hartford, Connecticut
2008	Thomas A. Colacchio, MD, Lebanon, New Hampshire
2009	Francis D. Moore, Jr., MD, Boston, Massachusetts
2010	Patricia K. Donahoe, MD, Boston, Massachusetts
2011	James C. Hebert, MD, Burlington, Vermont
2012	Thomas F. Tracy, Jr., MD, Providence, Rhode Island
2013	Neil S. Yeston, MD, Hartford, Connecticut
2014	Frederick R. Radke, MD, Portland, Maine
2015	David L. Berger, MD, Boston, Massachusetts
2016	Michael J. Zinner, MD, Coral Gables, Florida
2017	Bruce J. Leavitt, MD, Burlington, Vermont
2018	Robert J. Touloukian, MD, New Haven, Connecticut

VICE-PRESIDENTS

1917	John B. Wheeler, MD, Burlington, Vermont
1918-20	Homer Gage, MD, Worcester, Massachusetts
1921	William L. Cousins, MD, Portland, Maine
1922	Seldom B. Overlock, MD, Pomfret, Connecticut
1923	Herbert L. Smith, MD, Nashua, New Hampshire
1924	Lyman Allen, MD, Burlington, Vermont
1925	Frederick B. Sweet, MD, Springfield, Massachusetts
1926	Alfred M. Rowley, MD, Hartford, Connecticut
1927	Ralph H. Seelye, MD, Springfield, Massachusetts
1928	William W. Townsend, MD, Burlington, Vermont
1929	George C. Wilkins, MD, Manchester, New Hampshire
1930	Willis E. Hartshorn, MD, New Haven, Connecticut
1931	Arthur T. Jones, MD, Providence, Rhode Island
1932	Thomas W. Luce, MD, Portsmouth, New Hampshire
1933	Carl M. Robinson, MD, Portland, Maine
1934	H. Gildersleeve Jarvis, MD, Hartford, Connecticut
1935	Channing Simmons, MD, Boston, Massachusetts
1936	William H. Townsend, MD, Burlington, Vermont
1937	David W. Parker, MD, Manchester, New Hampshire
1938	Walter G. Phippen, MD, Salem, Massachusetts
1939	Carl M. Robinson, MD, Portland, Maine
1940	James B. Woodman, MD, Franklin, New Hampshire
1941	George M. Sabin, MD, Burlington, Vermont
1942	Ernest L. Herk, MD, Worcester, Massachusetts
1943-44	Benjamin H. Alton, MD, Worcester, Massachusetts
1945-46	John H. Woodruff, MD, Barre, Vermont
1947	John P. Bowler, MD, Hanover, New Hampshire
1948	Edward R. Lampson, MD, Hartford, Connecticut
1949	Herbert A. Durfee, MD, Burlington, Vermont
1950	George M. Smith, MD, New Haven, Connecticut
1951	James W. Jameson, MD, Concord, New Hampshire
1952	Peirce Leavitt, MD, Brockton, Massachusetts
1953	Ernest M. Daland, MD, Boston, Massachusetts
1954	Stephen A. Cobb, MD, Sanford, Maine
1955	Frederick S. Hopkins, MD, Springfield, Massachusetts
1956	Thacher W. Worthen, MD, Hartford, Connecticut
1957	Charles C. Lund, MD, Boston, Massachusetts
1958	William J. German, MD, New Haven, Connecticut
1959	John W. Spellman, MD, Brookline, Massachusetts
1960	J. Murray Beardsley, MD, Providence, Rhode Island
1961	W. Fenn Hoyt, MD, Springfield, Massachusetts
1962	Philip H. Wheeler, MD, Brattleboro, Vermont
1963	Clinton R. Mullins, MD, Concord, New Hampshire
1964	Francis A. Sutherland, MD, Torrington, Connecticut
1965	Robert R. Baldrige, MD, Providence, Rhode Island
1966	John W. Strieder, MD, Newton, Massachusetts
1967	Thomas Perry, Jr., MD, Providence, Rhode Island
1968	N. William Wawro, MD, Hartford, Connecticut
1969	Howard Ulfelder, MD, Boston, Massachusetts
1970	R.M. Peardon Donaghy, MD, Burlington, Massachusetts
1971	Isaac M. Webber, MD, Portland, Maine
1972	Albert E. Herrmann, MD, Waterbury, Connecticut

1973	Walter B. Crandell, MD, White River Junction, Vermont
1974	Harold H. Hamilton, MD, Plymouth, Massachusetts
1975	Richard H. Thompson, MD, Salem, Massachusetts
1976	Radford C. Tanzer, MD, Hanover, New Hampshire
1977	Frank J. Lepreau, MD, Westport, Massachusetts
1978	William W.L. Glenn, MD, New Haven, Connecticut
1979	Charles F. Chandler, MD, Clinton, Massachusetts
1980	Fiorindo A. Simeone, MD, Providence, Rhode Island
1981	Lloyd Brown, MD, Blue Hills, Maine
1982	William T. Mosenthal, MD, Hanover, New Hampshire
1983	Chilton Crane, MD, Dover, Massachusetts
1984	Chester A. Wiese, Jr., MD, Hartford, Connecticut
1985	Robert W. Hopkins, MD, Providence, Rhode Island
1986	Clement A. Hiebert, MD, Portland, Maine
1987	H. Brownell Wheeler, MD, Worcester, Massachusetts
1988	Francis M. Woods, MD, Jaffrey Center, New Hampshire
1989	Ludwig J. Pyrttek, MD, Hartford, Connecticut
1990	James M. Shannon, MD, Marblehead, Massachusetts
1991	Charles L. Thayer, MD, Portsmouth, New Hampshire
1992	J. Robert Bowen, MD, Cumberland, Rhode Island
1993	C. Elton Cahow, MD, New Haven, Connecticut
1994	David B. Pilcher, MD, Burlington, Vermont
1995	Walter B. Goldfarb, MD, Portland, Maine
1996	Albert W. Dibbins, MD, Portland, Maine
1997	Eugene W. Grabowski, MD, Bennington, Vermont
1998	Parvis J. Sadighi, MD, Pittsfield, Massachusetts
1999	Peter B. Baute, MD, Warwick, Rhode Island
2000	Seth A. Resnicoff, MD, Concord, New Hampshire
2001	Barbara K. Kinder, MD, New Haven, Connecticut
2002	Jeremy R. Morton, MD, Portland, Maine
2003	Neil S. Yeston, MD, Hartford, Connecticut
2004	Nick P. Perencevich, MD, Concord, New Hampshire
2005	Robert J. Touloukian, MD, New Haven, Connecticut
2006	David W. Butsch, MD, Barre, Vermont
2007	Charles P. Shoemaker, Jr., MD, Newport, Rhode Island
2008	Jack M. Monchik, MD, Providence, Rhode Island
2009	Bruce J. Leavitt, MD, Burlington, Vermont
2010	Nicholas P.W. Coe, MD, Springfield, Massachusetts
2011	Lenworth M. Jacobs, Jr., MD, Hartford, Connecticut
2012	Michael R. Curci, MD, Cumberland, Maine
2013	Giles F. Whalen, MD, Worcester, Massachusetts
2014	Theresa A. Graves, MD, Providence, Rhode Island
2015	Michael P. Vezeridis, MD, Providence, Rhode Island
2016	Richard J. Barth, Jr., MD, Hanover, New Hampshire
2017	Anne C. Larkin, MD, Worcester, Massachusetts
2018	Richard S. Swanson, MD, Cambridge, Massachusetts

SECRETARIES

1917-24	Philemon E. Truesdale, MD, Fall River, Massachusetts
1925-27	Ernest A. Wells, MD, Hartford, Connecticut
1928-37	John M. Birnie, MD, Springfield, Massachusetts
1938-46	John F. Gile, MD, Hanover, New Hampshire
1947-50	Grantley W. Taylor, MD, Boston, Massachusetts
1951-53	J. Englebert Dunphy, MD, Boston, Massachusetts
1954-57	Richard Warren, MD, Boston, Massachusetts
1958-62	J. Gordon Scannell, MD, Boston, Massachusetts
1963-69	John R. Brooks, MD, Boston, Massachusetts
1970-73	Earle W. Wilkins, Jr., MD, Boston, Massachusetts
1974-78	John W. Braasch, MD, Boston, Massachusetts
1979-82	Richard E. Wilson, MD, Boston, Massachusetts
1983-87	James H. Foster, MD, Farmington, Connecticut
1988-93	Robert W. Crichlow, MD, Hanover, New Hampshire
1994-98	Ashby C. Moncure, MD, Boston, Massachusetts
1999-2003	John P. Welch, MD, Hartford, Connecticut
2004-2005	Frederick H. Bagley, MD, Rutland, Vermont
2006-2010	Thomas F. Tracy, Jr., MD, Providence, Rhode Island
2010-2014	Neil Hyman, MD, Burlington, Vermont
2015-2018	David E. Clark, MD, Portland, Maine

TREASURERS

1917-20	Philemon E. Truesdale, MD, Fall River, Massachusetts
1921-34	Peer P. Johnson, MD, Beverly, Massachusetts
1935-38	James R. Miller, MD, Hartford, Connecticut
1939-51	Clinton D. Deming, MD, Hartford, Connecticut
1952-58	Welles A. Standish, MD, Hartford, Connecticut
1959-60	Edward J. Ottenheimer, MD, Willimantic, Connecticut
1961-66	Egbert M. Andrews, MD, Hartford, Connecticut
1967-74	Emerson H. Drake, MD, Portland, Maine
1975-77	Douglas A. Farmer, MD, New Haven, Connecticut
1978-82	H. Brownell Wheeler, MD, Worcester, Massachusetts
1983-86	J. Robert Bowen, MD, Providence, Rhode Island
1987-89	Roger S. Foster, MD, Burlington, Vermont
1990-95	Paul Friedmann, MD, Springfield, Massachusetts
1996-97	Peter J. Deckers, MD, Farmington, Connecticut
1997-2002	Robert M. Quinlan, MD, Worcester, Massachusetts
2003-2008	Nicholas P.W. Coe, MD, Springfield, Massachusetts
2009-2013	Victor E. Pricolo, MD, Providence, Rhode Island
2014-2018	John E. Sutton, Jr., MD, Redding, Connecticut

RECORDERS

1922-23	John Bapst Blake, MD, Boston, Massachusetts
1924-36	Walter G. Phippen, MD, Salem, Massachusetts
1937-41	Thomas H. Lanman, MD, Boston, Massachusetts
1942	Henry H. Lanman, MD, Boston, Massachusetts
1942	A. William Reggio, MD, Boston, Massachusetts, pro tempore
1943-46	Ernest M. Daland, MD, Boston, Massachusetts
1947-51	Franklin G. Balch, Jr., MD, Boston, Massachusetts
1952-59	Bentley P. Colcock, MD, Boston, Massachusetts
1960-70	John J. Byrne, MD, Boston, Massachusetts
1971-76	Donald C. Nabseth, MD, Jamaica Plain, Massachusetts
1977-82	James H. Foster, MD, Farmington, Connecticut
1983-88	John F. Burke, MD, Boston, Massachusetts
1989-94	Blake Cady, MD, Boston, Massachusetts
1995-99	A. Benedict Cosimi, MD, Boston, Massachusetts
2000-2004	Thomas A. Colacchio, MD, Lebanon, New Hampshire
2005-2009	Neil S. Yeston, MD, Hartford, Connecticut
2010-2015	Richard J. Barth, Jr., MD, Lebanon, New Hampshire
2015-2018	Walter E. Longo, MD, New Haven, Connecticut

PAST MEETINGS OF THE NEW ENGLAND SURGICAL SOCIETY

1916	Boston, Massachusetts
1917	No Meeting
1918	No Meeting
1919	Boston, Massachusetts
1920	Providence, Rhode Island
1921	Worcester, Massachusetts
1922	Burlington, Vermont
1923	Boston, Massachusetts
1924	Hartford, Connecticut
1925	Springfield, Massachusetts
1926	Boston, Massachusetts
1927	Manchester, New Hampshire
1928	New Haven, Connecticut
1929	Providence, Rhode Island, and Fall River, Massachusetts
1930	Boston, Massachusetts
1931	Portland, Maine
1932	Hartford, Connecticut
1933	Boston, Massachusetts
1934	Burlington, Vermont
1935	Manchester, New Hampshire
1936	Bridgeport, Connecticut
1937	Providence, Rhode Island
1938	Boston, Massachusetts
1939	Beverly/Salem, Massachusetts
1940	Poland Springs House, Poland Springs, Maine
1941	Hanover, New Hampshire
1942	No Meeting
1943	No Meeting
1944	Boston, Massachusetts
1945	Boston, Massachusetts
1946	Worcester, Massachusetts
1947	Providence, Rhode Island
1948	New Haven, Connecticut
1949	Mount Washington Hotel, Bretton Woods, New Hampshire
1950	Basin Harbor Club, Vergennes, Vermont
1951	York Harbor, Maine
1952	Red Lion Inn, Stockbridge, Massachusetts
1953	Ocean House, Watch Hill, Rhode Island
1954	Mount Washington Hotel, Bretton Woods, New Hampshire
1955	Mount Washington Hotel, Bretton Woods, New Hampshire
1956	Poland Springs House, Poland Springs, Maine
1957	Wentworth-by-the-Sea, Portsmouth, New Hampshire
1958	Poland Springs House, Poland Springs, Maine
1959	Wentworth-by-the-Sea, Portsmouth, New Hampshire
1960	Equinox House, Manchester, Vermont
1961	Wentworth-by-the-Sea, Portsmouth, New Hampshire
1962	Equinox House, Manchester, Vermont
1963	Wentworth-by-the-Sea, Portsmouth, New Hampshire
1964	Poland Springs House, Poland Springs, Maine
1965	The Mountain View House, Whitefield, New Hampshire
1966	Wentworth-by-the-Sea, Portsmouth, New Hampshire

1967	The Mountain View House, Whitefield, New Hampshire
1968	The Belmont Hotel, West Harwich, Massachusetts
1969	Wentworth-by-the-Sea, Portsmouth, New Hampshire
1970	The Belmont Hotel, West Harwich, Massachusetts
1971	Wentworth-by-the-Sea, Portsmouth, New Hampshire
1972	The Mountain View House, Whitefield, New Hampshire
1973	Wentworth-by-the-Sea, Portsmouth, New Hampshire
1974	Waterville Valley Resort, Waterville Valley, New Hampshire
1975	Wentworth-by-the-Sea, Portsmouth, New Hampshire
1976	The Mountain View House, Whitefield, New Hampshire
1977	Wentworth-by-the-Sea, Portsmouth, New Hampshire
1978	The Balsams Grand Resort, Dixville Notch, New Hampshire
1979	The Mountain View House, Whitefield, New Hampshire
1980	Wentworth-by-the-Sea, Portsmouth, New Hampshire
1981	The Balsams Grand Resort, Dixville Notch, New Hampshire
1982	Mount Washington Hotel, Bretton Woods, New Hampshire
1983	Mount Washington Hotel, Bretton Woods, New Hampshire
1984	The Balsams Grand Resort, Dixville Notch, New Hampshire
1985	The Balsams Grand Resort, Dixville Notch, New Hampshire
1986	The Balsams Grand Resort, Dixville Notch, New Hampshire
1987	Mount Washington Hotel, Bretton Woods, New Hampshire
1988	The Bonaventure Hilton Hotel, Montreal, Quebec, Canada
1989	Mount Washington Hotel, Bretton Woods, New Hampshire
1990	Newport Marriott Hotel, Newport, Rhode Island
1991	Le Chateau Frontenac, Quebec City, Quebec, Canada
1992	The Balsams Grand Resort, Dixville Notch, New Hampshire
1993	The Charles Hotel, Cambridge, Massachusetts
1994	Newport Marriott Hotel, Newport, Rhode Island
1995	Westin Mont-Royal Hotel, Montreal, Quebec, Canada
1996	The Balsams Grand Resort, Dixville Notch, New Hampshire
1997	The Sagamore Resort, Lake George at Bolton Landing, New York
1998	The Four Seasons Hotel, Toronto, Ontario, Canada
1999	The Doubletree Islander, Newport, Rhode Island
2000	The Fairmont Copley Plaza Hotel, Boston, Massachusetts
2001	The Westin Hotel, Providence, Rhode Island
2002	The Balsams Grand Resort, Dixville Notch, New Hampshire
2003	The Hyatt Regency Newport, Newport, Rhode Island
2004	The Hilton Bonaventure, Montreal, Quebec, Canada
2005	Mount Washington Resort, Bretton Woods, New Hampshire
2006	Mystic Marriott, Groton, Connecticut
2007	Hilton Burlington, Burlington, Vermont
2008	Seaport Hotel and World Trade Center, Boston, Massachusetts
2009	Hyatt Regency Hotel & Spa, Newport, Rhode Island
2010	Saratoga Hilton Hotel, Saratoga Springs, New York
2011	Omni Mount Washington Hotel, Bretton Woods, New Hampshire
2012	Samoset Hotel, Rockport, Maine
2013	Marriott Hartford Downtown, Hartford, Connecticut
2014	Stowe Mountain Lodge, Stowe, Vermont
2015	Hyatt Regency, Newport, Rhode Island
2016	Seaport Hotel, Boston, Massachusetts
2017	Omni Mount Washington Hotel, Bretton Woods, New Hampshire
2018	Westin Portland Harborview, Portland, Maine

NEW ENGLAND SURGICAL SOCIETY CONSTITUTION AND BY-LAWS ADOPTED 1961

(Amended through November 2015)

The Society is constituted for the purpose of promoting the science of surgery and kindred arts and sciences and the welfare of the profession of surgery in New England; to hold professional and social meetings and to publish transactions.

ARTICLE I

The name by which the society shall be known is the NEW ENGLAND SURGICAL SOCIETY.

ARTICLE II

MEMBERSHIP

Section a. There shall be six types of membership: active, senior, honorary, associate, candidate, and affiliate.

Section b. Active membership shall be limited to 425 members. No more than 35 new Active members shall be elected in any single year. Honorary membership shall be limited to 5 members. There shall be no limitation for senior, associate, candidate, or affiliate members.

Section c. Qualifications for active membership: Applicants for Active Membership shall be residents of the New England States. Fellowship in the American College of Surgeons or certification by an ABMS surgical specialty board and an unrestricted license (or an inactive license due to retirement) to practice medicine and surgery in the state in which the member practices or resides, are prerequisites for membership.

Section d. Qualifications for candidate membership: Applicants for Candidate Membership shall be matched or enrolled in a surgical residency or fellowship education program within the New England States. Individuals who have completed their education in one of the above programs and are in the process of acquiring either Fellowship in the American College of Surgeons or certification by an ABMS surgical specialty board are also eligible to apply for Candidate membership. Candidate members shall have no rights to vote or hold office. Candidate membership shall end either when the Candidate becomes eligible for Active or Affiliate membership, at which time s/he is invited to apply for Active or Affiliate membership, or five years after completion of education in one of the above programs, whichever comes first.

Section e. Qualifications for affiliate membership for surgeons from geographic areas outside the New England states: Applicants for Affiliate Membership shall reside outside of the New England States and within either the United States or Canada. Prerequisites for membership include: Fellowship in the American College of Surgeons, fellowship in the Royal College of Physicians and Surgeons of Canada, or certification by an ABMS surgical specialty board or Canadian equivalent; and an unrestricted license (or an inactive license due to retirement) to practice medicine and surgery in the state or province in which the member practices or resides. Affiliate members have the right to vote but may not hold office. Upon taking up residence in the New England States, an affiliate member shall ipso facto transfer to active membership, providing s/he meets all qualifications for active membership.

Section f. Nominations for membership in the Society may be submitted by any Active or Senior member. On request to the Secretary of the Society, an appropriate application form and a statement for prospective applicants shall be made available to any Active or Senior member of the Society who wishes to serve as the primary sponsor of an applicant. It shall be the responsibility of the primary sponsor to review with the applicant the statement adopted by the Executive Committee and to insure that the applicant understands the purpose of the Society and intends to support them. For active, senior, and affiliate membership applicants, it shall be the responsibility of the primary sponsor to complete the application form, and it shall be the responsibility of the co-sponsors to write letters of support, which shall be submitted with the application form to the Secretary of the Society prior to January 1st of the calendar year in which the application is to be considered. It shall be the responsibility of each state representative to review the active, senior, and affiliate application forms of applicants from his or her state, to seek advice from other members of the state about the proposed applicant, and to present the composite recommendations from members of that state for consideration by the Executive Committee at its first meeting after January 1st. For candidate membership applicants, completed applications can be submitted at any time.

Section g. Procedure for nomination: The Secretary will furnish each member of the Society with copies of the master list. Election of active, senior, and affiliate applicants whose names have been selected from the master list by the Executive Committee shall be by vote of all voting members of the entire Society. The Secretary will distribute voting ballots to all voting members with valid email addresses. Completed ballots must be returned to the Society by April 15th to be considered eligible. The Executive Committee shall review the ballots received by April 15th and elect those active, senior, and affiliate applicants selected by the membership ballot vote. Twenty negative votes shall exclude an applicant from membership. For candidate membership applicants, the Graduate Medical Education & Candidate Membership Committee shall vet applicants as needed

throughout the year; if the candidate applicant is in good standing in his/her program and approved by said committee, then s/he shall be elected to candidate membership.

Section h. An active, senior, or affiliate applicant's name will remain on the master list and will automatically come up for consideration by the Executive Committee each year for a period of three years after which time if the applicant has not been selected for presentation for vote, his/her name will be deleted. The names of applicants deleted from the master list may be proposed a second time after an interval of one year. No applicant shall be proposed more than twice.

Section i. Honorary members shall be distinguished individuals in the field of surgery or the related sciences and shall be proposed and voted on by the Executive Committee. Honorary members shall not pay dues, nor shall they have the right to vote or hold office.

Section j. Senior membership will be automatic for all active, associate, and affiliate members the year following the year in which they reach the age of 65 prior to September 1st. Senior members shall be exempt from dues; furthermore, Senior members who reside within the New England States shall have all other rights and privileges of the Society including the right to vote and hold office.

Section k. Associate membership shall be accorded to active members upon change of residence to regions outside of the New England States. Associate members are exempt from dues and may not vote or hold office. Upon again taking up residence in the New England States, however, associate members shall ipso facto revert to active membership.

Section l. Any Active or Affiliate member who fails to actively participate in the Society for three years shall be automatically dropped from the membership. Active participation can be met by: 1) attendance at an annual meeting; 2) inclusion as an author of an abstract submitted for consideration for presentation at the annual meeting; 3) attendance at a Spring Resident research forum; 4) inclusion as an author of an abstract submitted for consideration for presentation at a Spring Resident research forum; or 5) participation in committees and/or performance of official business sanctioned by the Executive Committee.

Section m. Application blanks may be sent only to members for proposal of names for membership.

ARTICLE III

OFFICERS

Section a. The officers of the Society shall be a President, a President-Elect, a Vice-President, a Secretary, a Treasurer, and a Recorder. If a vacancy occurs in the Office of the President, the duties of the President shall be assumed by the

President-Elect for the remainder of the vacated term. The President-Elect may ask the Nominating Committee to select both a President for the succeeding year and a new President-Elect at the subsequent Annual Meeting of the Society. If the President becomes disabled, the duties of the President may be assumed by the President-Elect until the period of disability is over. If a vacancy occurs in the Office of President-Elect, the President may ask the Nominating Committee to select a new President-Elect and succeeding President-Elect at the next Annual Meeting of the Society.

If a vacancy or disability occurs in the Offices of Secretary, Recorder, or Treasurer the President may assume the responsibility of the Office until the Nominating Committee chooses a new Secretary, Recorder, or Treasurer at the next Annual Meeting of the Society. The President may ask the President-Elect to assume a portion of the responsibility by mutual agreement.

Section b. The officers of the Society shall hold office for one year or until their successors are elected or appointed.

Section c. The Executive Committee shall consist of the officers of the Society, the representative of the Society on the Board of Governors of the American College of Surgeons, the representative of the Society on the Advisory Council for Surgery of the American College of Surgeons, the designated representative of the Society on the American Board of Surgery, and six State Representatives, one from each of the New England States. The representative of the Society on the Board of Governors of the American College of Surgeons, and on the American Board of Surgery shall be nominated by the Executive Committee and approved by the Society. Membership on the Executive Committee shall be contingent upon the final acceptance of these nominees by the American College of Surgeons and the American Board of Surgery.

Section d. The Recorder shall act as the Necrologist of the Society. He shall obtain from the State representatives to the Executive Committee the names of all members who have died during the year and present them at the annual meeting. He shall be responsible for obtaining obituaries for inclusion in the *Transactions* of that year.

The Recorder shall have the proceedings of the annual business meeting and all discussions of papers presented at the scientific meeting properly recorded. He shall be responsible for having the *Transactions* published annually in such manner as the Society deems best.

Section e. Within a period of two months preceding the annual meeting, the President shall appoint an Auditing Committee of two, who shall audit the Treasurer's account for the year and report to the Society at its annual meeting.

ARTICLE IV

ELECTION OF OFFICERS

The Officers shall be elected by ballot at the Annual Meeting. Within a period of two months preceding the Annual Meeting the President shall appoint a Nominating Committee which shall recommend to the Secretary a list of nominees to be placed before the Society for election at the Annual Meeting. The Nominating Committee shall be comprised of the three most immediate past Presidents currently residing in New England. The most senior of the three (in terms of service to the Society as President) shall serve as Chairman.

ARTICLE V

FEES AND DUES

The dues shall be determined annually by the Executive Committee. Any member who is in arrears in the payment of dues for two consecutive years shall, after due notice of the Treasurer, be dropped from the Society. The fiscal year of the Society shall end December 31.

ARTICLE VI

MEETINGS

The Society shall meet annually in the autumn. The time and place shall be determined by the Executive Committee. Application forms for new membership to the Society shall be distributed at the annual meeting. Special meetings may be held when ordered by the Executive Committee.

ARTICLE VII

PROGRAMS

The programs of all meetings shall be under control of the Executive Committee. All papers and discussions presented before the Society at its regular meetings shall become its property for publication in the *Transactions* and the official organ of the Society.

ARTICLE VIII

ARCHIVES

The archives of the Society will be assembled, maintained, and collated by the Archives Committee. The Chair of the Committee shall be appointed by the Executive Committee. Members of the Committee shall be chosen by the Chair. The Committee will prepare anniversary histories of the Society as appropriate.

ARTICLE IX

AMENDMENTS

The By-Laws may be repealed or amended and new By-Laws enacted by a two-thirds electronic vote of the membership within 30 days following the Annual Meeting of the Society when it has been proposed provided that the proposed alteration has been approved by the Executive Committee and electronically circulated to the Society at least 60 days preceding the vote.

ARTICLE X

DISTRIBUTION UPON DISSOLUTION

Upon the dissolution, termination, or cessation of the activities of the Society, any assets remaining in the name of the Society, after all obligations of the Society have been either paid or provided for, shall be distributed to an organization described in Section 501(c) (6) of the Internal Revenue Code of 1954, as amended, and the identity of such an organization shall be determined by a majority of the Executive Committee of the Society then in office. No amounts shall accrue to the benefit of the members or the officers of the Society.

INDOCTRINATION OF NEW MEMBERS BY THE PRESIDENT

This charge is read by the President to the new members of the New England Surgical Society at the time of their induction. It is periodically reviewed and updated by the Executive Committee. The current statement was approved by the Executive Committee at its meeting on June 19, 1991.

As President of the New England Surgical Society, it is my pleasure to welcome you into active membership and to stress the obligations that you assume by such membership.

The New England Surgical Society was founded on February 5, 1916, by eighteen surgeons who were noted for their strength of character, as well as for their professional leadership. They limited the number of members in the Society solely to promote closer communication. Since its inception, the Society has provided a scientific forum and a meeting place for leaders in New England surgery, both from academic and community practice. The Society strives to increase knowledge of the art and science of surgery and to promote the welfare of surgical patients. It provides an environment where members may develop friendships with other New England surgeons who share their high professional standards. Membership is limited to surgeons who are not only leaders in their field, but who are also characterized by honesty, kindness, tolerance, equanimity, good manners and social consciousness. The Society expects its members to reflect these values in their practice and in their community. Members are also expected to support the Society through active participation in its meetings. It is in this spirit that we welcome each of you into our membership. We look forward to your own contributions to a proud tradition.

If you will exemplify the high ethical and professional standards of the New England Surgical Society in your practice of surgery, and if you will participate actively in the future meetings of this Society, please respond by saying, "I will."

Since you have indicated your intent to become active and worthy members of the New England Surgical Society, and since you have been duly elected to membership therein, it is now my pleasure to present you each with a duly inscribed certificate of membership.

I now call upon the current members of the New England Surgical Society to rise and join me in welcoming our new colleagues.

REPORT OF THE SECRETARY

The ninety-ninth Meeting of the New England Surgical Society took place at the Westin Portland Harborview in Portland, Maine, September 21–23, 2018. The meeting attracted 161 members (including two Candidate members), 31 guest physicians, and 60 non-member residents, and was enhanced by the presence of 69 accompanying guests of the Society.

The academic program was thoughtfully prepared by the Program Committee under the direction of Dr. Kari Rosenkranz. One hundred thirty-two abstracts had been submitted and 25 were selected for presentation in the traditional format. Thirteen additional papers were presented as three-minute presentations with directed discussion, and the Paper of the Year Awards was presented. There were also an outstanding panel discussion entitled, “New Frontiers in Surgical Oncology,” and two breakfast sessions: “Navigating the Medicolegal Climate for Residents and Young Surgeons”; and “Posters of Distinction Presentations,” which vied for the Best Poster Award. Fifty-two posters were reviewed, including all four Research Day winners.

The Meeting’s Samuel Jason Mixter Lecture by Dr. Keith D. Lillemoe was titled, “Pancreatic Cancer: Current Outcomes—Is There Hope on the Horizon?”, and Dr. Robert J. Touloukian gave his Presidential Address, titled “The Surgical Mentorship of John Homans by Harvey Cushing: The Untold Story.”

The Society’s Executive Committee continues to meet three times a year, in September at the Annual Meeting, in January via conference call, and in May in Waltham, Massachusetts. The Committee carries out the business of the Society, coordinating the acceptance of new members, overseeing the finances, and working with the Program Committee. As of this writing, there are 350 Active, 397 Senior, 78 Associate, 32 Candidate, and 2 Honorary Members, which includes 17 Active members newly elected this year.

The NESS continues its support of the Annual Research Presentation Day in the spring, where residents from all the teaching programs in New England present their work.

Next year’s Annual Meeting of the Society will be:

2020 Annual Meeting, October 23–25, 2020
Gurney’s Hotel, Newport, Rhode Island

The Executive Committee is most grateful to Dr. Richard J. Barth, Jr. for his enthusiastic leadership as President through the past year, and looks forward to working with his successor, Dr. Walter E. Longo.

Respectfully submitted,
James Whiting, MD
Secretary

REPORT OF THE REPRESENTATIVE TO THE AMERICAN BOARD OF SURGERY

1. Meeting

The American Board of Surgery (ABS) met for its June board meeting at the Sofitel Hotel Philadelphia, in Philadelphia, PA, under the direction of chair Spence M. Taylor, MD.

2. Continuous Certification Process

The Continuous Certification Assessments (CCAs) in pediatric surgery, vascular surgery, and surgical critical care are on target to be offered to diplomates for the first time in 2019. The window for all CCAs for 2019 is September 6 to November 4.

3. New Board Members

New directors elected in January attended the June meeting for orientation. Those new members and their sponsoring organizations are as follows:

Dr. Peter Angelos – Southwestern Surgical Congress

Dr. Rabih A. Chaer – Society for Vascular Surgery

Dr. Joseph T. Jenkins – At Large

Dr. Kelly M. McMasters – Southern Surgical Association

Dr. John Mitchell – American Board of Thoracic Surgery

Dr. Kim M. Olthoff – American Surgical Association

Dr. Allison J. Robinson – At Large

Dr. Jennifer F. Tseng – Society of University Surgeons

4. Focused Practice Designations

The application for a focused practice designation (FPO) in bariatric surgery has been submitted and is in process with the American Board of Medical Specialties (ABMS). The next step in that approval process will be review by its committee on certification (COCERT).

A meeting between the ABS and representatives from the American Board of Otolaryngology-Head and Neck Surgery (ABOHNS) to continue to discuss the proposed FPO in endocrine surgery will take place in August 2019 in Chicago.

5. Budget

The directors reviewed five-year financial projections and approved the 2019–2020 budget.

6. Alternative Pathway to Certification for Internationally Trained Surgeons

The directors discussed an alternative pathway to certification for internationally trained surgeons, developed by the Board’s Credentials and Diplomates’ Committees. After minor revisions this pathway was approved, and details regarding requirements for surgeons to apply to the ABS via this pathway will be available on the Board’s website (www.absurgery.org) by the end of 2019.

7. SCORE

The directors voted to merge SCORE, Inc., formerly a separate corporation, fully into the ABS.

8. Governance Redesign

The directors discussed three resolutions that had been proposed by the governance redesign task force: first, to approve the new Bylaws to replace the current ABS Bylaws effective July 31, 2019; second, to charge the Executive Director to draft a set of policies and procedures defining the purpose, function, membership, and name change (if any) of the Council Member group and Committees as described in the Bylaws, which will be ratified by the Council Member group and Committees and presented to the ABS Directors’ at their fall 2019 meeting; and third, to approve the new slate of proposed ABS directors. All three resolutions were approved by the directors.

9. Organizational Goals

The directors voted to approve the organizational goals for the Board for 2019–2020.

Summary of American Board of Surgery Examinations: 2018–2019

Summary data of all 2018–2019 ABS examinations are presented in Table 1. A total of 14174 examinees participated in these examinations throughout the year. Excluding the In-Training Examinations, there were 3885 American Board of Surgery examinees. The total number of examinees is generally similar to most prior years. The number of In-Training examinees continues to increase.

Table 1: Summary of 2018–2019 Examinations

Examination	# of Examinees	# Pass	# Fail	Pass Rate	Fail Rate
Qualifying	1320	1247	73	94.5%	5.5%
Vascular Surgery QE	171	154	17	90.1%	9.9%
Vascular Surgery MOC	115	105	10	91.3%	8.7%
Surgical Critical Care	260	254	6	97.7%	2.3%
SCC Moc	81	66	15	81.5%	18.5%
CGSO QE	54	51	3	94.4%	5.6%
Pediatric Surgery QE	44	37	7	84.1%	15.9%
Pediatric Surgery MOC	51	42	9	82.4%	17.6%
Hand Surgery	7	5	2	71.4%	28.6%
Hand Surgery MOC	6	5	1	83.3%	16.7%
Hospice & Palliative Care	8	8	0	100%	0%
Hospice & Palliative Care MOC	6	6	0	100%	0%
Certifying	1466	1143	323	78%	22%
Vascular Surgery CE	179	169	10	94.4%	5.6%
Pediatric Surgery CE	48	39	9	81.2%	18.8%
CGSO CE	69	49	20	71%	29%
ITE	9043				
ITE – International	324				—
ITE – D.O.	184				—
Vascular Surgery ITE	626				
Pediatric Surgery ITE	112				

TOTAL EXAMINEES = 14174

TOTAL EXAMINEES excluding ITE exams = 3885

NOTE: ITE exams do not have pass/fail outcomes

Respectfully Submitted,
 Anne C. Larkin, MD
 NESS Representative, American Board of Surgery

REPORT OF THE REPRESENTATIVE TO THE BOARD OF GOVERNORS OF THE AMERICAN COLLEGE OF SURGEONS

The American College of Surgeons (ACS) Board of Governors Newsletter, *The Cutting Edge*, covers ACS news and events, special human interest stories, and Pillar updates; what follows are summaries of some recent Board activity.

Advocacy and Health Policy Pillar

The Advocacy Pillar continues to focus on myriad health care policy and advocacy issues at the local, state, and national level. The two workgroups work to align closely with the DAHP to facilitate communication and coordinate efforts.

Health Policy and Advocacy Workgroup

This workgroup seeks to advance issues that ACS members have at the state or specialty society level by maximizing the relationship with College leadership in response to these regulatory and legislative initiatives. Another important role of the workgroup is collaborating with ACS leadership and Regents to ensure that Fellows' perspectives are used to formulate College policies and positions.

Grassroots Advocacy Engagement Workgroup

The purpose of the Grassroots Advocacy Engagement Workgroup is to enhance bidirectional communication between the ACS leadership and Fellows regarding important legislative and regulatory issues that affect surgical patients, surgeons and their practices, and society.

Collaborative efforts with the Young Fellows Association (YFA) focus on the development of a Clinical Congress 2019 session proposal on surgical autonomy in relationship to reducing administrative burdens. Governors serve on the following health policy and advocacy-related ACS committees: ACSPA-SurgeonsPAC (ACS Professional Association Political Action Committee); General Surgery Coding and Reimbursement Committee; Health Policy and Advocacy Group; Health Policy Advisory Council; and Legislative Committee.

Communications Pillar

The Communications Pillar continues to focus on the bidirectional communication of the ACS, from the Fellows through the B/G to the Regents and likewise from the Regents through the B/G to the Fellows. This mission is accomplished via the Newsletter and Survey Workgroups.

Newsletter Workgroup

The Newsletter Workgroup produces *The Cutting Edge: News and Notes from the Board of Governors*, the biannual, fully electronic, mobile-friendly newsletter of the B/G. Newsletter stories range from College business to human interest stories. Workgroup members increase the readership of *The Cutting Edge* by posting feature articles in the B/R and B/G (BoR/BoG) ACS Community. Additional efforts include BoR/BoG ACS Community posts by B/G Workgroup Chairs and Vice-Chairs on their respective projects and activities. These posts help foster dialogue and discussion of important topics and activities. Past issues of *The Cutting Edge* are available on the ACS website.

Survey Workgroup

The Survey Workgroup analyzed the results of the 2018 B/G Annual Survey. In addition to routine demographic data points, survey topics included gender inequality and harassment, burnout, disruptive physicians, and impaired physicians.

Education Pillar

As the result of the work of the Governors on the Education Pillar Workgroups, the ACS has advanced a number of initiatives this past year.

Continuing Education Workgroup

The members of the Continuing Education Workgroup have continued to collaborate with the Division of Education to provide guidance in development of the Learning Content Management System that will help Fellows navigate the numerous educational offerings of the ACS as they work to maintain state licensure and specialty certification.

Patient Education Workgroup

The Patient Education Workgroup developed a PowerPoint presentation and articles for Governors to provide to their chapters or societies on the available ACS patient education resources. In addition, the workgroup developed an article for the *Bulletin* on the results of a recent member survey on the availability of quality patient education materials in surgical practice and how the ACS might further support patient education.

Surgical Training Workgroup

The workgroup developed the ACS Statement on Medical Student Use of the Electronic Health Record (HER). In addition, the committee published online essays that address key concepts about the early years of practice for the Resident and Associate Society (RAS) and YFA. Governors serve on the following related ACS committees: Clinical Congress Program Committee; Committee on Continuous Professional Development; Committee on Emerging Surgical Technology and Education; Committee on Ethics; Committee on Interprofessional Education and Practice; Committee on Medical Student Education; Committee on Patient Education; and Committee on Resident Education.

Member Services Pillar

The Member Services Pillar continues to strengthen both domestic and international chapters by updating and developing resources, using a chapter performance metric, surveying all the chapters about their activities and needs, as well as providing best practices and strategies for chapter operations and activities.

Chapter Activities Domestic Workgroup

The members of the Chapter Activities Domestic Workgroup continue to implement important initiatives, such as regular updates to the online Chapter Guidebook and Meeting Toolkit.

Chapter Activities International Workgroup

The Chapter Activities International Workgroup established four subcommittees to focus on Communications, the Chapter Annual Reports, *Chapter Guidebook*, and the Governors Annual Survey to further strengthen these activities for international chapters. The international chapters offered valuable educational events at regional meetings. In addition, the group works to increase international representation at Clinical Congress.

Surgical Volunteerism and Humanitarian Awards Workgroup

The members of the Surgical Volunteerism and Humanitarian Awards Workgroup conducts outreach through the ACS Communities, the *Bulletin*, military Governors, and Advisory Councils to further increase awareness of the awards. The workgroup continues to improve the awards nomination process. Governors have seats on the following related ACS committees: ACS Committee on Diversity Issues; ACS WiSC; International Relations Committee; YFA; and RAS.

Quality, Research, and Optimal Patient Care Pillar

The Quality Pillar has three workgroups that have worked to ensure that ACS Fellows are able to provide the best care to surgical patients.

Best Practices Workgroup

The workgroup continues to create guidelines developed from peer-reviewed best practices on topics relevant to the surgical community and to enhance patient care.

Physician Competency and Health Workgroup

The workgroup actively promotes the maintenance of physical and mental wellness in the Fellows, and addresses issues related to surgical competency.

Surgical Care Delivery Workgroup

The workgroup's primary objectives are as follows:

- Analyze and address surgeon workforce issues
- Assess patient access to quality surgical care
- Utilize EHR to improve delivery and physician efficiency
- Evaluate the status of surgical care delivery in the ambulatory setting

Governors have seats on the following related ACS committees: Committee on Perioperative Care; Commission on Cancer; and Committee on Trauma.

The Committee to Study the Fiscal Affairs of the College continues to review and monitor the fiscal health of the College.

Respectfully Submitted,

David L. Berger, MD

Representative to the American College of Surgeons Board of Governors

REPORT OF THE REPRESENTATIVE TO THE AMERICAN COLLEGE OF SURGEONS ADVISORY COUNCIL FOR GENERAL SURGERY

The Advisory Council for General Surgery (ACGS) met at the American College of Surgeons (ACS) Clinical Congress 2017 in San Diego, California, and again at the ACS Leadership & Advocacy Summit 2018 in Washington, DC, to discuss topics and activities relevant to the practice of general surgery. The ACGS was updated on and discussed the following:

Membership

There are more than 82,000 members of the ACS; approximately 50 percent are general surgeons. ACS membership continues to increase, with a record number of Initiates (approximately 2,000) for 2019.

Although membership in the College among U.S. graduates is increasing, there are challenges associated with recruiting subspecialty members, particularly in training tracts with early specialization that have less general surgery exposure than in the past.

Opportunities for enhanced membership recruitment and retention were discussed, including the requirement of the traditional three-year period between completion of training and ACS membership.

ACS Board of Regents Report

An outside consulting group has been engaged to help develop a global integrated communication strategy to improve communication with ACS fellows. A new, more personalized College News Scope called *My ACS NewsScope* is now available, which provides users with individually tailored health-related, economic, and global health care issues content via an artificial intelligence algorithm based on user preferences.

Collaboration among ACS Divisions, Advisory Councils and the Board of Governors was made a priority. Joint meetings of the Advisory Council Pillars with the Board of Governor Pillars were held during the 2019 Leadership & Advocacy Summit.

The Board of Regents approved and ACS Statement on Guidelines for Ethical Use of Social Media by Surgeons, which was published in the May issue of the ACS *Bulletin*. The guidelines are intended to provide guidance for how surgeons can maintain an online presence while adhering to the ACS standards of professionalism.

ACS IPV Task Force

The ACS Intimate Partner Violence (IPV) Task Force was formed in January 2018 to raise awareness of this public health problem in the surgical community and to educate surgeons about the signs, consequences, and prevention and escape strategies associated with IPV. A tool kit was created with appropriate resources for surgeons.

ACS Foundation

Donations to the ACS Foundation can be made in honor of or in tribute to a person that has inspired or mentored you. The ACS Foundation supports skills courses at the Clinical Congress, Stop the Bleed® training in rural communities and elsewhere, patient education materials, fellowship research awards, Operation Giving Back, and other notable College programs.

Quality

A surgical quality verification program is being developed based on the standards recommended by the *Optimal Resources for Surgical Quality and Safety* (the Red Book). Site visits have been conducted at various hospitals to pilot test the program.

Clinical Congress 2019

One of the key functions of the Advisory Council for General Surgery is to provide program proposals for the annual Clinical Congress. The majority of programs at the Clinical Congress are generated from proposals sponsored or co-sponsored by the ACS Advisory Councils. The advisory councils were responsible for 132 proposals for Panel Sessions, Postgraduate and Skills Courses, Meet-the-Expert sessions and Town Hall meetings at last year's Clinical Congress.

Respectfully Submitted,
Edward C. Borrazzo, MD
Representative to the American College of Surgeons
Advisory Council for General Surgery

**FINANCIAL STATEMENT
NEW ENGLAND SURGICAL SOCIETY
SCHOLARS FOUNDATION
For the Year 1/1/18–12/31/18**

RECEIPTS

Contributions	23,125
NESS Neckwear	100
Initiation Fees	800
Interest – Savings	5

TOTAL RECEIPTS **\$ 24,031**

DISBURSEMENTS

Contract Staff	2,040.49
Mixter Lecture	2,500
Nathan Smith Awardee	1,000
Investment Fees	1,209
ACS Health Policy	4,000
Scholars Research Grant	20,000
Research Day	3,000
Resident Prize Essay	3,000
Poster Prize	250
Legal & Insurance	254
Tax Preparation	600
Bank Charges	24
Printing & Mailing	16
Foundation Board	29

TOTAL DISBURSEMENTS **\$ 37,922**

INVESTMENTS **\$ (2,834)**

NET SURPLUS (DEFICIT) **\$(16,724)**

ABOUT THE NESS SCHOLARS FOUNDATION

Previously known as the Charitable Foundation, the **New England Surgical Society Scholars Foundation** was established in 1985 and is a 501(c)(3) non-profit organization.

Mission Statement: The Scholars Foundation exists to provide financial support to enhance the clinical and educational opportunities of the membership of the NESS in their efforts to strengthen the discipline of surgery in New England.

Activities currently supported include:

- **Scholar Research Grant**

Advances innovative surgical research via multiyear support

- **ACS/NESS Health Policy and Management Scholarship**

Allows development of socioeconomic expertise within the society, via an annual scholarship to subsidize attendance and participation in the Executive Leadership Program in Health Policy and Management at Brandeis University

- **Spring Resident and Fellow Research Presentation Day**

Promotes the professional development of young surgeons

- **Annual Samuel Jason Mixter Lecture**

Expands the understanding of the national surgical environment

- **Nathan Smith Award**

Acknowledges the distinguished service of an NESS member

- **New Member, Resident Essay, and Best Poster Prizes at the Annual Meeting**

Acknowledges scholarship to the discipline of surgery

It is anticipated that an increase in the Foundation's endowment will also allow support for future activities such as a **third world surgical mission** and **individual state educational grants** to support MOC CME requirements.

The Foundation has established **Contribution Levels** to support its mission. A member's donation level is cumulative, determined by the sum total of all his/her donations over time.

<i>Scholar</i>	>	\$5,000
<i>Samuel Jason Mixter Leader</i>	≥	\$2,500
<i>Nathan Smith Sponsor</i>	≥	\$1,000
<i>Benefactor</i>	≥	\$500
<i>Patron</i>	≥	\$100
<i>Friend</i>	<	\$100

Listing reflects contributions received through July 24, 2019.

To learn more about how you can contribute and support the Foundation visit the Scholars Foundation at nesurgical.org.

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Roger S. Foster, Jr.
James C. Hebert
Francis J. Podbielski

*Deceased

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FREDERICK W. ACKROYD, MD

1930–2017

Dr. Frederick William Ackroyd died February 12th, 2017 in his residence in Palo Alto, CA of natural causes surrounded by his beloved family. Dr. Ackroyd lived a long and full life devoted to his family, his patients, and our country. As a youth he was an Eagle Scout, and president of his high school class. As a teen he was inspired to become a doctor after losing his young sister to blue baby syndrome and subsequently dedicated his life to caring for patients for over 40 years. He practiced general surgery for many years in the Harvard system, eventually retiring from the Massachusetts General Hospital. As a Navy Flight Surgeon, he spent a year in Antarctica supporting the naval and scientific mission for the International Geo-physical year of 1957–1958. Antarctica's Ackroyd Point was named after him for this service, and he performed the first surgical procedure on Antarctica during that year.

Dr. Ackroyd was also a scientist who helped in the labs that discovered the techniques to allow kidney transplant early in his career, and continued research in many other areas. His study of trauma resuscitation led him to Viet Nam as a Commander in the Navy in charge of a Marine Hospital in 1966–1967. He won his Purple-Heart medal there for injuries suffered on a mission to help evacuate wounded marines via helicopter. Later he spoke at the United Nations on the effects of Napalm, helping with the negotiations to ban its use.

He was asked to join a small group of American burn surgeons in 1989, at the request of President George Bush (Sr.), to respond to the Soviet Gas-Pipeline/train disaster in Russia that involved thousands of burned children. He made several trips that forged bonds with the surgeons and nurses in Russia, encouraging them to subsequently visit Boston to continue their professional and personal connections.

Fred was the ultimate father, taking his children for “mystery rides” to stretch their imaginations and stimulate their love of education. He had an endless thirst for knowledge and learning, reading three newspapers cover to cover each day, clipping out articles for each family member according to their interests. He loved boats and fishing and dogs, frequently combining the three. He was endlessly optimistic, relentlessly curious, full of energy, and made anyone he was talking to feel 10 feet tall. He had a wonderful sense of humor and loved to laugh at himself. He always rooted for the underdog. He was a remarkably selfless human being, and always considered his own needs last. He was greatly loved by everyone who knew him.

Dr. Frederick W. Ackroyd is survived by a brother, James Ackroyd, his wife, Dr. Anita Honkanen, their 5 daughters Alexandra Natarajan Honkanen Ackroyd, Margaret Rose Honkanen Ackroyd, Suzanna Honkanen Ackroyd, Rebecca Kate Honkanen Ackroyd, Eliza George Honkanen Ackroyd, his first wife Robin Woodroofe Ackroyd and their 3 children Frederick Stephen Ackroyd the 2nd, Sarah Ackroyd Bergin, Robert Woodroofe Ackroyd, his five grandchildren, many nieces and nephews, and countless friends.

C.M.R

ROBERT LASZLO BERGER, MD

1929–2016

Bob Berger had an astonishing career that most of us could not imagine. He was born in Debrecen, Hungary, to Jewish shopkeeper parents. With the onset of World War II, as he and his family were at extreme risk of persecution, Bob fled to Budapest and joined the Jewish resistance. At war's end, he was in a displaced persons camp, and as an immigrant refugee, arrived in New York in 1947 speaking no English. On moving to Boston, he attended Boston Latin learning English as a second language, but stood out enough to be accepted at Harvard College, supported by scholarships and summer work. Education continued at Boston University School of Medicine followed by residency in surgery and cardiothoracic surgery at Boston City Hospital. A further surgical year was spent in Scotland.

He became chief of Cardio-thoracic Surgery at St Elizabeth's Hospital in 1963 where he met his future wife, Patricia Downs MD. Invited to become Professor of Surgery and Chief of C-V Surgery at Boston University School of Medicine, he served from 1968 to 1982, then moved to Beth Israel Deaconess as Director of Clinical research in the Division of Thoracic Surgery. While there, he led the Overholt-Blue Cross Emphysema Surgery Trial which led to the understanding of lung-reduction surgery and developed criteria for successful operations.

In 1978, pioneering in the use of Left Ventricular Assist Devices (LVAD) for heart failure following myocardial infarctions with cardiogenic shock, he had the first two survivors after LVAD placement. Prior to that, in 1966, he demonstrated the feasibility of percutaneous catheter placement of aortic valves in dogs with induced aortic insufficiency.

Of widespread interest was his 1990 report in the *New England Journal of Medicine*, where he proved the scientific fraudulence, beyond the immorality, of the Nazi physicians Dachau hypothermia experiments, which some had suggested provided useful scientific data. "(had) the (scientific) shortcomings of the Dachau hypothermia study . . . been fully appreciated, the ethical dialogue . . . would never have begun . . . (That data) runs the risk of implying that these grotesque Nazi medical exercises yielded results worthy of consideration . . . The present analysis clearly shows that nothing could be further from the truth."

Dr. Berger's life experiences produced a humanistic and ethical approach to life, and he was known for an open and accepting attitude towards the less fortunate. He was a devoted physician to patients and an admired teacher and mentor to students, residents, and staff.

He is survived by his daughters Ilana and Shana, and his wife Patricia.

B.C.

WILLIAM F. BERNHARD, MD

1924–2018

William Bernard, an internationally renowned cardiac surgeon and Emeritus Professor of Surgery at Harvard Medical School, died peacefully at home in Framingham, Massachusetts after a remarkable life and a brave battle with cancer on October 29, 2018 at the age of 93. He was born in Brooklyn, New York on December 11, 1924, and raised in Great Neck Long Island.

He graduated from Williams College in three years in the accelerated degree programs at the time of WW II, joined the Navy as an Ensign and served in the Pacific from 1944–46. When he returned, he went to Syracuse Medical School, met and married June Horne who was a nurse there and then embarked on both his surgical career and growing his family—demonstrating an enormous talent for both. He and his wife raised 10 children together while he embarked on several residencies at Bellevue Hospital and Columbia Presbyterian Hospital in New York. He ultimately found his way to Children’s Hospital in Boston with Dr. Robert Gross and became a classic “triple threat” academic surgeon.

He was an active clinical surgeon at Children’s Hospital, wrote and presented many papers on operations and experiences with cardiac disorders in children and adolescents, and was also on the staff at the West Roxbury VA, and Beth Israel Hospital. He also founded The Boston Children’s Cardiovascular Research Laboratory and produced a substantial body of basic and translational work related to the development of ventricular assist devices and study of the ways to ameliorate problems associated with them – such as the development of thrombi. He published more than 126 papers on his work in high impact journals over the course of his career.

He burst into national prominence first in 1963 based on his work with hyperbaric oxygen chambers to treat Hyaline membrane disease when the chamber was used to treat President John F. Kennedy’s premature infant son Patrick Bouvier Kennedy. He was able to translate his work on ventricular assist devices into clinical care, announcing its first successful use to save two patients in failure who were subsequently weaned off the device after several days at the 1978 meeting of the American Heart Association. He appeared on PBS, Nova and 60 minutes and in *Time Magazine*. He formed a company to develop this prototype device; a later model of which was implanted in Vice President, Dick Cheney in 2010. Throughout his life he maintained his sense of humor, his love of sailing, jazz, sports cars, cats, and especially his marriage and his family. He is survived by his wife of 70 years, 9 of his children, 15 grandchildren and one great grandchild.

G.F.W.

HARRISON BLACK, MD

1919–2013

Harrison Black, MD, 94, a longtime resident of Dedham and Dover, died peacefully in Rockport, Maine on May 10, 2013. Dr. Black was a nationally renowned thoracic surgeon and pioneer in open heart surgery at the Peter Bent Brigham Hospital in Boston, and a proud member of the New England Surgical Society. He was born March 26, 1919 in Cincinnati, a graduate of Deerfield Academy, Princeton University, and Harvard Medical School where he subsequently served as faculty. Dr. Black was also an avid and accomplished sailor. A founding member of the Biddeford Pool Yacht Club, he served as a Commodore of the club for twenty years. When he retired from medicine, Dr. Black researched and wrote two volumes of family genealogy which were published by the New England Historic Genealogical Society. He was married over 60 years to Gertrude D. Black who predeceased him in 2011. He is survived by his sons William H. Black of Oxford, MS, Timothy S. Black of Cincinnati, OH and his daughter Nancy B. Carhart of Washington, ME, and two granddaughters Abigail C. and Emily H. Black.

R.L.P.

WILLIAM ARTHUR COOK, MD

1936–2018

William Arthur “Bill” Cook MD of Amesbury, Massachusetts and Hope, Maine passed away peacefully on November 13, 2018 at the age of 86. He died in hospice care at High Pointe House in Haverhill, MA of complications from bladder cancer. He was surrounded by his wife, family, friends, and his dog, “Tar.” An accomplished thoracic surgeon, he worked for 60 years and had just retired when diagnosed.

Bill was born on August 27, 1932 in Stevens Point, Wisconsin to Laura Hansen Cook and Arthur R. Cook D.D.S.; he was an outstanding student who excelled at track, wrestling and football. The high hurdles record he set in junior college was not broken for 11 years. As a senior at P.J. Jacobs High School in 1950, his football team won the Wisconsin Valley Regional Championship. As a youth, he was also an active member of the First English Lutheran, and later Trinity Lutheran Church, where sang with a sterling voice in the choir and was awarded the Pro Deo et Patria religious award. During World War II, he was awarded both the MacArthur and Eisenhower awards for collecting used paper and fat as materials for the war effort.

As a Boy Scout, Bill reached the coveted rank of Eagle Scout at 16 and was selected by his peers as a member of the prestigious Order of the Arrow, a service organization within Scouting. With six uncles and the Wisconsin woods nearby, he learned to hunt, fish, ski, and enjoy the town’s famous Point beer and brats. A recent DNA analysis revealed him to be Viking of pure Danish ancestry.

At the University of Wisconsin, Madison, he completed his B.S. and M.D. degrees and was a member of the Chi Phi fraternity and a lifelong Badger fan, known to spontaneously sing “On, Wisconsin” with other alums. He married (and is predeceased by) Judith Kayser Cook Ferriter of Madison in 1957. The couple raised four daughters, first in Dallas, Texas then in Larchmont, New York.

Bill completed his initial surgical training at Cleveland Metropolitan Hospital (now part of the Case Western Reserve University – MetroHealth system), and finished his general surgery residency at the Medical University of South Carolina in 1963. He stayed in Charleston an extra year to complete a fellowship in Cardiovascular Disease, prior to formal accreditation of the MUSC cardiothoracic surgery training program in 1967. After graduation Bill became the Chief of Thoracic Surgery at the Albert Einstein Medical Center in New York. It was during this time he rose to the rank of Associate Professor of Surgery and published several general thoracic surgery articles including Hyperacute Rejection in Pulmonary Xenografts, the role of Transthoracic Vertebral Surgery in patients

with spinal cord injury, and Treatment of Pleural Aspergillosis and Bronchopleural Fistula. His most recent contribution to the literature in 2015 was a book chapter on Thoracoplasty for Tuberculosis in Adult Chest Surgery edited by Sugarbaker, et al.

Bill was a member of the American Association for Thoracic Surgery, the General Thoracic Surgical Club, the Southern Thoracic Surgical Association (for which he served as its President in 1992), and the Society of Thoracic Surgeons. He remained an active Diplomate of the American Board of Thoracic Surgery since his initial certification, and was a Fellow of both the American College of Surgeons and the American College of Chest Physicians. He joined the New England Surgical Society in 1993.

Later divorcing, he moved to Amesbury, Mass. and established a robust private medical practice serving several hospitals in the Merrimack Valley, including: Lawrence General, Ana Jacques, Holy Family in Methuen, and Lowell General hospitals. “Dr. Cook” was an accomplished surgeon, often rising in the middle of the night—or the middle of dinner—to save a life. In 2008, he married Cynthia “Cindy” Fortune Cook of Wakefield, MA who is Administrator of the Portsmouth NH Ambulatory Surgery Center. They recently celebrated their 10th wedding anniversary.

Bill worked until the very end of his life healing others. He had just retired in April when, three weeks later, he was diagnosed with bladder cancer. Ironically, he was treated at Lawrence General Hospital where he had worked for years with many of the doctors and nurses who cared for him there.

Known by his grandchildren as “Grandpa Captain,” he found great happiness in mid-coast Maine where he spent every free weekend at his cabin on Hobbs Pond near Camden. His passion was sailing the islands of Penobscot Bay where he enjoyed a fresh breeze every afternoon, the thickest fog, and the most vivid sparkles on the water. He kept his 22-ft. boat Sira at the American Yacht Club in Newburyport, MA, sailed regularly in Antigua Race Week, and was a member of the Royal Naval Tot Club of Antigua & Barbuda.

A true sportsman, he had a lifelong affair with fishing and hunting. He was commonly seen in his old, green canoe fly-fishing the shores of Hobbs Pond. He spent many fun-filled vacations bone fishing with friends in the Caribbean. He also excelled at singing and dancing. His deep baritone was often heard in the pews at church in Newburyport, and at the piano bar of The Black Pearl in Maine. A bear of a man, he used his 6-ft. 4-in. frame to gracefully sashay female partners around the dance floor.

Bill was a gourmand and a natty dresser with a preference for bow ties and the eponymously branded Cook's champagne. He was most famous for his "Boat Sauce" spaghetti dinner, perfected by hundreds of reps on a galley stove, and his Thanksgiving stuffing, of which the secret ingredient is spicy Italian sausage.

His life-long objective was to "grab all the fun you can get," and he did. He had a sonorous belly laugh and a gift for story telling that captivated listeners. Friends share epic stories and photos of his mischief. After learning of his diagnosis he reflected, "Life doesn't owe me anything. I've had more fun than 90 percent of the people I know!"

Bill is predeceased by his parents of Stevens Point and his sister Charlotte Ann "Cookie" Domke of LaCrosse, Wisconsin. He is survived by his wife, Cynthia Fortune Cook of Amesbury; his brother, Lawrence Kerwin Cook D.D.S. of Lakeland, FL.; four daughters: Ellen Cook Humphrey of Lake Forest, IL, Catherine Ann Turnipseed of Eagle, CO, Andrea Cook Fleming of Palo Alto, CA. and Courtney Sleeth Cook of San Francisco, CA; and two step-children: Ryan Fortune of Bradford, MA and Marybeth Fortune Calabria of Hopewell, PA. He is also survived by 11 grandchildren: William, Nicholas and Davis Humphrey of Lake Forest; Griffin and Ellen Turnipseed of Eagle; Carson and Caroline Fleming of Palo Alto, Cameron and Bailey Rose Calabria of Hopewell and Grayson and Brody Fortune of Bradford.

F.J.P.

RICHARD W. DOW, MD

1936–2017

Dr. Richard Dow passed away at the age of 80 on August 17, 2017. Rick was a loving husband, father, and grandfather who was surrounded by his three daughters at the time of his passing.

Rick received his undergraduate degree and his M.D. from the University of Michigan, where he also completed general surgery residency. He was elected to AOA prior to his medical school graduation. He then joined the Michigan faculty in 1967 and remained in Ann Arbor, MI until 1973 when he was called to service by the US Army Medical Corps. He was stationed in Oklahoma and deployed to Vietnam where he honed his surgical skills caring for wounded soldiers. He then practiced general surgery in Maine until 1980 when he moved to Vermont to practice general and vascular surgery at the Mary Hitchcock Memorial Hospital and the White River Junction Veterans' Hospital. In 1987, Rick was recruited to Henry Ford Hospital where he began the liver transplant program. He then returned to Dartmouth Mary Hitchcock Hospital as the Department of Surgery Chair and General Surgery Residency Program Director and a Professor at the Dartmouth School of Medicine.

Dr. Dow was a natural leader, a gentle teacher, and an astounding technical surgeon. He was universally regarded as a “surgeon’s surgeon” and the “go to” guy for challenging cases. He could work his way out of any intra-operative surprise and reason his way through any clinical diagnosis. He patiently and passionately educated generations of residents and medical students. His gift for teaching was recognized nationally by his receipt of the ACGME’s Courage to Teach Award. He was also honored as an ACGME Markle Scholar in Academic Medicine.

Rick was an active and engaged member of the New England Surgical Society. The NESS paid tribute to Rick’s commitment to the society and to the field of surgery by awarding him the Nathan Smith Distinguished Service Award.

K.M.R.

ALLAN E. DUMONT, MD

1924–2017

Dr. Dumont was a revered surgeon, teacher, and scientist, a faculty member at the NYU School of Medicine for most of his career. Born in Brooklyn, N.Y., Dr. Dumont attended Hobart College followed by attending medical school at NYU. He continued at Bellevue Hospital, completing his surgical residency prior to joining the Navy for a tour of duty. He subsequently returned to NYU, where he ultimately became the Jules Whitehill Professor of Surgery. He served as the long-standing chairman of the NYU Institutional Review Board, and at one time served as the President of the New York Surgical Society.

Dr. Dumont was an expert on the lymphatic system, serving as editor of the journal *Lymphology* and as a founder and president of the International Society of Lymphology. Over the course of his extensive career, Dr. Dumont published 25 book chapters and 115 journal articles on topics ranging from wound healing and animal physiology to cirrhosis and heart failure.

Following retirement to New Hartford, CT in 1990, he continued as a popular teacher at the University of Connecticut Health Sciences Center, ultimately moving to Maine in 2003. Dr. Dumont is survived by his wife, Joan, and three sons, Mark, James and David, as well as seven grandchildren.

J.L.C.

GRAEME L. HAMMOND, MD

1933–2019

The Department of Surgery of the Yale School of Medicine mourns the passing of Graeme Lord Hammond, MD, Professor Emeritus of Surgery. Dr. Hammond was an internationally recognized surgeon-scientist in cardiac diseases.

Born in New York City on January 30, 1933, Dr. Hammond received his medical degree from McGill University after serving in the United States Army. He trained in surgery at the Massachusetts General Hospital that included a year in the research laboratory of Dr. Austen. He joined the Yale School of Medicine faculty as an assistant professor in 1969, was appointed associate professor in 1972, and rose to the rank of full professor in 1979. He served as interim chief of Cardiothoracic Surgery from 1986–1987. He retired from a surgical career and became emeritus professor in 2006; continuing as a senior research scientist until 2008.

At Yale, Dr. Hammond catalyzed numerous surgical innovations and carried out groundbreaking research through many collaborations. He was the first to perform coronary artery bypass grafting in the region. His early research focused on coronary blood flow and he was later interested in xenotransplantation. Highlights of his diverse accomplishments include defining molecular signals for initiating protein synthesis in organ hypertrophy and the suppression of major histocompatibility complex antigen expression by noncoding RNA. He was an established investigator of the American Heart Association and received funding for his research from the National Institutes of Health for a 30-year span.

During his productive career, Dr. Hammond received numerous awards and honors, was a member of many surgical societies, including the American Surgical Association, the New England Surgical Society, the American Association for Thoracic Surgery, and the Society of University Surgeons. Dr. Hammond had an international reputation and was invited as visiting professor throughout the country and abroad. He was an esteemed clinical trainer and mentor to generations of students, general surgery residents, and cardiothoracic surgical fellows, many of whom have become leaders in surgery. He was a member of the National Board of Medical examiners and he co-edited a standard textbook of thoracic and cardiovascular surgery.

Dr. Hammond was predeceased by his wife, Janet, and he is survived by his son, Christopher and daughter, Wendy.

A.G.

GEORGE L. MACDONALD, JR., MD

1933–2019

Dr. George MacDonald, the former chief of Surgery at Salem Hospital died on March 25th, 2019 at the age of 85. Although he was a widely respected surgeon who practiced the broad range of General Surgery for more than 30 years at several hospital along the North Shore (Lynn Hospital and Mary Alley Hospital, in addition to Salem Hospital which is now the North Shore Medical Center), he is perhaps best known in his home area for saving and rejuvenating the Marblehead High School Football program in the 1980s when it was about to be terminated. He was a devoted and true son of Marblehead, Massachusetts. He was born in the Mary Alley Hospital in Marblehead, worked summers in his father's Marblehead shoe factory, and graduated from Marblehead High School where excelled in sports—lettering in football, basketball and baseball. He was good enough to earn a scholarship to Harvard where he majored in Physics and ultimately captained the baseball team. After graduation, he was drafted by the Red Sox and played in the Minor leagues for a year before deciding that medicine would be a more satisfying endeavor for him. He graduated from Tufts Medical School and left Massachusetts for a surgical residency at the University of Minnesota where he met and married his wife Lois, and then spent a year of fellowship in Malmo Sweden before returning home to a long career of general surgical practice and a happy commitment to the local institutions that had nourished him as a young man. He worked on the umpiring crew for Northeast High School Football Conference as the head linesman. He founded the Marblehead Magicians Gridiron Club and was usually in the stands for their games. He was an active member of the Harvard club; over the years interviewing many of the North Shore applicants for admissions. He was a deacon at the Old North Church in Marblehead and served as a Vice President of the Marblehead Savings Bank. He enjoyed fishing and sailing in his home waters almost as much as following his home sports teams in Marblehead, Harvard, and Boston. He is survived by his wife, his daughter Bonnie, son Jeff, and two granddaughters.

G.S.W.

J. GREER MCBRATNEY, MD

1925–2018

Greer McBratney, citizen of Dartmouth Massachusetts, Philanthropist, and a highly respected surgeon based out of St Luke's Hospital in New Bedford where he practiced for 40 years died suddenly while working outside at his home in Dartmouth on November 30th 2018. He was 93 years old and is survived by his wife of 68 years–Elizabeth Ingwersen McBratney.

He was born in Montclair N.J.; the second of three boys born to parents who had immigrated to this country from Australia and Northern Ireland. As a child he spent several idyllic summers on Mishaum Point which ultimately drew him back to South Dartmouth to live later in life. First, however, he joined the Army at the age of 17 and during World War II served in the Italian Theatre of operations as an enlisted communications linesman in infantry combat. He rose to the rank of Sergeant and later enlisted in the National Guard where he became an officer and rose to the rank of Major. After the war he attended college on GI bill, graduating from University of Wisconsin and then Case Western Medical School.

As a practicing surgeon he was known for his speed and technical dexterity, excellent judgement, and broad clinical experience. In addition to serving his community, he also volunteered his surgical services around the world serving with Project Hope in several developing countries including Civilian Hospitals in Vietnam in the 1960s and in Haiti. He was a strong supporter of younger surgeons who came to New Bedford to work, and a mentor to interested High School or College students from the New Bedford area. Fundamentally he treated everyone as colleague in the pursuit of improving medical and surgical care in his community. He had a reputation for innovation and as a more senior surgeon was one of the early adopters of laparoscopic surgery. The Auditorium at St. Luke's Hospital is named in his honor.

He also was an intellectual omnivore, loved history, and was particularly interested in the natural world around him. He was keen gardener of fruits and vegetables–his wife took care of the flowers–and an avid beekeeper once he retired. He was deeply committed to the conservation of open green space and farmlands in his community and was a founding member of the Dartmouth Natural Resources Trust to which he donated hundreds of acres.

In addition to his wife, he is survived by his older brother, five of his six children, 14 grand children and 10 great grandchildren.

G.W. & P.A.

JACK S. PARKER, MD

1923–2018

Dr. Jack S. Parker of Westwood, Massachusetts, passed away peacefully on February 9, 2018. A long-time resident of Wellesley and Osterville, he was born September 28, 1923, in Akron, Ohio, the son of Alton Norton and Gladys (Jordan) Parker. He was very proud of his celebratory father who was chosen to be the pilot for the Byrd Expedition and first American to set foot on the continent of Antarctica.

After attending Kansas University, Jack received his MD from Harvard Medical School in 1945. He trained at the Mass General, Boston Children's, Evanston Hospital and the New England Medical Center. He married Babette "Betty" Stone Parker in 1944, and welcomed son, Jack Jr., in 1945 and daughter, Diane, in 1948. Jack was called into active duty in the U.S. Navy Medical Corps 1946–47. In 1951 he opened his surgical practice briefly in Wellesley only to close it when he was called back to the navy in 1953–54 during the Korean War. Jack then returned to Wellesley to practice and was co-founder of a four-man general surgery group practice, Newton-Wellesley Surgeons, Inc., where he continued to practice until his retirement in 1984.

Jack was the consummate gentleman surgeon: accomplished, dedicated to his patients, steady and well-mannered even during tense times in challenging cases. His procedures were always meticulously and carefully completed. He was a tinkerer and enjoyed refining and improving OR instruments, including a Parker clamp which was quite useful in constructing hand-sewn bowel anastomoses.

Wherever he went in his professional or personal life, he was a mature presence. Colleagues and friends turned to him for advice and direction. He had a broad view of matters and a sense of possible future developments which led him to form a surgical group practice, with its members all for one and one for all, at a time when surgical practice in the community was generally solo. He was quick to recognize the benefit of collaboration and dependable, quality cross-coverage and make that a realization for his patients.

During his career he served as Assistant Clinical Professor of Surgery at Tufts, a member of the Board of Governors of the American College of Surgeons, President of the Mass Chapter of the ACS, President of the District Medical Society and President of the Medical Staff of Newton Wellesley Hospital.

In 1991 he moved his permanent home to Cape Cod, enjoying boating and golf and spent winters in Vero Beach, Florida. Always curious and wanting to learn, he took art lessons at the Vero Beach Museum and began a prolific and enjoyable watercolor hobby. He valued his friendships through shared adventures in golf, skiing, sailing and music. His friends will miss his sense of humor, long explanations of how and why things work and his kind presence.

M.G.K.

HENRY O. WHITE, MD

1938–2018

Henry “Hank” White passed away after a long and valiant battle with Parkinsonism on September 15, 2018. He was a fixture of the Mid-coast Maine medical establishment for decades. He practiced general and thoracic surgery mostly at the Penobscot Bay Medical Center, which he had a major part in planning and building. His other interests were his family, music and sailing. He was instrumental in fundraising to create the Sussman House, the hospice facility where he himself passed away. He was 90 years old.

Hank was born in Boston and graduated from Amherst in 1949 and Boston University Medical School in 1953. He trained at RI Hospital and upon completion moved to Maine.

M.P.R.

ROBERT J. WILLIAMSON, MD

1924–2018

Dr. Williamson had a successful and lengthy career practicing general surgery in Bristol, CT. Born in Birmingham, Alabama, Bob attended Columbia Military Academy in Tennessee and then Vanderbilt University in Nashville. He served as a Medical Officer in the Field Aid Station during the Korean War. Following the war, Dr. Williamson completed his residency in general surgery in Baltimore, MD. As Dr. Williamson had previously been an intern at Yale University prior to being deployed during the Korean War, and had met his wife Janet there, they decided to return to Connecticut and join a practice in Bristol.

During his career, he was extremely active in his community and served on many civic committees. His colleagues remembered him eloquently at the time of his passing, such as the following examples: “Bob was a shining example of the physician we all wish we had. He was wise, kind, patient, empathetic and carried himself with dignity and respect for others”, and “He was well respected by all, Bristol Hospital lost a great surgeon & member of its staff when he retired”. Dr. Williamson is survived by his wife Janet, two children, Rob and Laura, two grandchildren, Dannu and Mikyla and his doting dog, Deva.

J.L.C.

In addition to the preceding Memorial Statements, the New England Surgical Society is saddened to acknowledge the passing of the following members:

RICHARD CARDOZO, MD 1920–2014

JAMES GALLISON SISE, MD 1945–2014

ANNUAL SAMUEL JASON MIXTER LECTURE IN HONOR OF SAMUEL JASON MIXTER, MD

Sponsored by the NESS Scholars Foundation

Samuel Jason Mixter was chosen President of the newly formed New England Surgical Society in 1917, just one year before he was elected President of the American Surgical Association. Born in Western Massachusetts in Hardwick (1855), he was educated at the Massachusetts Institute of Technology (1875) and Harvard Medical School (1879). After serving as West Surgical House Officer at the Massachusetts General Hospital, he studied anatomy and the new science of microscopic anatomy in Vienna which he brought back to the Harvard Medical School Department of Anatomy. He soon changed careers and became surgeon at the Carney Hospital and the Massachusetts General Hospital and finished his surgical career as Chief of the West Surgical Service at the Massachusetts General Hospital. His anatomical skills and mechanical ingenuity made him a surgical genius and his innate honesty and sound judgment made him a great physician. He was the first in America to successfully resect a Zenker's diverticulum of the esophagus, pioneered in Gasserian ganglion surgery and performed one of the first successful hypophysectomies. He helped to develop the new frontiers of abdominal surgery and was skilled in surgery of bones and joints, head and neck, breast tumors and pediatrics.

Dr. Mixter's kind, gentle and hospitable nature was felt when he guided visiting surgeons, as well recorded by William Mayo, to operative clinics and staff meetings at the hospital and when his many guests shared the happiness of his home. His non-surgical interests had to do with life in the open air with sports, gardening, and breeding Guernsey cattle.

A rich and rewarding family life followed his marriage in 1879 to Wilhelmina Galloupe (1879) of Swampscott. The marriage was blessed with four sons, two of whom—William Jason Mixter and Charles Galloupe Mixter—were members of the New England Surgical Society as was his grandson, Charles G. Mixter, Jr., and is his great-grandson, Charles G. Mixter, III.

His loyalty to his country was demonstrated in World War I when, incensed by the German brutality, he left a life of complete retirement to join the Medical Reserve Corps. As a consultant he made numerous tours of the Eastern military camps. He remained in the Medical Reserve Corps, attaining the rank of Colonel one year before his death.

Dr. Mixter died in 1926, a scant year after the death of his wife. His life exemplified in all respects the qualities that our Society demands of its new members: "surgeons with the attributes of a gentleman, i.e., basic honesty, kindness, tolerance, equanimity, good manners and social consciousness."

1985	Lord Rodney Smith, Marlow, England
1986	Martin Adson, MD, Rochester, Minnesota
1987	Joseph P. Vacanti, MD, Boston, Massachusetts
1988	F. Griffith Pearson, MD, Toronto, Ontario, Canada
1989	Alexander Walt, MD, Huntington Woods, Michigan
1990	Professor Peter Morris, Oxford, England
1991	Lazar J. Greenfield, MD, Ann Arbor, Michigan
1992	Paul A. Ebert, MD, Chicago, Illinois
1993	Thomas E. Starzl, MD, Pittsburgh, Pennsylvania
1994	John E. Niederhuber, MD, Stanford, California
1995	Jonathan E. Rhoads, MD, Philadelphia, Pennsylvania
1996	M. Judah Folkman, MD, Boston, Massachusetts
1997	Samuel A. Wells, Jr., MD, St. Louis, Missouri
1998	Paul S. Russell, MD, Boston, Massachusetts
1999	Bernard Fisher, MD, Pittsburgh, Pennsylvania
2000	John L. Cameron, MD, Baltimore, Maryland
2001	Glenn D. Steele, Jr., MD, Chicago, Illinois
2002	Thomas J. Krizek, MD, Wesley Chapel, Florida
2003	David L. Nahrwold, MD, Chicago, Illinois
2004	Irving L. Kron, MD, Charlottesville, Virginia
2005	Patricia K. Donahoe, MD, Boston, Massachusetts
2006	Murray F. Brennan, MD, New York, New York
2007	Andrew L. Warshaw, MD, Boston, Massachusetts
2008	Lucian L. Leape, MD, Boston, Massachusetts
2009	Atul A. Gawande, MD, Boston, Massachusetts
2010	David H. Sachs, MD, Boston, Massachusetts
2011	David B. Hoyt, MD, Chicago, Illinois
2012	Barry Mills, Brunswick, Maine
2013	Peter J. Deckers, MD, Farmington, Connecticut
2014	Thomas H. Cogbill, MD, La Crosse, Wisconsin
2015	Dorry L. Segev, MD, Baltimore, Maryland
2016	Atul A. Gawande, MD, Boston, Massachusetts
2017	John G. Meara, MD, DMD, MBA, Boston, Massachusetts
2018	Keith D. Lillemoe, MD, Boston, Massachusetts

**NEW ENGLAND SURGICAL SOCIETY'S
DISTINGUISHED SERVICE AWARD IN HONOR
OF
NATHAN SMITH**

Sponsored by the NESS Scholars Foundation

Nathan Smith, the first all-New England surgeon, was one of the most remarkable men ever to adorn the American surgical profession. Born in 1762 in Rehoboth, Massachusetts, his only education was from his parents, his father being a farmer-surveyor and his mother a midwife; from Doctor Josiah Goodhue, a prominent surgeon of the upper Connecticut Valley, and from the Harvard Medical School near the time of its inception. In addition he accomplished a period of eight months of study in Edinburgh and London.

During his long career, he was a major force in the establishment and development of Dartmouth Medical School while he developed an extensive surgical practice in the upper Connecticut Valley. Success in upper New England was followed by an appointment in the new Yale Medical School, where he made contributions as a surgeon, teacher and practitioner with attention to the necessary requirements of politics. He further directly contributed to the establishment of the new medical school at Bowdoin College and to the new medical school at the University of Vermont.

During this time his contributions to the practice of surgery were of great importance. Essays on typhus (typhoid) fever, on the pathology and treatment of necrosis (osteomyelitis) and in the performance of ovarian cystectomy were notable. Other reports described new methods for fashioning skin flaps following amputation and the use of various apparatus for the treatment of fractures of the extremities. His record in urinary lithotomy was enviable.

No evaluation of this remarkable man would be complete without mention of his family. All four of his sons graduated from Yale Medical School and nine grandsons, six great-grandsons and at last count one great-great grandson entered medicine.

In the New England area and perhaps in the country, no man contributed more than did Nathan Smith, not only to the birth of surgery as a specialty, but to the early evolution of the medical teaching institution. As a surgeon, as a teacher and as a person of high intellectual and moral quality, there is no one who surpasses him.

Gordon A. Donaldson, MD
Presidential Address, New England Surgical Society, 1977

1985	Claude E. Welch, MD, Boston, Massachusetts
1989	Francis D. Moore, MD, Boston, Massachusetts
1991	Joseph E. Murray, MD, Boston, Massachusetts
1992	George R. Dunlop, MD, Worcester, Massachusetts
1994	John F. Burke, MD, Boston, Massachusetts
1995	Frank J. Lepreau, Jr., MD, Westport, Massachusetts
1996	Harry C. McDade, MD, Littleton, New Hampshire
1997	John H. Davis, MD, Burlington, Vermont
1999	John A. Mannick, MD, Boston, Massachusetts
2000	Hermes C. Grillo, MD, Boston, Massachusetts
2001	Charles L. Thayer, MD, New Castle, New Hampshire
2002	W. Gerald Austen, MD, Boston, Massachusetts
2003	No Award Given
2004	Susan Briggs, MD, Boston, Massachusetts
2005	Michael R. Curci, MD, Portland, Maine
2006	Erwin F. Hirsch, MD, Boston, Massachusetts
2007	Charles J. McCabe, MD, Boston, Massachusetts
2008	Richard W. Dow, MD, Lebanon, New Hampshire
2009	No Award Given
2010	Grant V. Rodkey, MD, West Roxbury, Massachusetts
2011	Stanley J. Dudrick, MD, Waterbury, Connecticut
2012	No Award Given
2013	W. Hardy Hendren, MD, Duxbury, Massachusetts
2014	Albert W. Dibbins, MD, Portland, Maine
2015	Bruce J. Leavitt, MD, Burlington, Vermont
2016	H. David Crombie, MD, Windsor, Connecticut
2017	Thomas A. Colacchio, Norwich, Vermont
2018	John P. Welch, Bloomfield, Connecticut

INSTRUCTIONS TO AUTHORS FOR MANUSCRIPTS SELECTED FOR PRESENTATION AT THE ANNUAL MEETING

The *Journal of the American College of Surgeons (JACS)* is the official publication of the New England Surgical Society. Podium Presentations require manuscript submission to the *JACS*; Brief Reports are strongly encouraged to submit manuscripts but not required to do so; likewise, Poster Presentations are encouraged but not required to submit manuscripts. In order for these papers to be published in the *JACS*, whether in the NESS Annual Meeting issue or later, these guidelines for submission must be followed closely and carefully:

1. Do **not** submit your manuscript to *JACS* before the meeting. Your manuscript must be submitted to *JACS* **by October 15, 2019** (within four weeks after the Annual Meeting).
2. For **formatting and style requirements**, follow “Manuscript Preparation Details” at <http://www.journalacs.org/authorinfo>.
3. On the **title page** at the bottom type “Presented at the New England Surgical Society, 2019 Annual Meeting, Montreal, Quebec, Canada, September 2019.”
4. The corresponding author must complete and submit an Author Contributions form, and each author must complete the *JACS* Disclosure form. These forms (available as Word documents at <http://www.journalacs.org/authorinfo>) must be uploaded with the manuscript submission.
5. Make all revisions to the paper before submitting to *JACS*. Again, **October 15, 2019, is the deadline** for uploading your paper.
6. **Register and log-on** at <http://editorialmanager.com/jacs/> and follow instructions for uploading the manuscript.
7. **PLEASE NOTE: Be certain to scroll down and choose “New England Surgical Society” from the “article type” drop-down menu.** Do **not** select “original scientific article.”

RESIDENT AWARD RECIPIENTS

Sponsored by the NESS Scholars Foundation

- 1987 **Predicting Hospital Charges for Trauma Care**
Susan E. Pories, MD, Burlington, VT
- 1988 **Liver Abscess – The Need for Complete Gastrointestinal Evaluation**
Jeffrey L. Cohen, MD, Burlington, MA
- 1989 **Albumin Therapy in the Critically Ill: A Prospective Randomized Trial**
Eugene F. Foley, MD, Boston, MA
- 1990 **Patterns of Venous Incompetence in Patients with Varicose Veins**
Lawrence M. Hanrahan, MD, Boston, MA
- 1991 **Preliminary Assessment of a Basic Science Curriculum in a Surgical Residency Program**
David B. Safran, MD, Hartford, CT
- 1992 **Continuous Arteriovenous Hemofiltration Attenuates Polymorphonuclear Leukocyte Phagocytosis in Porcine Intra-Abdominal Sepsis**
Anthony W. DiScipio, MD, Lebanon, NH
- 1993 **Parastomal Hernia: Is Stoma Relocation Superior to Fascial Repair?**
Marc S. Rubin, MD, Boston, MA
- 1994 **Prostaglandin Protects Renal Cortical Blood During Infrarenal Aortic Clamping**
Elias J. Arbid, MD, Boston, MA
- 1995 **Moose Motor Vehicle Collision: An Increasing Hazard of Northern New England Life**
Timothy M. Farrell, MD, Lebanon, NH

- 1996 *First Place*
The Impact of Histopathology on Nodal Mestastases in Minimally Invasive Breast Cancer
Isha A. Mustafa, MD, Providence, Rhode Island
- Second Place*
The Use of Authentic Angiotensin II in the Treatment of Refractory Septic Shock
Mary B. Harler, MD, Providence, Rhode Island
- Third Place*
Gastrointestinal Complications are Predictable Following Cardiac Surgery
Richard A. Perugini, MD, Worcester, Massachusetts
- 1997 *First Place*
Effect of Delayed Fluid Resuscitation on Cerebral Hemodynamics in a Swine Model of Head Injury and Simulated Uncontrolled Hemorrhagic Shock
Paul R. Bourguignon, MD, Burlington, Vermont
- Second Place*
Influence of Peritoneal Cytology on Treatment of Patients with Pancreatic Cancer
Martin A. Makary, Boston, Massachusetts
- Third Place*
Neoadjuvant Chemo-Radiotherapy for Esophageal Cancer. Is it Worthwhile?
Wael Z. Tamin, MD, Worcester, Massachusetts
- 1998 *First Place*
Does Uninjured Skin Release Pro-Inflammatory Cytokines Following Trauma and Hemorrhage?
Robert A. Catania, MD, Providence, Rhode Island
- Second Place*
Percutaneous Sclerosis of Recurrent Thyroid Cysts
Sara W. Mayo, MD, Portland, Maine
- Third Place*
Extracorporeal Membrane Oxygenation for Non-Neonatal Acute Respiratory Failure
Peter T. Masiakos, MD, Boston, Massachusetts

- 1999 *First Place*
Mechanisms of the Salutory Effects of Dehydroepiandrosterone Following Trauma-Hemorrhage: Direct or Indirect Effects on Cardiac and Hepatocellular Functions
Doraid Jarrar, MD, Providence, Rhode Island
- Second Place*
Impact of Laparoscopic Staging in the Treatment of Pancreatic Carcinoma
Ramon E. Jimenez, MD, Boston, Massachusetts
- Third Place*
Is Admission for Pediatric Trauma Patients with Isolated Head Injury and Normal Head CT Scan Necessary?
Bernard Benedetto, MD, Springfield, Massachusetts
- 2000 *First Place*
Ten-Year Experience with 734 Pancreatic Resections: Changing Indications, Older Patients, and Decreasing Length of Hospitalization
James H. Balcom, IV, MD, Boston, Massachusetts
- Second Place*
Repair of Pectus Excavatum Deformities in Children: A New Perspective of Treatment Using Minimal Access Surgical Technique
Peter C. Wu, MD, Hartford, Connecticut
- Third Place*
The Effect of Grade and Surgery on Outcome of Gastrointestinal Stromal Tumors
Jean-Pierre E.N. Pierie, MD, PhD, Boston, Massachusetts
- 2001 *First Place*
Abnormal Motility in Ulcerative Colitis: Role of Inflammatory Cytokines
Matthew D. Vrees, MD, Providence, Rhode Island
- Second Place*
Late Outcomes After Laparoscopic Surgery for Gastroesophageal Reflux Disease
Jean Y. Liu, MD, White River Junction, Vermont

Third Place

Hand-Assisted Laparoscopic Liver Surgery

Marc Anotonetti, MD, Hartford, Connecticut

2002

First Place

MEN2: Genotype-Phenotype Analysis

Linwah Yip, MD, Houston, Texas

Second Place

Casting Type Calcifications with Invasion and High-Grade DCIS: A More Aggressive Disease?

Raul G. Zonzunegui, MD, Providence, Rhode Island

Third Place

Minimally Invasive Collis Gastroplasty: Institutional Experience

David H. Rothstein, MD, Portland, Maine

Third Place

Management of Adult Splenic Injury: A 20-year Perspective

Kimberly L. Hartnett, MD, Portland, Maine

2003

First Place

Major Lower Extremity Amputation: Outcome of a Modern Series

Bernadette Aulivola, MD, Boston, Massachusetts

Second Place

Is Completion Lymphadenectomy Following a Positive Sentinel Lymph Node Biopsy for Malignant Cutaneous Melanoma Always Necessary?

Nathel Elias, MD, Boston, Massachusetts

2004

First Place

Poly ADP-Ribose Polymerase (PARP) Inhibition Modulates Skeletal Muscle Injury Following Ischemia Reperfusion

Hong T. Hua, MD, Boston, MA

Second Place

Carotid Endarterectomy in 1650 Patients Under 60 Years Old: Implications for Screening

Desarom Teso, MD, Waterbury, Connecticut

Third Place

Localizing Colorectal Cancer by Colonoscopy: Are We Missing the Boat?

Nicole P. Piscatelli, MD, Burlington, Vermont

2005

First Place

Neoadjuvant Therapy and Local Recurrence in Pancreatic Adenocarcinoma

Sarah E. Greer, MD, Lebanon, New Hampshire

Second Place

Risk Factors for the Development of Abdominal Abscess Following Operation for Perforated Appendicitis: A Multi-Center Case Control Study

Marion C.W. Henry, MD, New Haven, Connecticut

Third Place (tie)

Is Right Hemicolectomy for 2.0 cm Appendiceal Carcinoids Justified

Zubin M. Bamboat, MD, Boston, Massachusetts

Women in Surgery: Do We Really Understand the Deterrents?

Debra A. Gargiulo, MD, Burlington, Vermont

2006

First Place

Evolving Patterns in the Detection of Pancreatic Neuroendocrine Tumors (PNETs): The Massachusetts General Hospital Experience from 1977 – 2005

Parsia A. Vagefi, MD, Boston, Massachusetts

Second Place

Improved Outcome Following Colectomy for Fulminant Pseudomembranous Colitis (PMC)

Syed O. Ali, MD, Hartford, Connecticut

Third Place

Endoscopically Assisted Laparoscopic Resections of Submucosal Gastric and GE Junction Tumors: A Novel Approach to Resection Based on Tumor Location

Alicia Privette, MD, Burlington, Vermont

- 2007 *First Place*
Improving Communication in the Surgical Intensive Care Unit: A Prospective Trial
 Mallory Williams, MD, Boston, Massachusetts
- Second Place*
Do All Patients Undergoing Parathyroidectomy Require Additional Neck Exploration When Intraoperative PTH Levels Do Not Decrease Appropriately?
 Patrick B. O’Neal, MD, Boston, Massachusetts
- Third Place*
Angiographic Embolization for Gastroduodenal Hemorrhage: Safety, Efficacy, and Predictors of Outcome
 George A. Poultides, MD, Farmington, Connecticut
- 2008 *First Place*
Extracorporeal Membrane Oxygenation for Non-neonatal Acute Respiratory Failure: The Massachusetts General Hospital Experience from 1990 to 2008
 Deepika Nehra, MD, Boston, Massachusetts
- Second Place*
Fulminant Clostridium Difficile Colitis: Patterns of Care and Predictors of Mortality
 Elizabeth A Sailhamer, MD, Boston, Massachusetts
- Third Place*
Outcomes Following Thyroidectomy and Parathyroidectomy in Pregnant Women in the US
 SreyRam Kuy, MD, New Haven, Connecticut
- 2009 *First Place*
Family and Gender Impact Career Goals: Results of a National Survey of 4586 Surgery Residents
 Kate V. Viola, MD, Yale University School of Medicine, New Haven, Connecticut
- Second Place*
Surgery and Radiation Therapy for Abdominal and Retroperitoneal Sarcoma: Both Necessary and Sufficient?
 Jessica P. Simons, MD, University of Massachusetts Medical School, Worcester, Massachusetts

Third Place

Pre-Operative Predictors of Positive or Close Margins Following Initial Partial Mastectomy for Breast Cancer

Alicia R. Privette, MD, University of Vermont/Fletcher Allen Health Care, Burlington, Vermont

2010

First Place

Acute Cholecystitis in the Elderly. Is Cholecystectomy Necessary?

Edward McGillicuddy, MD, Yale University School of Medicine

Second Place

The CT Diagnosis of Pneumatosis Intestinalis: Clinical Measures Predictive of the Need for Surgical Intervention

Vincent Duron, MD, Brown Medical School

Third Place

Aeromedical Transport of Patients With Traumatic Injuries: Discharge Within 24 Hours

Meredith Sorensen, MD, Dartmouth Hitchcock Medical Center

2011

First Place

The Clinical and Economic Impact of a Sustained Program in Global Plastic Surgery: Valuing Cleft Care in Resource-Poor Settings

Christopher D. Hughes, MD, University of Connecticut School of Medicine

Second Place

Join the Club: Impact of Resident and Attending Social Interactions on Overall Satisfaction Among 4,390 General Surgery Residents

Michael C. Sullivan, MD, Yale School of Medicine

Third Place

Variability in Utilization of Neoadjuvant Chemotherapy in Treatment of Women with Invasive Breast Cancer Eligible for Breast Conservation Therapy

Jill K. Onesti, MD, Grand Rapids Medical Education Partners

- 2012 *First Place*
Graduating Surgical Resident Operative Confidence: Insights into Residency Training Environment
 Annabelle L. Fonseca, MD, Yale University School of Medicine, Department of Surgery
- Second Place*
Secondary Overtriage: The Burden of Unnecessary Interfacility Transfers in a Rural Trauma System
 Meredith J. Sorensen, MD, Dartmouth Hitchcock Medical Center
- Third Place*
Impact of Immunocompromised Status on Outcomes in Patients with Necrotizing Soft Tissue Infection
 Emily K. Zeung, MD, Brigham and Women's Hospital
- 2013 *First Place*
Reducing Postoperative Venous Thromboembolism Complications with a Standardized Risk-Stratified Protocol and Mobilization Program
 Michael R. Cassidy, Boston University Medical Center
- Second Place*
Epidemiology and Outcomes of C. Difficile Infections in the Elderly
 Courtney Collins, University of Massachusetts
- Third Place*
Impact of Insurance Type on Pancreatic Cancer Outcomes: A Decade in Review
 Mariam Eskander, Beth Israel Deaconess Medical Center
- 2014 *First Place (tie)*
Peri-Operative Bundle Reduces Post-Operative Hepatic Surgery Infections
 Maureen V. Hill, MD, Dartmouth Hitchcock Medical Center
- The Liver Transplant Timeline: A Comparison of Patients with and without Hepatocellular Carcinoma from Listing to Post-Transplant Care**
 Madhukar S. Patel, MD, Massachusetts General Hospital/Harvard Medical School

- 2015 *First Place*
Suboptimal Compliance with NCCN Melanoma Guidelines: Who Is at Risk?
Andrew M. Blakely, MD, Rhode Island Hospital/Brown University
- Second Place*
Operative vs. Non-Operative Management of Pediatric Blunt Pancreatic Trauma: Evaluation of the National Trauma Data Bank
Maria Carmen Mora, MD, Baystate Medical Center, Tufts University School of Medicine
- 2016 *Clinical Science Award*
Single Incision Pediatric Endoscopic Surgery with a Glove Access Technique Versus Multiport Laparoscopic Appendectomy in Children: A Retrospective Study
Maria Carmen Mora, MD, Baystate Medical Center
- Basic Science Award*
Vascular Endothelial Growth Factor Accelerates Compensatory Lung Growth by Increasing Alveolar Units
Duy Dao, MD, Boston Children's Hospital
- Historical Award*
William W.L. Glenn: Surgeon-Scientist, Inventor, and NESS President
Andrew C.W. Baldwin, MD, Yale School of Medicine
- 2017 *Clinical Science Awards*
The Impact of Race on the Surgical Management of Adhesive Small Bowel Obstruction
Alexander S. Chiu, MD, Yale School of Medicine
- A Guideline for Discharge Opioid Prescriptions After Inpatient General Surgical Procedures**
Maureen Hill, MD, Dartmouth-Hitchcock Medical Center
- The Impact of an Acute Care Surgery Model on the General Surgery Service Revenue Stream**
Adam N. Paine, MD, University of Vermont Medical Center

Basic Science Award

**Tissue Engineering Approaches for Treating Long Gap
Esophageal Atresia**

Ishna Sharma, MD, UConn Health

2018

First Place

**Practice Patterns and Guideline Non-Adherence in Surgical
Management of Appendiceal Carcinoid Tumors**

Danielle R. Heller, Yale University School of Medicine

Second Place

**Atrial Fibrillation After Anatomic Lung Resection:
Amiodarone Prophylaxis and Risk Stratification**

Eleah Porter, Dartmouth-Hitchcock Medical Center

Third Place

**Does Overlapping Surgery Result in Worse Surgical
Outcomes? A Systematic Review and Meta-Analysis**

Rajshri Mainthia Gartland, Massachusetts General Hospital

NEW MEMBER AWARD RECIPIENTS

Sponsored by the NESS Scholars Foundation

- 2003 *(Tie)*
The Cost of Operative Training for Residents
Timothy J. Babineau, MD, Boston, Massachusetts
- Renal Transplant Survival from Older Donors: A Single Center Experience**
Paul E. Morrissey, MD, Providence, Rhode Island
- 2004 **Reduction of Hyperglycemia and Nosocomial Infections in a General-Surgical Intensive-Care Unit**
George A. Perdrizet, MD, Hartford, Connecticut
- 2005 **Treatment of Hepatic Abscess**
David A. Iannitti, MD, Providence, Rhode Island
- 2006 **Enhancing Compliance with Medicare Guidelines for Surgical Infection Prevention (SIP): An Institutional Experience with a Cross Disciplinary Quality Improvement Team**
Laurence E. McCahill, MD, Burlington, Vermont
- 2007 –
2010 **No award given.**
- 2011 **Long Term Complications After MammoSite Brachytherapy Compared to Whole Breast Radiation Therapy**
Kari M. Rosenkranz, MD, Lebanon, New Hampshire
- 2012 –
2015 **No award given.**
- 2016 **Surgical Technique and Time to Adjuvant Chemotherapy in Breast Cancer Patients**
Anees B. Chagpar, MD, MBA, MPH, Yale University, New Haven, Connecticut
- 2017 **Pregnancy and Motherhood During Surgical Training: Results of a Nationwide Survey of General Surgery Residents**
Erika L. Rangel, MD, Brigham and Women's Hospital, Boston, Massachusetts
- 2018 **No award given.**

BEST POSTER AWARD RECIPIENTS

Sponsored by the NESS Scholars Foundation

- 2005 **Decellularized Ovine Arterial Tissue: A Three-Dimensional Tubular Scaffold For Tissue Engineering Small Diameter Vascular Conduits**
Matthew P. Brennan, MD, Yale University, New Haven, Connecticut
- 2006 **A Simplified Technique for Single Stage Breast Reconstruction**
William G. Austen, Jr., MD, Massachusetts General Hospital, Boston, Massachusetts
- 2007 **Clinical Outcomes in Patients With Severe Diabetic Foot Ulcers Treated With and Without Hyperbaric Oxygen**
George A. Perdrietz, MD, University of Connecticut, Hartford Hospital, Hartford, Connecticut
- 2008 **Immunohistological Characterization of Tissue Engineered Graft Remodeling in Severe Combined Immunodeficient/Beige (SCID/bg) Mouse Model**
Rajendra F. Sawh-Martinez, BS, Yale University School of Medicine
- 2009 **N-acetyl-L-cysteine (NAC) Reduces Intraabdominal Adhesion Formation Through The Upregulation of Peritoneal Fibrinolytic Activity And Antioxidant Defenses**
Daniel I. Chu, MD, Boston University School of Medicine
- 2010 **Oral Resveratrol Supplementation Reverses Glucose Intolerance: The Role of Skeletal Muscle and the Liver**
Michael P. Robich, MD, Beth Israel Deaconess Medical Center, Boston, MA
- 2011 **Photochemical Tissue Bonding Improves Colonic Anastomotic Strength**
Prabhu Senthil-Kumar, MD, Massachusetts General Hospital

- 2012 **Colon Cancer Metastases Are Not Infiltrated by Favorably Prognostic T Cells: Evidence for the Escape Phase of the Cancer Immunoediting Hypothesis in Humans**
Bryan P. Stanifer, MD, Dartmouth Hitchcock Medical Center
- 2013 **A Novel Approach to Targeted Oncologic Therapy – Co-Culture Viability of Polymer Prodrug Conjugation to Mesenchymal Stem Cells**
Kaitlyn Wong, MD, MPH, Baystate Medical Center
- 2014 **Effective Triage of Early Stage Lung Cancer Patients in Community Hospitals Yields Low Surgical Mortality**
Christopher T. Ducko, MD, Brigham and Women’s Hospital
- 2015 **Improving Perioperative Counseling for Emergency Abdominal Surgery: Creation of a Scoring Tool to Predict One-Year Mortality in the Elderly**
Olubode A. Olufajo, MD, Brigham and Women’s Hospital, Boston, Massachusetts
- 2016 **Analysis of Trends of Breast Cancer Recurrence Detection**
Trishul Kapoor, MD, University of Vermont, College of Medicine, Burlington, Vermont
- 2017 **Local Excision Versus Radical Resection for 1 to 2 cm Carcinoid Tumors of the Rectum: A National Cancer Database Analysis**
Adam C. Fields, MD, Brigham and Women’s Hospital, Boston, Massachusetts
- 2018 **Programmed Cell Death Receptor-1 (PD-1)’s Effects on Innate Immune Cells: Unraveling Lung Injury After Neonatal Intra-Abdominal Sepsis**
Eleanor A. Fallon, MD, Brown University/Rhode Island Hospital, Providence, RI

PAPER OF THE YEAR AWARD RECIPIENTS

The New England Surgical Society recognizes a Paper of the Year at its Annual Meeting. The paper so designated must be one of the highest-cited manuscripts, published during the previous five calendar years, for which an Active or Senior NESS member was the first or last author. In the following, only the NESS-member first and/or last author(s) are listed; consult the online award listing at nesurgical.org/awards/paper-year-awardees.cgi for links to the complete author block.

- 2018 Genomic Responses in Mouse Models Poorly Mimic Human Inflammatory Diseases**
Ronald G. Tompkins, Massachusetts General Hospital, Boston, MA
- 2017 Comparison of a Lymph Node Ratio-Based Staging System with the 7th AJCC System for Gastric Cancer Analysis of 18,043 Patients from the SEER Database**
Sam S. Yoon, Massachusetts General Hospital, Boston, MA
- 2016 CO-AWARDS**
Prognosis of Invasive Intraductal Papillary Mucinous Neoplasm Depends on Histological and Precursor Epithelial Subtypes
Sarah P. Thayer, Massachusetts General Hospital and Harvard Medical School, Boston, MA
- Laparoscopic Sleeve Gastrectomy Has Morbidity and Effectiveness Positioned between the Band and the Bypass**
Matthew M. Hutter, Massachusetts General Hospital, Boston, MA
- 2015 Regeneration and Orthotopic Transplantation of a Bioartificial Lung**
Harald C. Ott, Massachusetts General Hospital, Harvard Medical School, Boston, MA

- 2014** **A Surgical Safety Checklist to Reduce Morbidity and Mortality in a Global Population**
Atul A. Gawande, Safe Surgery Saves Lives Study Group
- 2013** **Epidermal Growth Factor Gene Functional Polymorphism and the Risk of Hepatocellular Carcinoma in Patients with Cirrhosis**
Kenneth K. Tanabe, Massachusetts General Hospital, Boston, MA

ACS/NESS HEALTH POLICY AND MANAGEMENT SCHOLARSHIP RECIPIENTS

Sponsored by the NESS Scholars Foundation

The American College of Surgeons and the New England Surgical Society Scholars Foundation offer an annual scholarship to subsidize attendance and participation in the Executive Leadership Program in Health Policy and Management at Brandeis University in Waltham, Massachusetts. The award is in the amount of \$8,000, to be used toward the cost of tuition, travel, housing, and subsistence during the period of the course.

2012	Joel D. Lafleur, MD, Rockport, Maine
2013	Michael P. Hirsh, MD, Northboro, Massachusetts
2014	David McAneny, MD, Boston, Massachusetts
2015	Neal E. Seymour, MD, Springfield, Massachusetts
2016	Christopher S. Muratore, MD, Providence, Rhode Island
2017	Alik Farber, MD, Boston, Massachusetts
2018	John R. Romanelli, MD, Springfield, Massachusetts
2019	Jacqueline J. Wu, MD, Springfield, Massachusetts

SCHOLARS RESEARCH GRANT RECIPIENTS

Sponsored by the NESS Scholars Foundation

The Scholars Research Grant allows the recipient to pursue research in diverse areas of medicine. The purpose of the Scholars Research Grant is to advance innovative surgical research via multiyear support. The recipient of this grant will be awarded \$10,000 in the initial year; the grant can then be renewed by review of the NESS Scholars Foundation Board of Trustees for a succeeding year, for up to an additional \$10,000.

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|------|---|
| 2014 | The Role of Neuropilin-1 (NRP1) on Dendritic Cells in the Tolerogenic Liver Environment
Heung Bae Kim, MD, Children's Hospital, Boston, Massachusetts |
| 2015 | Documentation of Enteric Neurogenesis in an In Vivo Murine Model
Robert A. Cowles, MD, Yale University, New Haven, Connecticut |
| 2016 | Assessment of the Correlation Between Gastric Morphology, Gastric Emptying, Post Prandial GLP-1 Response, and Hunger Scores Following Longitudinal Sleeve Gastrectomy
Richard A. Perugini, MD, University of Massachusetts
Memorial Medical Center, Worcester, Massachusetts |
| 2017 | The Role of Intestinal Immunity in the Anti-Diabetic Effects of Sleeve Gastrectomy
Eric G. Sheu, MD, Brigham and Women's Hospital,
Boston, Massachusetts |
| 2018 | Personalized Cell Therapy Using Gene-Edited Liver Progenitor Cells for the Treatment of Inborn Errors of Metabolism
Khashayar Vakili, MD, Boston Children's Hospital,
Boston, Massachusetts |

NEW ENGLAND SURGICAL SOCIETY
2019 ANNUAL MEETING

SEPTEMBER 13 – SEPTEMBER 15, 2019

MONTREAL MARRIOTT CHÂTEAU CHAMPLAIN
MONTREAL, QC, CANADA

FRIDAY, SEPTEMBER 13, 2019

9:00 AM – 5:00 PM	REGISTRATION <i>Ballroom Foyer (Lower Lobby)</i>
9:00 AM – 5:00 PM	SPEAKER READY AREA <i>Ballroom Foyer (Lower Lobby)</i>
9:00 AM – 12:00 PM	POSTER OF DISTINCTION SET-UP <i>Salle De Bal Ballroom (Lower Lobby)</i>
9:00 AM – 12:00 PM	POSTER SET-UP <i>Viger A-C (Lower Lobby)</i>
12:00 PM – 3:00 PM	EXHIBIT HALL HOURS <i>Viger A-C (Lower Lobby)</i>

Scientific Session I

12:30 PM – 2:00 PM

Salle De Bal Ballroom (Lower Lobby)

Co-Moderators: Matthew A. Conway
Erika L. Rangel

Podium papers (8-minute presentation/5-minute discussion).

Brief papers (3-minute presentation/2-minute discussion).

1. The Effect of Hepatitis C Virus Infection on Kidney Transplant Outcomes in the Era of Direct-Acting Antiviral Therapy

***Qing Yuan^{1,2}**, *Shanjuan Hong¹, *Andric Perez-Ortiz¹,
*Enid E. Martinez³, *David C. Chang¹, Joren C. Madsen^{1,4},
Nahel Elias^{1,5}

¹Transplant Center, Massachusetts General Hospital, Boston, MA; ²Organ Transplant Institute, 8th Medical Center, Chinese PLA General Hospital, Beijing, China; ³Division of Critical Care Medicine, Boston Children's Hospital, Boston, MA; ⁴Division of Cardiac Surgery, Massachusetts General Hospital and Harvard Medical School, Boston, MA; ⁵Division of Transplantation, Department of Surgery, Massachusetts General Hospital and Harvard Medical School, Boston, MA

+2. A Volume-Restrictive Burn Resuscitation Bundle and the Incidence of Acute Kidney Injury

Roberto Cortez, Benjamin Hall, *David Heffernan,
*Andrew Stephen, *Michael Connolly, *Charles Adams,
William G. Cioffi, David T. Harrington;
Brown University/Rhode Island Hospital, Providence, RI

* NESS Non-Members

+ RPE Award Eligible

3. **Evolving Multimodality Treatment Strategies in Locally Advanced Non-Small Cell Lung Cancer**
 *Abby White¹, *Suden Kucukak¹, *Daniel N. Lee¹,
 *Emily Polhemus¹, *Emanuele Mazzola², *Michael Jaklitsch¹,
 *Steven Mentzer¹, *Jon Wee¹, *Raphael Bueno¹,
 Scott J. Swanson¹
¹Brigham and Women's Hospital, Boston, MA; ²Dana Farber Cancer Institute, Boston, MA
4. **Surgeon-Performed Ultrasound Alters Pre-Operative Planning in Patients with Endemic Goiter**
 Peter J. Mazzaglia³, *Sravanthi Puranam¹, *Zhou Joy¹,
 *Fletcher Starnes²
¹Warren Alpert School of Medicine at Brown University, Providence, RI; ²Albany Medical Center, Albany, NY; ³Rhode Island Hospital, Providence, RI
- +5. **A Fast Track Pathway in Acute Care Surgery at an Academic Medical Center**
 *Amanda Fazzalari^{1,2}, *Shruthi Srinivas¹, *Natalie Pozzi²,
 *Reeti Sheoran¹, *Joseph Sabato¹, *Dawn Durocher¹,
 *Martin Reznick¹, *Francesco Aiello¹, Demetrius Litwin¹,
 Mitchell A. Cahan¹
¹University of Massachusetts Medical School, Worcester, MA; ²Saint Mary's Hospital, Waterbury, CT
- ^Brief 1. **Higher Risk of Urinary Tract Infections in Renal Transplant Recipients Receiving Pentamidine Versus Trimethoprim-Sulfamethoxazole (TMP-SMX) for Pneumocystis Pneumonia Prophylaxis**
 *Whitney Fu¹, *Maria Barahona¹, *Taylor Harkness¹,
 *Elizabeth Cohen¹, *David Reardon², Peter Yoo¹
¹Yale School of Medicine, New Haven, CT; ²Vizient, Inc., Irving, TX

* NESS Non-Members

+ RPE Award Eligible

^ Brief Report Award Eligible

- ^Brief 2. Development and Five-Year Results of a Pediatric Appendicitis Working Group: Harmonizing Care and Increasing Value**
***Yuqi Zhang**, *Sam Miller, Michael G. Caty, Emily R. Christison-Lagay, Robert A. Cowles, *David H. Stitelman, *Beth L. Emerson, *Cicero T. Silva, *Thomas R. Goodman, *Brian Dillon, Lisa Sagnella, *Daniel G. Solomon, Doruk E. Ozgediz
Yale New Haven Hospital, New Haven, CT
- Brief 3. The Shape of Breast Cancer**
***Brook K. Byrd¹**, *Venkataramanan Krishnaswamy², *Timothy B. Rooney³, *Rebecca A. Zuurbier³, Richard J. Barth Jr.⁴
¹*Thayer School of Engineering, Dartmouth College, Hanover, NH;* ²*CairnSurgical, Inc., Lebanon, NH;* ³*Department of Radiology, Dartmouth-Hitchcock Medical Center, Lebanon, NH;* ⁴*Department of Surgery, Dartmouth-Hitchcock Medical Center, Lebanon, NH*
- ^Brief 4. Longer Travel Distance Associated with Higher Utilization of Chest Radiographs After Chest Tube Removal in Thoracic Surgery Patients**
Eleah D. Porter¹, *Kayla A. Fay¹, *Spencer W. Trooboff¹, *Rian M. Hasson¹², *Timothy M. Millington¹², *David J. Finley¹², *Joseph D. Phillips¹²
¹*Dartmouth-Hitchcock Medical Center, Lebanon, NH;* ²*Geisel School of Medicine, Hanover, NH*
- ^Brief 5. Transaminases Are Better Biochemical Predictors of Choledocholithiasis Than Bilirubin and Alkaline Phosphatase**
***Thomas Peponis**, *Nikolaos Kokoroskos, *Jae Moo Lee, *April Mendoza, *Martin Rosenthal, *Noelle Saillant, Haytham Kaafarani, *David King, George Velmahos, *Peter Fagenholz
Massachusetts General Hospital, Boston, MA

2:00 PM – 2:30 PM

**COFFEE BREAK: VISIT
EXHIBITS & POSTERS**
Viger A-C (Lower Lobby)

* NESS Non-Members

^ Brief Report Award Eligible

2:30 PM – 3:00 PM

GUEST SPEAKER

Salle De Bal Ballroom (Lower Lobby)

Being an Academic Surgeon in the Canadian Healthcare System: The Good, the Bad, and the Ugly

Gerald M. Fried

*McGill University Health Centre,
Montreal, QC*

Scientific Session II

3:00 PM – 5:00 PM

Salle De Bal Ballroom (Lower Lobby)

Moderator: **Barbara A. Ward**
 Catherine C. Chen

Podium papers (8-minute presentation/5-minute discussion).

Brief papers (3-minute presentation/2-minute discussion).

- +6. A Standardized Ultrasound Reporting Template for Pediatric Appendicitis Improves Diagnostic Rates and Decreases CT Utilization Among Both Pediatric and Non-Pediatric Radiologists: An Analysis of 3539 Patients**

***Samuel Miller, *Yuqi Zhang, Michael G. Caty, Emily R. Christison-Lagay, Robert A. Cowles, David H. Stitelman, *Thomas R. Goodman, *Cicero T. Silva, *Beth L. Emerson, *Brian Dillon, *Lisa Sagnella, Doruk Ozgediz, *Daniel G. Solomon**
Yale University School of Medicine, New Haven, CT

* NESS Non-Members

+ RPE Award Eligible

- +7. Care Discontinuity in Emergency General Surgery: Does Hospital Quality Matter?**
 *Manuel Castillo-Angeles, *Molly Jarman, *Daniel J. Sturgeon,
 *Zara Cooper, Ali Salim, Joaquim Havens
Brigham and Women's Hospital, Boston, MA
- +8. Improved Mortality in Necrotizing Pancreatitis with a Multidisciplinary Minimally Invasive Step Up Approach: Comparison to a Modern Open Necrosectomy Cohort**
 *Casey M. Luckhurst, *Ahmed E. Elsharkawy, *Ahmed I. Eid,
 *Majed El Hechi, *Lydia M. Maurer, Haytham M. Kaafarani,
 *Ashraf Thabet, *David G. Forcione, Carlos Fernandez-Del
 Castillo, Keith D. Lillemoe, *Peter J. Fagenholz
Massachusetts General Hospital, Boston, MA
- +9. Contrast Enhanced Computed Tomography During Normothermic Machine Perfusion of Kidneys**
 *Matthew Harris¹, *Jenna DiRito¹², *Taras Lysy¹,
 *Shin Rong Lee¹, *Nabil Boutagy¹, *Susann Spindler¹,
 Peter Yoo¹, *Sarah Hosgood², David Mulligan¹,
 *Michael Nicholson², *Albert Sinusas¹, *Gregory Tietjen¹,
 *Danielle Haakinson¹
¹*Yale University School of Medicine, New Haven, CT;*
²*University of Cambridge, Cambridge, United Kingdom*
- #10. The Effect of Anticoagulation on Outcomes After Liver and Spleen Injuries: A Research Consortium of New England Centers for Trauma (ReCONNECT) Study**
 Bishwajit Bhattacharya¹, *Reza Askari², Kimberly A. Davis¹,
 *Jon Dorfman³, *Ahmed I. Eid⁴, *Ahmed E. Elsharkawy⁴,
 *George Kasotakis⁵, *Sandra Mackey⁶, *Stephen Odom⁷,
 *Barbara U. Okafur², *Michael Rosenblatt⁶, *Alex Rudtisky⁵,
 George Velmahos⁴, Adrian A. Maung¹
¹*Yale School of Medicine, New Haven, CT;* ²*Brigham and Women's Hospital, Boston, MA;* ³*UMass Medical School, Worcester, MA;* ⁴*Massachusetts General Hospital, Boston, MA;*
⁵*Boston University, Boston, MA;* ⁶*Lahey Clinic, Burlington, MA;*
⁷*Beth Israel Deaconess Medical Center, Boston, MA*

* NESS Non-Members

+ RPE Award Eligible

New Member Award Eligible

- #11. Health Maintenance and Screening Among Residents**
Erika Rangel, *Manuel Castillo Angeles, *Mehreen Kise, *Tovy Kamine, Reza Askari
Brigham and Women's Hospital, Boston, MA
- 12. Background Checks and State-to-State Variation in Firearm Suicide and Homicide Rates**
Frederick H. Millham
Newton Wellesley Hospital, Newton, MA
- +13. Treatment of Facial Fractures at a Level 1 Trauma Center: Do Medicaid and Non-Medicaid Enrollees Receive the Same Care?**
***Amanda Fazzalari**, *David Alfego, *Joseph Taylor Shortsleeve, *Qiming Shi, *Jomol Mathew, Demetrius Litwin, Mitchell A. Cahan
University of Massachusetts Medical School, Worcester, MA
- ^Brief 6. Gender Representation by Specialty Track at Surgical Meetings: The American and Australasian Experiences**
***Allison R. Wilcox**¹, *Christine S. Lai², *Fellicia E. Stanzah², *Jessica G. Farrar², Sandra L. Wong¹
¹*Dartmouth-Hitchcock Medical Center, Lebanon, NH;*
²*University of Adelaide, The Queen Elizabeth Hospital, Adelaide, Australia*
- ^Brief 7. Blood Gene Expression Profiles Support Early Changes in Immunometabolism in Patients Following Sleeve Gastrectomy**
***Tammy Lo**¹, *Keyvan Heshmati¹, Ali Tavakkoli¹, *Damien C. Croteau-Chonka², Eric G. Sheu¹
¹*Brigham and Women's Hospital, Boston, MA;* ²*Channing Division of Network Medicine, Boston, MA*
- ^Brief 8. Ketorolac Is Not Associated with Adverse Outcomes Following Pancreaticoduodenectomy**
***Whitney S. Brandt**, *Sara Abou Azar, *Raymond A. Jean, *John W. Kunstman, Ronald R. Salem
Yale New Haven Hospital, New Haven, CT

* NESS Non-Members

+ RPE Award Eligible

^ Brief Report Award Eligible

New Member Award Eligible

5:00 PM – 5:45 PM

STATE CAUCUS MEETINGS

Connecticut	<i>Maisonnette A (36th Floor)</i>
Maine	<i>Maisonnette F (36th Floor)</i>
Massachusetts	<i>Salle De Bal Ballroom</i>
New Hampshire	<i>Maisonnette E (36th Floor)</i>
Rhode Island	<i>Maisonnette B (36th Floor)</i>
Vermont	<i>Maisonnette C (36th floor)</i>

6:00 PM – 7:00 PM

WELCOME RECEPTION

Le Caf Conc (Lower Lobby)

SATURDAY, SEPTEMBER 14, 2019

- 9:00 AM – 1:00 PM** **REGISTRATION**
Ballroom Foyer (Lower Lobby)
- 9:00 AM – 1:00 PM** **SPEAKER READY AREA**
Ballroom Foyer (Lower Lobby)
- 7:00 AM – 10:45 AM** **EXHIBIT HALL HOURS**
Viger A-C (Lower Lobby)
- 7:00 AM – 8:00 AM** **CONTINENTAL BREAKFAST**
Viger A-C (Lower Lobby)
- 7:00 AM – 7:45 AM** **POSTERS OF DISTINCTION
BEST POSTER AWARD**
Salle De Bal Ballroom
Moderator: Matthew A. Conway

BASIC SCIENCE FIRST PLACE AWARD – NESS RESIDENT AND FELLOW RESEARCH DAY

- ♦ **POD1.** **Decreased Recurrence in Sarcoma Using
Double-Loaded Paclitaxel-Eluting Polymer Films**
*David A. Mahvi¹, *Catalina Bordeianu², *Ngoc-Quynh Chu¹,
*Jeremy Miller², *Mark W. Grinstaff², *Yolonda L. Colson³,
Chandrajit P. Raut¹
*¹Brigham and Women's, Boston, MA; ²Boston University,
Boston, MA; ³Massachusetts General Hospital, Boston, MA*
- ♦ **POD2.** **Innovative Process for Department-Wide Engagement
in Quality Improvement: Experience from the
Massachusetts General Hospital**
*Yanik J. Bababekov, *David C. Chang, *Ya-Ching Hung,
*Yu-Tien Hsu, *Daniel Hashimoto, *Elan Witkowski,
*Alex B. Haynes, John T. Mullen, Allan M. Goldstein,
Keith D. Lillemoe
Massachusetts General Hospital, Boston, MA

* NESS Non-Members

♦ Poster of Distinction

- ♦ **POD3. Chemoprevention by Bromodomain Inhibition in a Rodent Model of Hepatocellular Carcinoma**
 *Shen Li¹, *Nourdine Hamdane², *Frank Jühling²,
 *Gunisha Arora¹, *Mozhdeh Sojoodi¹, *Derek J. Erstad¹,
 *Michael Lanuti¹, *Thomas F. Baumert², *Bryan C. Fuchs¹,
 Kenneth K. Tanabe¹
¹Massachusetts General Hospital, Boston, MA; ²Institut de Recherche sur les Maladies Virales et Hépatiques, Strasbourg, France
- ♦ **POD4. Tumor Deposits in Stage III Colon Cancer: Correlation with Other Histopathologic Variables, Prognostic Value and Risk Stratification**
 Victor E. Pricolo^{1,2}, *Jon Steingrimsson³, *Tracey J. McDuffie¹,
 *Joshua M. McHale¹, *Brian McMillen¹, *Mark Shparber¹
¹Southcoast Health Charlton Memorial Hospital, Fall River, MA; ²Department of Medical Education, Alpert Medical School of Brown University, Providence, RI; ³Brown University School of Public Health, Providence, RI
- ♦ **POD5. Specific Amino Acid Substitution As Well As RET Codon Location Influence Age of Onset and Penetrance of Pheochromocytoma in MEN2 Kindreds**
 *Danielle B. Cameron¹, Jill C. Rubinstein², Glenda G. Callender³,
 *Catherine W. Dinauer³, Emily R. Christison-Lagay³
¹Massachusetts General Hospital, Boston, MA; ²Memorial Sloan Kettering Cancer Center, New York, NY; ³Yale School of Medicine, New Haven, CT
- ♦ **POD6. Venous Thromboembolism Prophylaxis in Patients Undergoing Breast Surgery**
 *Na Eun Kim¹, *Liam Conway-Pearson², *Kevin Bachrach²,
 Maureen T. Kavanah¹, Jane E. Mendez³, Teviah E. Sachs¹,
 *Thurston F. Drake¹, David McAneny¹, *Michael R. Cassidy¹
¹Boston Medical Center, Boston, MA; ²Boston University School of Medicine, Boston, MA; ³Baptist Health South Florida, Miami, FL

* NESS Non-Members

♦ Poster of Distinction

- ♦ **POD7. A Role for RAD51-Interacting POLQ SNPs in Papillary Thyroid Carcinogenesis**
*Jianliang Man, *Timothy Murtha, *Reju Korah, Tobias Carling
Yale, New Haven, CT
- ♦ **POD8. RYGB Mediated Lipid Metabolism Changes Contribute to T2D Resolution**
*Tammy Lo, *Renuka Subramaniam, Eric G. Sheu, Ali Tavakkoli
Brigham and Women's Hospital, Boston, MA
- ♦ **POD9. Optimizing Follow-Up of Incidental Findings: A Structured Survey of Primary Care Providers**
*Stephanie D. Talutis¹, *Ellen Childs², *Philip E. Knapp¹,
*Avneesh Gupta¹, *Cleopatra Ferrao¹, David McAneny¹,
*F. Thurston Drake¹
¹*Boston University, Boston, MA;* ²*Boston University School of Public Health, Boston, MA*
- ♦ **POD10. PHD Inhibition Accelerates Lung Growth in a Murine Model of Unilateral Pneumonectomy**
*Victoria Ko, *Duy T. Dao, *Lorenzo Anez-Bustillos,
*Lumeng J. Yu, *Bennet S. Cho, *Amy Pan, Mark Puder
Boston Children's Hospital, Boston, MA
- P11. The Effect of the Business Cycle on the Living Organ Donation Rate: Evidence and Implications**
Sean S. Lee¹, Michael W. Sielski², Kevin P. Charpentier^{1,3}
¹*The Warren Alpert Medical School of Brown University, Providence, RI;* ²*Brown University, Providence, RI;*
³*Department of Surgery, Rhode Island Hospital, Providence, RI*
- P12. Racial Disparities in Body Image Satisfaction Following Bariatric Surgery**
*Danny Mou¹, *Claire de Vries¹, *Rene Wiezer²,
*Simon Nienhuijs³, *Ronald Liem⁴, *Maarten Hoogbergen³,
*Dennis Makarawung⁵, *Regan Bergmark¹, *Anne Klassen⁶,
Ali Tavakkoli¹, *Andrea Pusic¹, *RN van Ween⁷
¹*Brigham and Women's Hospital, Boston, MA;* ²*Sint Antonius Ziekenhuis, Gouda, Netherlands* ³*Catharina Ziekenhuis, Eindhoven, Netherlands;* ⁴*Groene Hart Hospital, Gouda, Netherlands;* ⁵*Sint Antonius Ziekenhuis, Nieuwegein, Netherlands;* ⁶*McMasters University, Hamilton, ON, Canada;*
⁷*OLVG West, Amsterdam, Netherlands*

* NESS Non-Members

♦ Poster of Distinction

- P13. The Association of Primary Language with Outcomes After Cancer Operations at a Single Tertiary Referral Center and Safety Net Hospital**
***Frederick A. Godley IV**, *Timothy Feeney, *Christine Park, *Michael R. Cassidy, *Teviah E. Sachs, David McAneny, Jennifer F. Tseng, *Frederick T. Drake
Boston University School of Medicine, Boston, MA
- P14. How to Reduce Unnecessary Postoperative Labs After Elective General Surgery**
Eleah D. Porter¹, *Julia L. Kelly¹, *Lye-Yeng Wong², *Allison R. Wilcox¹, Christina V. Angeles^{1,2}
¹*Dartmouth-Hitchcock Medical Center, Lebanon, NH;*
²*Geisel School of Medicine, Hanover, NH*
- P15. Repeat Dosing in the Retinoic Acid Model of Transamniotic Stem Cell Therapy for Spina Bifida**
***Sarah Tracy**¹, *Alexander Chalpin¹, *Stefanie Lazow¹, *Ina Kycia², *Christopher Chan³, *Adam Finkelstein⁴, *David Zurakowski², Dario Fauza²
¹*Boston Children's Hospital and Beth Israel Deaconess Medical Center, Boston, MA;* ²*Boston Children's Hospital, Boston, MA;* ³*Boston University, Boston, MA;* ⁴*Lafayette College, Easton, PA*
- P16. Impact of Delay in ICU Transfers on the Rates of ICU Readmissions: An Unintended Randomized Study**
***Stephen E. Ranney**, Ajai K. Malhotra, *Peter Callas, *Lloyd Patashnick, *Samy Ramadan, *Jennifer Gratton, *Amy Sharpe, *Deirdre LaFrance, Margaret A. Tandoh, William E. Charash, *Gary C. An, *Tim H. Lee
University of Vermont Medical Center, Burlington, VT
- P17. Routine Blood Count Monitoring Is Unnecessary After Uncomplicated Appendectomy**
Eleah D. Porter¹, *Lye-Yeng Wong², *Allison R. Wilcox¹, Jenaya L. Goldwag¹, *Spencer W. Trooboff¹, Eric D. Martin^{1,2}, *Alexandra Briggs^{1,2}, Christina V. Angeles^{1,2}, *Andrea B. Wolffing^{1,2}
¹*Dartmouth-Hitchcock Medical Center, Lebanon, NH;*
²*Geisel School of Medicine, Hanover, NH*

* NESS Non-Members

- P18. Neighborhood Risk: Socioeconomic Status and Hospital Admission for Pediatric Burn Patients in Rhode Island**
***Mary A. Palilonis¹, *Lauren Schlichting², *Michelle L. Rogers², David T. Harrington¹, *Patrick M. Vivier²**
¹*Brown University/Rhode Island Hospital, Providence, RI;*
²*Hassenfeld Child Health Innovation Institute, Providence, RI*
- P19. Evaluation of a Preceptorship Model on the Third Year General Surgery Clerkship**
***Alaina D. Geary, *Luise I.M. Pernar, *Cullen O. Carter**
Boston Medical Center, Boston, MA
- P20. Discharge Destination Following Emergent Major Colectomy: An Analysis of Preoperative and Intraoperative Predictive Factors**
Mehida Rojas-Alexandre, *David A. Mahvi, *Pamela Lu, *Richard Urman, *Jason S. Gold, Edward E. Whang
Brigham and Women's Hospital, Boston, MA
- P21. Participant Evaluation of a Novel, Multi-Institution Coach Training Workshop for Practicing Surgeons**
***Jason C. Pradarelli^{1,2}, *Steven Yule^{1,2}, *Kurt W. Lowery², *Jim Knight^{3,4}, Douglas S. Smink^{1,2}**
¹*Brigham and Women's Hospital, Boston, MA;* ²*Ariadne Labs, Boston, MA;* ³*Instructional Coaching Group, Lawrence, KS;* ⁴*University of Kansas, Lawrence, KS*
- P22. Enhanced Recovery After Surgery: Effects on Narcotic Usage in a Community Hospital**
Craig Hawkins, *Lynne Pinkham, *Melissa Streeter, *Aaron Koch
Mid Coast Hospital, Brunswick, ME
- P23. Hospital-Based Variations in Geriatric Surgical Safety for Emergency Operations**
***Robert D. Becher, *Michael P. DeWane, *Nitin Sukumar, *Marilyn J. Stolar, *Thomas M. Gill, *Cheryl K. Zogg, Kevin M. Schuster, Adrian A. Maung, Kimberly A. Davis**
Yale School of Medicine, New Haven, CT

* NESS Non-Members

- P24. Downregulation of Cytochrome P450 4B1 Is Associated with Large, Hormone-Inactive Adrenocortical Adenomas**
***Thomas R. Schneider**^{1,2}, ***Norman G. Nicolson**^{2,3},
***Reju Korah**^{2,3}, **Tobias Carling**^{2,3}
¹*Frank H. Netter MD School of Medicine, North Haven, CT;*
²*Yale Endocrine Neoplasia Laboratory, New Haven, CT;* ³*Yale School of Medicine, Department of Surgery, New Haven, CT*
- P25. Incidence of Fascial Defects at Prior Stoma Sites in Patients with Colorectal Cancer**
Jenaya L. Goldwag, ***Lauren R. Wilson**, ***Srinivas J. Ivatury**,
***Michael J. Tsapakos**, ***Matthew Z. Wilson**
Dartmouth Hitchcock Medical Center, Lebanon, NH
- P26. Tracking Outcomes of Tracheoesophageal Fistula and Esophageal Atresia in Pediatric Population**
***Ishna Sharma**, ***Shefali Thaker**, ***Todd Jensen**, **Christine Finck**
Connecticut Children's Medical Center, Hartford, CT
- P27. Increased Disease Severity in Patients Suffering from Appendicitis with Cultures Growing *Streptococcus Anginosus***
***Allison R. Wilcox**¹, ***Olivia A. Sacks**², ***Laura E. Baumann**¹,
Eleah D. Porter¹, **Daniel P. Croitoru**¹, ***Reto M. Baertschiger**¹
¹*Dartmouth-Hitchcock Medical Center, Lebanon, NH;*
²*Geisel School of Medicine at Dartmouth, Hanover, NH*
- P28. Post-Operative Opioid Prescription and Usage Patterns: Impact of Public Awareness and State Mandated Prescription Policy Implementation**
***Mayo H. Fujii**¹, **Ajai K. Malhotra**¹, ***Ethan Jones**¹,
***Thomas P. Ahern**², ***Loic Fabricant**¹, ***Christos Colovos**¹
¹*University of Vermont Medical Center, Burlington, VT;*
²*University of Vermont Larner College of Medicine, Burlington, VT*

* NESS Non-Members

- P29. Correlation of Stomach Morphology with Gastrointestinal Hormone Response Following Laparoscopic Sleeve Gastrectomy**
Richard A. Perugini, *Kashayar M. Rafatzand, *Laura Alonso, John K. Kelly, Donald R. Czerniach, Philip Cohen
University of Massachusetts Medical School, Worcester, MA
- P30. Risk Factors of Mortality in Patients with Necrotizing Soft Tissue Infection**
 ***Mahsa Shariat**, *Ramsis Ramsis, *Manuel Castillo Angeles, *Mehreen Kisat, *Deepika Nehra, Reza Askari
Brigham and Women's Hospital, Boston, MA
- P31. Postnatal Fate of Donor Mesenchymal Stem Cells After Transamniotic Stem Cell Therapy**
 ***Sarah Tracy**¹, *Alexander Chalpin¹, *Stefanie Lazow¹, *Ina Kycia², *Adam Finkelstein³, *Christopher Chan⁴, *David Zurakowski², Dario Fauza²
¹Boston Children's Hospital and Beth Israel Deaconess Medical Center, Boston, MA; ²Boston Children's Hospital, Boston, MA; ³Lafayette College, Easton, PA; ⁴Boston University, Boston, MA
- P32. Eliminating Opioids from Breast Conserving Surgery: A Perioperative Pain Management Pathway**
 ***Ravinder Kang**¹, *Jackson T. Read², *Adam C. Glaser², *Richard J. Barth Jr.¹
¹Dartmouth Hitchcock Medical Center, Lebanon, NH; ²Geisel School of Medicine at Dartmouth, Hanover, NH
- P33. Integrin VLA3 Mediates Endothelial Barrier Damage by Human Sepsis Patient Neutrophils In Vitro**
 ***Chelsey C. Ciambella**¹, *Catherine M. Dickinson¹, David S. Heffernan¹, *Minsoo Kim², William G. Cioffi¹, *Jonathan S. Reichner¹
¹Brown University School of Medicine, Division of Surgical Research, Rhode Island Hospital, Providence, RI, Providence, RI; ²University of Rochester, Department of Microbiology and Immunology, Center for Vaccine Biology and Immunology, Rochester, NY

* NESS Non-Members

- P34. Surgical and Oncologic Outcomes of Open Versus Laparoscopic Distal Pancreatectomy in a Low-Volume Setting**
*Susanna W. de Geus, *Kurt S. Schultz, *Timothy Feeney,
*Sing Chau Ng, *Thurston F. Drake, David McAneny,
Jennifer F. Tseng, Teviah E. Sachs
Boston Medical Center, Boston, MA
- P35. The Financial Burden of Thyroid Cancer Treatment**
*Shen Li, *Sarah Duncan, *Anam Choudhary,
*Simran Budhwani, Benjamin C. James
Beth Israel Deaconess Medical Center, Boston, MA
- P36. Online Patient Portal Use Is Associated with Decreased Time to Deceased Donor Renal Transplant in Patients on Hemodialysis**
*Polina V. Zmijewski^{1,2}, *Eliza Decroce- Movson²,
*Steven E. Reinert³, *Meaghan M. Mallette¹, *Jason T. Machan^{1,2},
Paul E. Morrissey^{1,2}, *Adena J. Osband^{1,2}
¹Rhode Island Hospital, Providence, RI; ²The Warren Alpert Medical School of Brown University, Providence, RI;
³Lifespan Information Services, Providence, RI
- P37. Socioeconomic Disparity in the Surgical Management and Outcomes of Familial Adenomatous Polyposis (FAP) Disease at Children's Hospitals**
*Briana Leung, Michael Tirabassi
Baystate Medical Center, Springfield, MA
- P38. Diuresis As an indicator of the Resolution of Ileus**
*Robin Riley, *Sarah Kelso, *Tom Ahern, James Murphy
University of Vermont Medical Center, Burlington, VT

* NESS Non-Members

Scientific Session III

7:45 AM – 8:40 AM

Salle De Bal Ballroom (Lower Lobby)

**Co-Moderators: Marlene Cutitar
David McAneny**

Podium papers (8-minute presentation/5-minute discussion).

Brief papers (3-minute presentation/2-minute discussion).

- +14. Four Factor Prothrombin Complex Concentrate Compared to Fresh Frozen Plasma in Patients on Warfarin with Traumatic Intracranial Hemorrhage: A Real-World Analysis**
 *Shunella Lumas, *Walter Hsiang, *Eunice Baik,
 *Robert D. Becher, Kimberly A. Davis, Kevin M. Schuster
Yale School of Medicine, New Haven, CT
- 15. The Impact of Fresh Frozen Plasma to Packed Red Blood Cell Ratio on Mortality in Traumatic Hemorrhage: A Nationwide Analysis**
 *Charlie J. Nederpelt, *Majed el Hechi, *Alexander Bonde,
 *Napaporn Kongkaewpaisan, *Nikos Kokoroskos,
 *April E. Mendoza, *Noelle N. Saillant, *Martin G. Rosenthal,
 *Peter J. Fagenholz, *David R. King, *David C. Chang,
 George V. Velmahos, Haytham M.A. Kaafarani
Massachusetts General Hospital, Boston, MA

* NESS Non-Members

+ RPE Award Eligible

- +16. Have We Missed the Mark on Patient Education Materials for Colorectal Cancer?**
***Ravinder Kang¹**, *Elizabeth A. Carpenter-Song²,
 *Catherine H. Saunders³, *Spencer W. Trooboff¹,
 *Jesse A. Columbo¹, *Kayla O. Moore³, *Philip P. Goodney¹,
 Sandra L. Wong¹, Srinivas J. Ivatury¹
¹Dartmouth Hitchcock Medical Center, Lebanon, NH;
²Dartmouth College, Department of Anthropology, Hanover, NH; *³The Dartmouth Institute for Health Policy and Clinical Practice, Hanover, NH*
- +17. Bowel Resection for Melanoma Progressing After Immunotherapy with Checkpoint Inhibitors**
***Nicholas D. Klemen¹**, *Sara Abou Azar¹, *Melinda Wang¹,
 *Paul L. Feingold¹, Dale Han², Kurt Roberts¹, *Vikram Reddy¹,
 *Kelly Olino¹, Ronald S. Salem¹, *Sarah Weiss¹,
 *Harriet Kluger¹, *Mario Sznol¹, Charles Cha¹
¹Yale University School of Medicine, New Haven, CT;
²Oregon Health and Science University, Portland, OR

8:40 AM – 8:55 AM

**INTRODUCTION OF
NEW MEMBERS**

Salle De Bal Ballroom (Lower Lobby)

* NESS Non-Members
 + RPE Award Eligible

Paper of the Year & Scientific Session IV

8:55 AM – 10:10 AM

Salle De Bal Ballroom (Lower Lobby)

**Co-Moderators: Carlos E. Marroquin
Margaret A. Tandoh**

Podium papers (8-minute presentation/5-minute discussion).

Brief papers (3-minute presentation/2-minute discussion).

**18. Lessons Learned from the Study of 10,000 Patients
with Soft Tissue Sarcoma**

Murray F. Brennan, Cristina R. Antonescu, Nicole Moraco,
Samuel Singer

Memorial Sloan Kettering Cancer Center, New York, NY

**+19. Is Abdominal Ultrasound a Useful Adjunct to
Abdominal Radiograph in Neonates with Necrotizing
Enterocolitis?**

***Sarah Tracy¹**, ***Stefanie Lazow¹**, ***Ilse Castro-Aragon²**,
***Alan Fujii²**, ***Judy Estroff¹**, ***Richard Parad³**,
***David Zurakowski¹**, Catherine Chen¹

*¹Boston Children's Hospital, Boston, MA; ²Boston Medical
Center, Boston, MA; ³Brigham and Women's Hospital, Boston, MA*

* NESS Non-Members

+ RPE Award Eligible

**CLINICAL SCIENCE SECOND PLACE
AWARD – NESS RESIDENT AND FELLOW
RESEARCH DAY**

- +20. Defining Risk and Risk Factors for Unplanned ICU Admission of Trauma Patients: Developing a Predictive Risk Score**
***Stephen E. Ranney**, Ajai K. Malhotra, *Peter Callas,
 *Lloyd Patashnick, *Samy Ramadan, *Jennifer Gratton,
 *Amy Sharpe, *Deidre LaFrance, Margaret A. Tandoh,
 William E. Charash, *Gary C. An, *Tim H. Lee
University of Vermont Medical Center, Burlington, VT
- 21. Completion of Multimodality Therapy Mitigates the Adverse Impact of Postoperative Complications on Survival in Patients Undergoing Gastrectomy for Advanced Gastric Cancer**
***Selena Li**¹, *Aparna Parikh², John Mullen²
¹Harvard Medical School, Cambridge, MA; ²Massachusetts General Hospital, Boston, MA
- 22. Long-Term Improvement After Ileocectomy in Pediatric Crohn’s Disease**
***Julie Monteagudo**¹, *Hans M. Huber²,
 *Catherine M. Dickinson², *Jason Shapiro²,
 Francois I. Luks²
¹Hasbro Children’s Hospital and Alpert Medical School of Brown University, Providence, RI; ²Alpert Medical School of Brown University, Providence, RI
- ^Brief 9. The Impact of the Enhanced Recovery After Surgery (ERAS) Pathway on Patients Undergoing Surgery for Soft Tissue Sarcoma (STS)**
***Heather Lyu**, *Lily Saadat, Monica Bertagnolli, *Jiping Wang,
 *Elizabeth Baldini, *Matthias Stopfukuchen-Evans,
 Ronald Bleday, Chandrajit Raut
Brigham and Women’s Hospital, Boston, MA

* NESS Non-Members

+ RPE Award Eligible

^ Brief Report Award Eligible

^Brief 10. The Effectiveness of an Intervention to Decrease Postoperative Opiate Prescriptions

*Lee Ranstrom, David P. Mooney
Boston Children's Hospital, Boston, MA

10:10 AM – 10:40 AM COFFEE BREAK: VISIT EXHIBITS & POSTERS
Viger A-C (Lower Lobby)

10:45 AM – 12:15 PM PANEL: DEBATE SERIES
Salle De Bal Ballroom
Moderator: Christina V. Angeles

DEBATE 1: Antibiotics Versus Surgery for Acute Appendicitis

Faculty: **Antibiotics:** Thomas F. Tracy, Jr.
Surgery: David P. Mooney

DEBATE 2: Extent of Surgery for Well Differentiated Thyroid Cancers <4 cm in Diameter

Faculty: **Lobectomy:** Gerard M. Doherty
Total Thyroidectomy: Meredith J. Sorensen

DEBATE 3: Risks of Long-Term Opioid Use After Post-Operative Opioid Prescriptions

Faculty: **Low Risk:** Richard J. Barth
Significant Risk: Jennifer Waljee

12:15 PM – 1:15 PM NAVIGATING YOUR FINANCIAL FUTURE: A GUIDE FOR TRAINEES AND JUNIOR FACULTY
Salle De Bal Ballroom
Faculty: Evan P. Welch
Sponsored by the GME Committee

* NESS Non-Members

^ Brief Report Award Eligible

AFTERNOON TICKETED ACTIVITIES

(*Separate Subscription Required)

1:30 PM – 4:00 PM

McGill Immersive Interactive Simulation Tour at the Steinberg Centre for Simulation and Interactive Learning

Transportation will leave from the Montreal Marriott at promptly 1:30 PM.

\$50 per person

Tour fee includes transportation to and from the center and use of the center. *Lunch will not be provided.*

Rotate through stations where task trainers will be available for participants to try their skills at:

- Gastro-intestinal Trainer
- Coronary Anastomosis
- Chest tube
- Ultrasound

Participants will also have the opportunity to test themselves on an Acute Surgical Clinical Scenario module.

1:30 PM – 4:00 PM

McGill's Maude Abbott Medical Museum Tour

Transportation will leave from the Montreal Marriott at promptly 1:30 PM.

\$40 per person

Tour fee includes transportation to and from the museum, a guided tour and access to museum exhibits. *Lunch will not be provided.*

Museum Director, Dr. Rick Fraser, will give a brief overview of the history of the museum and participants will have 90 minutes for a private viewing of the current collections and exhibits.

To read about the history of the Maude Abbott Medical Museum, go to: <https://www.mcgill.ca/medicalmuseum/introduction>.

6:15 PM – 7:00 PM	WOMEN IN SURGERY PRE-RECEPTION <i>Mainsonneuve A (36th Floor)</i>
6:15 PM – 7:00 PM	NEW MEMBERS PRE-RECEPTION <i>*Invitation Only</i> <i>Mainsonneuve D (36th Floor)</i>
7:00 PM – 10:00 PM	PRESIDENT’S RECEPTION & DINNER Reception: <i>Le Caf Conc (Lower Lobby)</i> Dinner: <i>Salle De Bal Ballroom</i> Guest Speaker: Helen Antoniou, Author of <i>“Back to Beer . . . and Hockey”</i>
7:00 PM – 10:00 PM	KIDS BANQUET <i>Terrasse (Plaza Level)</i>

SUNDAY, SEPTEMBER 15, 2019

9:00 AM – 11:00 AM	REGISTRATION <i>Ballroom Foyer (Lower Lobby)</i>
9:00 AM – 10:30 AM	SPEAKER READY AREA <i>Ballroom Foyer (Lower Lobby)</i>
7:00 AM – 10:00 AM	EXHIBIT HALL HOURS <i>Viger A-C (Lower Lobby)</i>
7:00 AM – 8:00 AM	CONTINENTAL BREAKFAST <i>Viger A-C (Lower Lobby)</i>
7:30 AM – 8:15 AM	ANNUAL BUSINESS MEETING (Members Only) <i>Salle De Bal Ballroom</i>

Scientific Session V

8:15 AM – 9:20 AM

Salle De Bal Ballroom (Lower Lobby)

**Co-Moderators: Timothy C. Counihan
Catherine A. Schneider**

Podium papers (8-minute presentation/5-minute discussion).

Brief papers (3-minute presentation/2-minute discussion).

**23. The Design and Impact of a Novel Surgery-Specific
Second Victim Peer Support Program**

**Majed El Hechi¹, *Jordan Bohnen¹, *Maggie Westfal¹,
*Kelsey Han¹, *Christy Cauley², *Cameron Wright¹,
*John Schulz¹, *Keith Lillemoe¹, Haytham Kaafarani¹**

¹*Massachusetts General Hospital, Boston, MA;*

²*Cleveland Clinic, Cleveland, OH*

* NESS Non-Members

- 24. Oral Water Soluble Contrast Challenge Does Not Affect Outcome in Adhesive Small Bowel Obstruction**
***Gustavo Bauza¹, *Elizabeth Yates¹, Frederick H. Millham²**
¹*Brigham and Women's Hospital, Boston, MA;* ²*South Shore Hospital, Weymouth, MA*
- 25. 57% Decline in Rhode Island Invasive Breast Cancer Mortality Between 1987 and 2017: Mammography Predominates in Preventing Mortality**
Blake Cady, John Fulton
Rhode Island Cancer Registry, Department of Public Health, Providence, RI
- #26. Overdue for #MeToo – The Prevalence of Sexual Harassment in Surgery in the United States**
Jacqueline J. Wu¹, *Aditi Kapil¹, Susan Kartiko¹, *Jeffry Nahmias², *Elan Jeremitsky³
¹*Baystate Medical Center, Springfield, MA;* ²*University of California at Irvine, Orange, CA;* ³*Forbes Regional Hospital, Monroeville, PA*
- Brief 11. Opioid Prescription and Use Patterns Following Two Common Acute Care Surgery Procedures: Is Less More?**
***Mayo H. Fujii¹, Ajai K. Malhotra¹, *Ethan Jones¹, *Thomas P. Ahern², *Loic Fabricant¹, *Christos Colovos¹**
¹*University of Vermont Medical Center, Burlington, VT;* ²*University of Vermont Larner College of Medicine, Burlington, VT*
- Brief 12. Long-Term Outcomes of an Intensive, Pre-Operative Tobacco Cessation Program for Lung Resection**
Joseph D. Phillips, *Kayla A. Fay, *Alexandra Fannin, *Timothy M. Millington, *Rian M. Hasson, *David J. Finley
Dartmouth-Hitchcock Medical Center, Lebanon, NH

* NESS Non-Members

New Member Award Eligible

9:20 AM – 10:05 AM	35TH ANNUAL SAMUEL JASON MIXTER LECTURE <i>Salle De Bal Ballroom</i> Good Judgment Comes from Experience: Building a Learning Healthcare System Monica M. Bertagnolli <i>Brigham & Women's Hospital, Boston, MA</i>
10:05 AM – 11:00 AM	PRESIDENTIAL ADDRESS <i>Salle De Bal Ballroom</i>
10:05 AM	INTRODUCTION OF THE PRESIDENT David E. Clark
10:10 AM	PROFILES OF SURGICAL ENTREPRENEURS Richard J. Barth, Jr.
11:00 AM	ADJOURN

NEW ENGLAND SURGICAL SOCIETY

2019 ANNUAL MEETING

SEPTEMBER 13 – SEPTEMBER 15, 2019

MONTREAL MARRIOTT CHÂTEAU CHAMPLAIN
MONTREAL, QC, CANADA

FRIDAY, SEPTEMBER 13, 2019

FRIDAY

9:00 AM – 5:00 PM	REGISTRATION <i>Ballroom Foyer (Lower Lobby)</i>
9:00 AM – 5:00 PM	SPEAKER READY AREA <i>Ballroom Foyer (Lower Lobby)</i>
9:00 AM – 12:00 PM	POSTER OF DISTINCTION SET-UP <i>Salle De Bal Ballroom (Lower Lobby)</i>
9:00 AM – 12:00 PM	POSTER SET-UP <i>Viger A-C (Lower Lobby)</i>
12:00 PM – 3:00 PM	EXHIBIT HALL HOURS <i>Viger A-C (Lower Lobby)</i>

Scientific Session I

12:30 PM – 2:00 PM

Salle De Bal Ballroom (Lower Lobby)

Co-Moderators: Matthew A. Conway
Erika L. Rangel

Podium papers (8-minute presentation/5-minute discussion).

Brief papers (3-minute presentation/2-minute discussion).

1. The Effect of Hepatitis C Virus Infection on Kidney Transplant Outcomes in the Era of Direct-Acting Antiviral Therapy

***Qing Yuan^{1,2}**, *Shanjuan Hong¹, *Andric Perez-Ortiz¹,
*Enid E. Martinez³, *David C. Chang¹, Joren C. Madsen^{1,4},
Nahel Elias^{1,5}

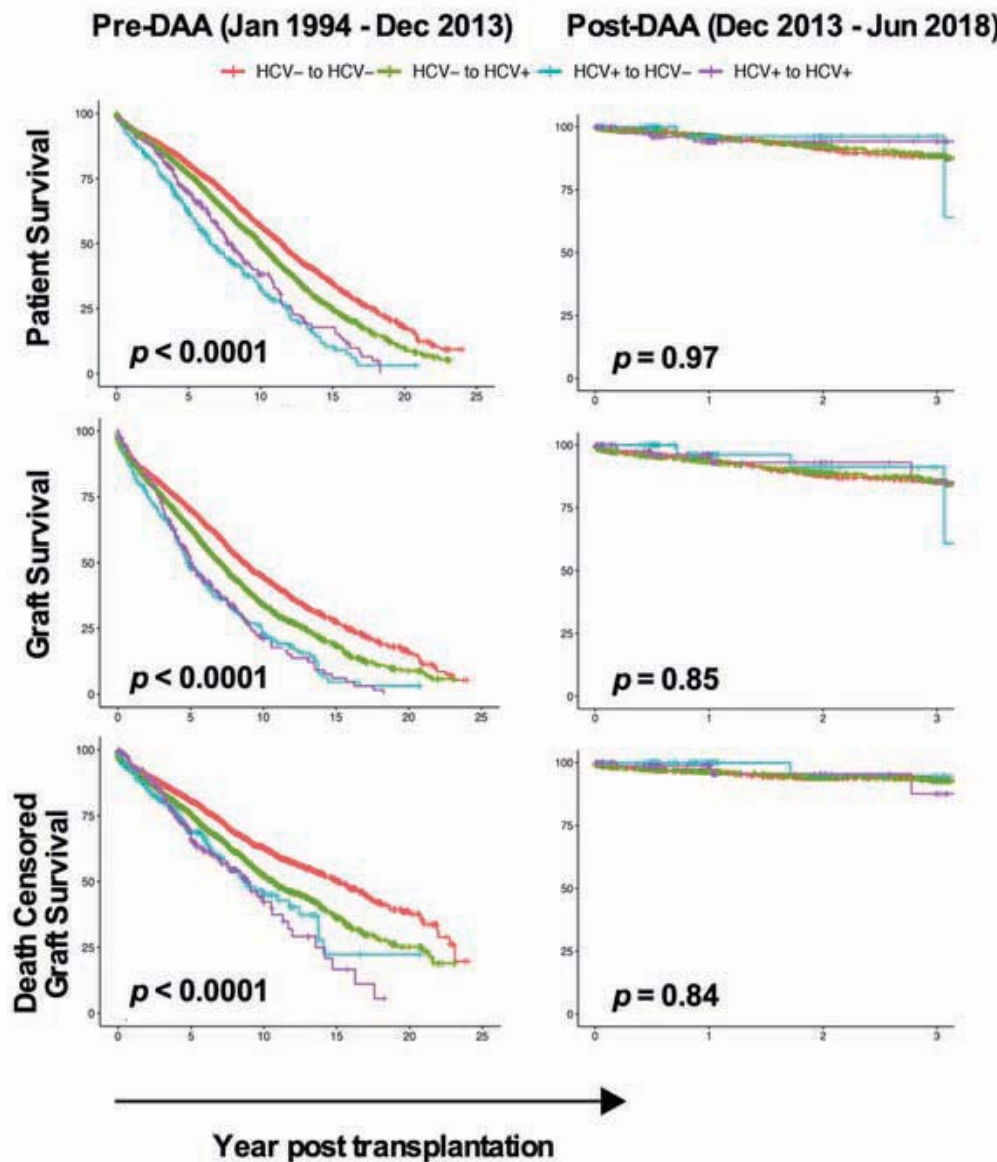
¹*Transplant Center, Massachusetts General Hospital, Boston, MA;* ²*Organ Transplant Institute, 8th Medical Center, Chinese PLA General Hospital, Beijing, China;* ³*Division of Critical Care Medicine, Boston Children's Hospital, Boston, MA;* ⁴*Division of Cardiac Surgery, Massachusetts General Hospital and Harvard Medical School, Boston, MA;* ⁵*Division of Transplantation, Department of Surgery, Massachusetts General Hospital and Harvard Medical School, Boston, MA*

Objective: To investigate effects of Hepatitis C Virus (HCV) infection in kidney recipients and kidney donors before and during the era of direct-acting antiviral (DAA) therapy.

Design: Match-kidney analysis of a retrospective cohort study from the Organ Procurement and Transplantation Network (OPTN) as of September 2018.

Setting: National database of all kidney transplant programs in the United States.

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Patients: HCV+ and HCV- adult recipients of first solitary kidney transplants from ABO-compatible HCV+ or HCV- deceased donors between January 1, 1994 and June 30, 2018 in the US. We selected donors where one kidney transplant recipient was HCV seropositive and the mate kidney recipient was HCV seronegative.

Main Outcome Measure: Patient and graft survival, and death-censored graft survival (DCGS).

Results: 4071 HCV positive and 347 negative donor's mate kidneys were transplanted in HCV discrepant recipient. HCV positive recipients of HCV negative donor had worse patient and graft survival (aHR: $1.29_{1.19}^{1.39}$, $1.29_{1.19}^{1.39}$, respectively) and DCGS (aHR: $1.24_{1.15}^{1.33}$). Similar patient and graft survival and DCGS were found in recipients of HCV positive donors, regardless of recipient HCV status. The risk associated with HCV positivity in donors or recipients in the pre-DAA era (before Dec 2013) was no longer statistically significant in the post-DAA era ($p = 0.97, 0.85, 0.84$, for patient-, graft-survival, and DCGS, respectively).

Conclusion: Given improved outcomes of HCV positive kidneys in recipients with or without HCV, broader utilization of HCV positive kidneys should be advocated in the post-DAA era.

+2. A Volume-Restrictive Burn Resuscitation Bundle and the Incidence of Acute Kidney Injury

Roberto Cortez, Benjamin Hall, *David Heffernan,
*Andrew Stephen, *Michael Connolly, *Charles Adams,
William G. Cioffi, David T. Harrington;

Brown University/Rhode Island Hospital, Providence, RI

Objective: We hypothesize a computer-driven, volume-restrictive protocol, emphasizing early albumin administration and oliguria tolerance decreases resuscitation volumes while minimizing adverse outcomes in patients with over 20% TBSA burns.

Design: Retrospective review analyzing patients admitted to a single burn center since 2007.

Setting: Single-institution, burn center.

Patients: 40 patients over 20% TBSA burn.

Interventions: 25 patients using modified Brooke formula and 15 patients using volume-restrictive bundle.

Main Outcome Measures: Cumulative fluid resuscitation rates (cc/kg/% TBSA); urine output (cc/kg/hr); time of anuria (hr); limb/abdominal compartment syndrome release; early death (within 72 hours of injury); kidney injury per post-burn day (PBD) 3 creatinine.

Results: The cohorts were not statistically different for age and % TBSA ($p = 0.85$), presence of inhalational injury ($p = 0.41$), existing cirrhosis ($p = 0.67$), COPD ($p = 0.63$), and malignancy ($p = 0.67$). As compared to standard resuscitation protocol patients, computer-guided patients had significantly more hours of anuria in the first 24 hours (0.7 v. 2.7, $p = 0.002$) without an increase in measured PBD3 creatinine (1.07 v. 1.11, $p = 0.89$). Data trends suggest that standard resuscitation patients had more catastrophic resuscitation rates represented as cumulative resuscitation volumes (cc/kg/TBSA) greater than 8 (24% v. 7%, $p = 0.17$) and 10 (24% vs. 0%, $p = 0.09$), higher incidence of early death (20% v. 0%, $p = 0.14$), and higher incidence of celiotomy for abdominal compartment syndrome (24% v. 0%, $p = 0.09$) as compared to computer-driven patients.

* NESS Non-Members

+ RPE Eligible

Conclusions: Protocol-driven patients, despite receiving less volume and sustaining episodes of anuria did not demonstrate increased incidence of acute kidney injury. The computer protocol showed trends toward less catastrophic resuscitations, reduced rates of abdominal compartment syndrome and early death. The data from this pilot study suggest that a new bundled, computer-driven strategy may improve burn resuscitation.

3. Evolving Multimodality Treatment Strategies in Locally Advanced Non-Small Cell Lung Cancer

*Abby White¹, *Suden Kucukak¹, *Daniel N. Lee¹,
*Emily Polhemus¹, *Emanuele Mazzola², *Michael Jaklitsch¹,
*Steven Mentzer¹, *Jon Wee¹, *Raphael Bueno¹,
Scott J. Swanson¹

¹Brigham and Women's Hospital, Boston, MA; ²Dana Farber Cancer Institute, Boston, MA

Objective: To evaluate the safety and efficacy of surgery, with and without induction therapy, in locally advanced (Stage IIIA) non-small cell lung cancer (NSCLC).

Design: Single-center retrospective cohort review.

Setting: Academic tertiary referral center.

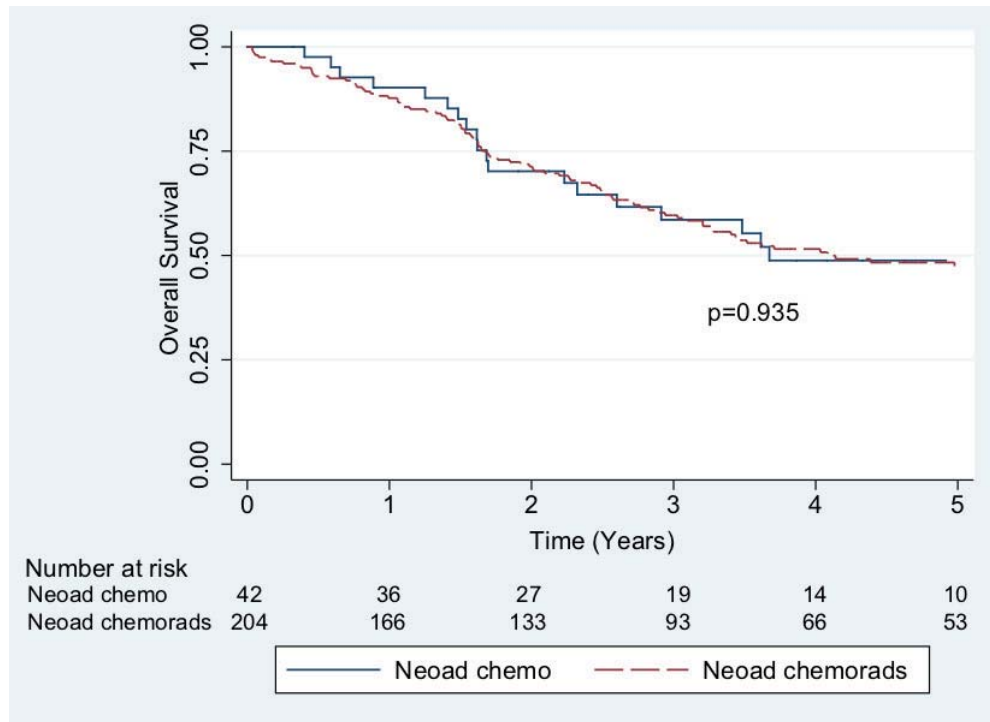
Patients: All patients undergoing resection for Stage IIIA NSCLC were included. A total of 364 patients underwent surgery for Stage IIIA NSCLC during the study period (2006–2016). Median age was 64 years and 58.8% were female.

Interventions: Surgery included segmentectomy (6.6%), lobectomy (75.8%), bilobectomy (3.9%) or pneumonectomy (13.7%). Video-assisted Thoracic Surgery (VATS) and traditional open approaches were applied.

Main Outcome Measures: Perioperative outcomes, 5-year overall survival (OS) and disease-free survival (DFS)

Results: 246/364 patients underwent neoadjuvant therapy prior to surgery. 42 patients had induction chemotherapy and 204 patients underwent induction chemoradiation. OS was significantly better in patients undergoing neoadjuvant therapy prior to resection (OS 47.6% vs 28.8%, $p = 0.02$, 95% CI). There was a non-significant trend toward improved DFS with induction therapy (30.8% vs 16.8%, $p = 0.059$). Nodal downstaging was more common with an induction chemoradiation strategy (51.0% vs 33.3%, $p = 0.04$). There were no significant differences in perioperative mortality or complications as a result of neoadjuvant therapy. VATS completion rates were significantly higher at the end of the study period compared to the beginning.

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Conclusions: Survival following neoadjuvant therapy and surgery is favorable. Complication and mortality rates are low, even when resection requires pneumonectomy. VATS lobectomy is technically feasible in stage IIIA NSCLC with and without neoadjuvant therapy, and conversion rates can be expected to decrease over time.

4. Surgeon-Performed Ultrasound Alters Pre-Operative Planning in Patients with Endemic Goiter

Peter J. Mazzaglia³, *Sravanthi Puranam¹, *Zhou Joy¹,
*Fletcher Starnes²

¹Warren Alpert School of Medicine at Brown University,
Providence, RI; ²Albany Medical Center, Albany, NY;

³Rhode Island Hospital, Providence, RI

Objective: Compare accuracy of physical exam to surgeon-performed ultrasound (SPUS) for assessment of endemic goiter.

Design: Criterion standard comparison.

Setting: Surgical mission trips to sub-Saharan African countries with high goiter prevalence. Operations were performed at a clinic in Migori, Kenya, and the Military Hospital in Kigali, Rwanda.

Patients: 33 sequential patients from areas of endemic goiter who presented for thyroidectomy performed by an endocrine surgeon.

Interventions: Surgeon-performed ultrasound using a Phillips Lumify[®] hand held probe for smart phone.

Main Outcome Measures: Nodule laterality and tracheal deviation.

Results: There were 32 were females and 1 male. Median age was 50 (range 27–67) years old. Median duration of goiter was 7.5 years (range 0.6–30 years). Average goiter volume was 155.6 cc (range 31–688 cc, SD 137.3 cc). 76% of patients were symptomatic: 45% with shortness of breath, 45% with dysphagia, and 30% with voice change. Average TSH was 1.45 (SD 1.29). On physical exam, unilateral goiter was diagnosed in 66%, bilateral disease in 34%, and tracheal deviation in 47%. SPUS differed significantly from physical exam in 42% of patients. 34% demonstrated unilateral or bilateral disease, which contradicted the physical exam findings. Discrepancies in the presence of tracheal deviation were also found in 33%. Lobectomy was performed in 66%, sub-total thyroidectomy in 25%, and total or near-total thyroidectomy in 9%. Drains were placed in 64%. Average blood loss was 48 cc (SD 69.8 cc). Complications included one hemorrhage requiring hematoma evacuation. There were no recurrent laryngeal nerve injuries and no mortality.

Conclusions: SPUS proved to be a highly valuable tool in the pre-operative evaluation of patients with endemic goiter, with implications for changing surgical planning and management.

* NESS Non-Members

+5. A Fast Track Pathway in Acute Care Surgery at an Academic Medical Center

***Amanda Fazzalari**^{1,2}, *Shruthi Srinivas¹, *Natalie Pozzi²,
*Reeti Sheoran¹, *Joseph Sabato¹, *Dawn Durocher¹,
*Martin Reznek¹, *Francesco Aiello¹, Demetrius Litwin¹,
Mitchell A. Cahan¹

¹*University of Massachusetts Medical School, Worcester, MA;*

²*Saint Mary's Hospital, Waterbury, CT*

Objective: Fast Track Pathways (FTP) directed at reducing hospital length of stay (LOS) and overall costs for elective procedures are being increasingly implemented for urgent surgeries. The objective of this study is to evaluate the impact of a FTP for Acute Care Surgery at an academic medical center.

Design: Case control.

Setting: Academic Medical Center.

Patients: The study included adult patients (N = 165) enrolled in a FTP who underwent laparoscopic appendectomy (LA), laparoscopic cholecystectomy (LC), or laparoscopic inguinal hernia repair (LI) between September–December 2018 (n = 89). The control group included patients who underwent LA, LC, or LI between October–December 2016 (n = 76), prior to FTP implementation. The sample was 47.9% female, with a mean age of 42.1 years.

Main Outcome Measures: TTS, LOS, post-operative LOS, and readmissions were compared between groups. Direct costs, reimbursements, and patient satisfaction (reported as frequency 1 = never to 4 = always) were also compared.

Results: Case distribution in the FTP group was 56.2% LA, 40.1% LC, and 3.3% LI, compared to 42.1% LA and 57.9% LC in the control group. TTS was similar between groups (11 h 48 m vs 10 h 02 m, $p < 0.633$). LOS was significantly shorter in the FTP group (15 h 17 m vs 29 h 09 m, $p < 0.001$), reflected by shorter post-operative LOS (3 h 11 m vs 20 h 10 m, $p < 0.001$), fewer patients requiring overnight stay in a hospital bed ($p < 0.001$), and lower direct costs ($p < 0.001$). Reimbursements were similar in both groups ($p = 0.088$). There were no readmissions in the FTP group and average patient satisfaction was 3.3/4.

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+ RPE Eligible

Conclusions: In an era focused on optimizing resources and ensuring patient satisfaction, a FTP can play a significant role in ACS. At an academic medical center, a FTP significantly decreased LOS, hospital bed utilization, and direct costs, while not impacting reimbursement or patient satisfaction.

^Brief 1. Higher Risk of Urinary Tract Infections in Renal Transplant Recipients Receiving Pentamidine Versus Trimethoprim-Sulfamethoxazole (TMP-SMX) for Pneumocystis Pneumonia Prophylaxis

***Whitney Fu¹, *Maria Barahona¹, *Taylor Harkness¹,
*Elizabeth Cohen¹, *David Reardon², Peter Yoo¹**

*¹Yale School of Medicine, New Haven, CT; ²Vizient, Inc.,
Irving, TX*

Objective: For renal transplant patients who are intolerant of trimethoprim-sulfamethoxazole (TMP-SMX), aerosolized pentamidine may be used for *Pneumocystis pneumonia* (PCP) prophylaxis; however, this regimen does not provide the same coverage against urinary tract infections (UTI), one of the most common infectious complications. This study aimed to evaluate the risk of UTI in the first six months post-transplant among patients receiving PCP prophylaxis with TMP-SMX or pentamidine.

Design: Single tertiary referral transplant center.

Patients: Renal transplant patients between the dates of 1/1/15 and 12/31/15 receiving TMP-SMX or pentamidine who completed at least six months follow-up post-transplant to completion of prophylaxis course. 81 patients included in the analysis.

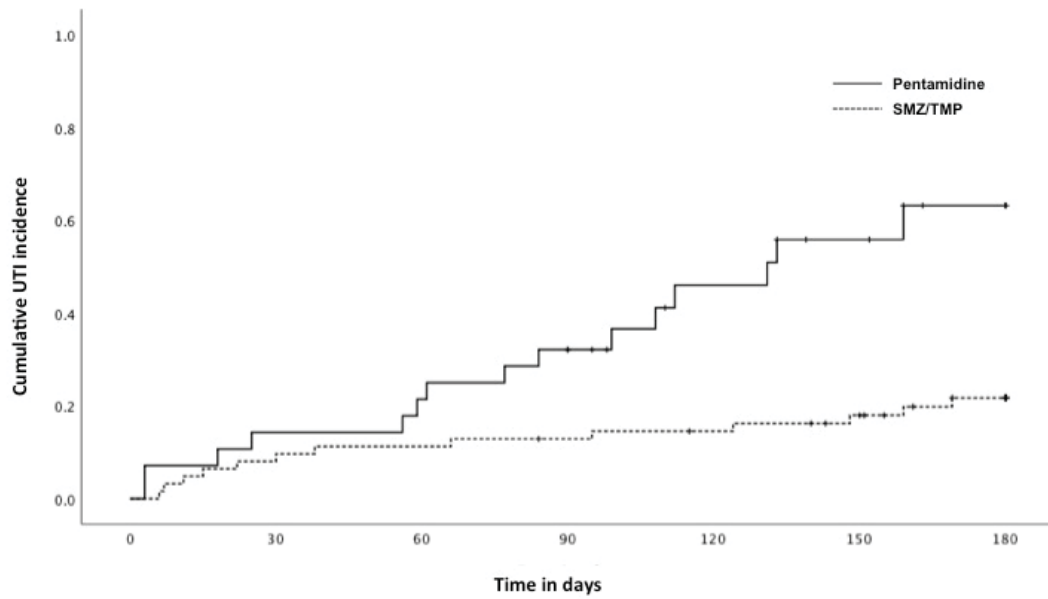
Interventions: PCP prophylaxis with TMP-SMX (400/80 mg oral daily) or pentamidine (300 mg monthly).

Main Outcome Measures: Cumulative incidence of UTI; independent risk factors for UTI.

Results: There were no breakthrough cases of PCP. Nineteen patients (23.5%) experienced at least one UTI. The rates of UTI in the TMP-SMX and pentamidine groups were 12% (9/58) and 43% (10/23), respectively. Kaplan-Meier analysis showed significantly higher cumulative incidence of UTI in the pentamidine group than in the TMP-SMX group (Log-rank test $p < 0.001$) (Figure 1). On multivariate analysis, female sex (HR 3.773; 95% CI 1.654–8.603; $p = 0.002$) and pentamidine prophylaxis (HR 3.464; 95% CI 1.615–7.432; $P = 0.001$) were independently associated with increased UTI incidence.

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Conclusions: Patients receiving pentamidine for PCP prophylaxis are at higher risk of developing UTI than patients receiving TMP-SMX. UTI prophylaxis with a second antibiotic agent for patients with other risk factors for UTI warrants further study.

^Brief 2. Development and Five-Year Results of a Pediatric Appendicitis Working Group: Harmonizing Care and Increasing Value

***Yuqi Zhang**, *Sam Miller, Michael G. Caty,
Emily R. Christison-Lagay, Robert A. Cowles,
*David H. Stitelman, *Beth L. Emerson, *Cicero T. Silva,
*Thomas R. Goodman, *Brian Dillon, Lisa Sagnella,
*Daniel G. Solomon, Doruk E. Ozgediz
Yale New Haven Hospital, New Haven, CT

Objective: Improvement in pediatric appendicitis care through a multidisciplinary approach and protocols.

Design: We convened a multidisciplinary working group between pediatric radiology, interventional radiology, emergency medicine, and pediatric surgery. We reviewed data from Pediatric Health Information Systems (PHIS) to assess priority areas.

Setting: Tertiary center.

Patients or Other Participants: 1319 patients <18 who underwent an appendectomy for acute uncomplicated and perforated appendicitis at Yale-New Haven Children's Hospital.

Interventions: Formation of working group.

Main Outcome Measures: Development of care pathways.

Results: A standardized definition of perforated appendicitis and protocols were developed. Six different care pathways were reduced to one. Average length of stay decreased from 6 to 4 days ($p < 0.05$) for complicated appendicitis and antibiotic cost decreased for both uncomplicated and complicated appendicitis (\$102 vs. \$35 and \$1,666 vs. \$155, respectively) with no increase in complications. Same day discharge in select patients with uncomplicated appendicitis was instituted with no increase in ER re-visits. Currently, selected patients are being discharged directly from the post-anesthesia care unit. Template-based reporting of pediatric ultrasound for appendicitis was initiated to improve diagnostic accuracy in equivocal cases. Finally, a single evidence-based pathway for percutaneous drains placed by interventional radiology reduced care variation

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and decreased resource utilization, primarily through performing drain injections in only select patients; reducing the mean number of procedures for patients requiring a drain from 1.9 to 1.2 ($p = 0.2$).

Conclusions: A multidisciplinary appendicitis team can develop evidence-based care pathways that reduce unnecessary variability in care and decrease cost without compromising outcomes, thereby increasing value.

Brief 3. The Shape of Breast Cancer

***Brook K. Byrd¹**, ***Venkataramanan Krishnaswamy²**,

***Timothy B. Rooney³**, ***Rebecca A. Zuurbier³**,

Richard J. Barth Jr.⁴

¹Thayer School of Engineering, Dartmouth College, Hanover,

NH; ²CairnSurgical, Inc., Lebanon, NH; ³Department of

Radiology, Dartmouth-Hitchcock Medical Center, Lebanon, NH;

⁴Department of Surgery, Dartmouth-Hitchcock Medical Center, Lebanon, NH

Objective: Little is known about the shape of breast cancer. Many surgeons assume cancers are spherical and base their excisions, especially when guided by a point source, on that assumption. We obtained pre-operative supine MRI images and derived tumor shapes by outlining their edges on successive MRI slices.

Design: Retrospective database review.

Setting: Academic medical center.

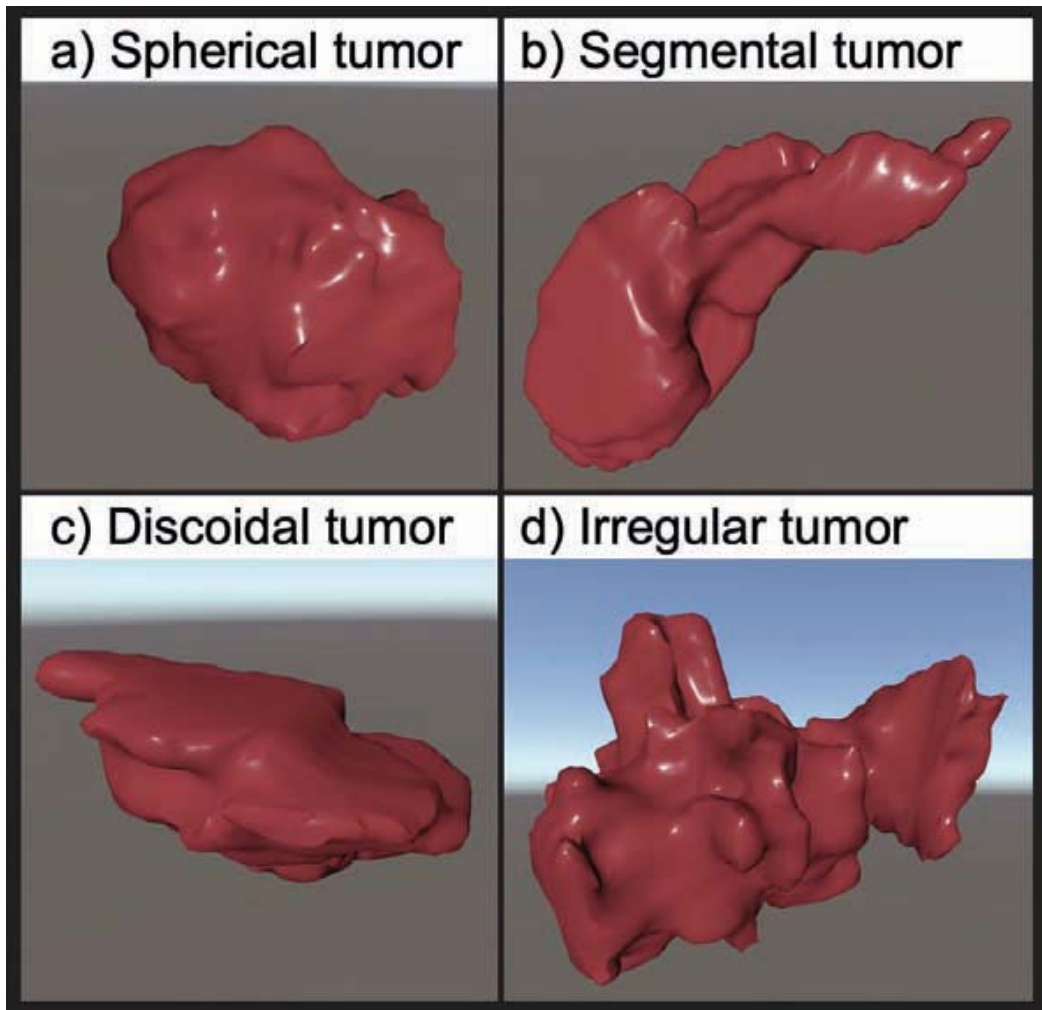
Patients: 65 patients undergoing partial mastectomy: 57 invasive cancer, 8 DCIS.

Interventions: Supine MRI.

Main outcome measures: Breast shape: 3-dimensional tumor models were categorized into four categories (spherical, discoidal, segmental and irregular) based on geometrically defined parameters. Ideal resection volumes were determined by adding 1 cm in every dimension to the actual tumor volume and were compared to spherical and actual resection volumes.

Results: 35% of tumors were segmental, 32% discoidal, 21% spherical and 12% irregular. No DCIS tumors were spherical. When the smallest spherical volumes possible were fit to the ideal resection shapes, the volume of tissue defined was 2.2 and 2.7 times greater than the ideal resection volume for discoidal and segmental shaped tumors, respectively. The actual volume excised by surgeons who could see the 3D tumor shape during surgery was 1.4 and 1.7 times the ideal resection volume for discoidal and segmental tumors, respectively.

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Conclusions: Information from supine MRIs can be used to display and classify breast tumor shapes. Most breast cancers have segmental or discoidal shapes, few are spherical. Knowledge of tumor shape may facilitate more precise lumpectomies.

^Brief 4. Longer Travel Distance Associated with Higher Utilization of Chest Radiographs After Chest Tube Removal in Thoracic Surgery Patients

Eleah D. Porter¹, *Kayla A. Fay¹, *Spencer W. Trooboff¹,
*Rian M. Hasson¹², *Timothy M. Millington¹²,
*David J. Finley¹², *Joseph D. Phillips¹²

¹*Dartmouth-Hitchcock Medical Center, Lebanon, NH;*

²*Geisel School of Medicine, Hanover, NH*

Objective: The effect of travel distance on postoperative management in thoracic surgery patients has not been studied. Our goal was to assess the impact of travel distance on chest radiograph (CXR) utilization after chest tube (CT) removal post-surgery.

Design: Retrospective cohort study. Primary exposure was travel distance, calculated by home zip code to hospital and dichotomized at 50 miles (short vs. long).

Setting: Rural, academic quaternary referral center.

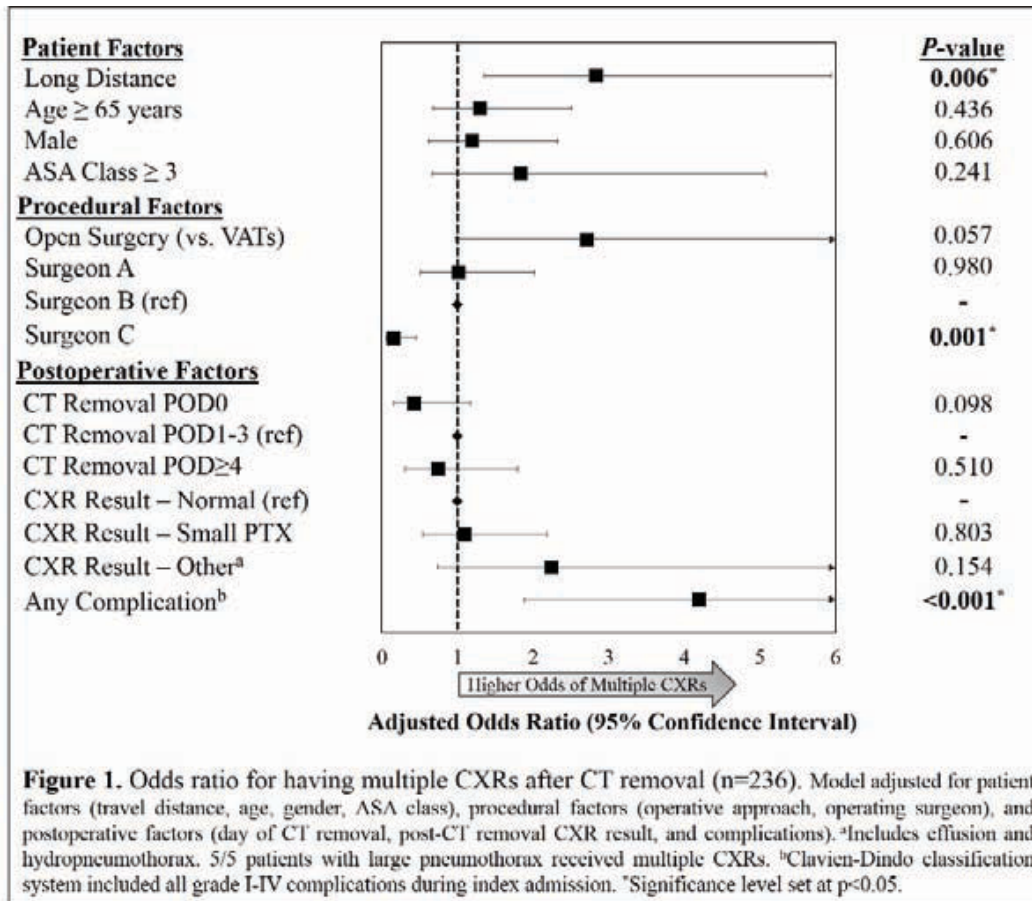
Patients: Adult general thoracic surgery patients with an intraoperative CT placed July 2017–June 2018. Patients discharged with a CT or who had an immediate clinical change after CT removal prompting intervention were excluded.

Main Outcome Measures: Frequency of CXRs after final CT removal.

Results: 241 patients met inclusion; 64% (155) traveled long distance vs. 36% (86) short distance. On univariate analysis, patients traveling long distance were more likely to have multiple (>1) CXRs after CT removal (38% vs. 23%, $p = 0.015$). After adjusting for patient, procedural and postoperative factors, patients who traveled long distance remained almost three times more likely to undergo multiple CXRs after CT removal (OR: 2.83, 95% CI: 1.35–5.95). The operating surgeon and postoperative complications were also independently associated with the likelihood of multiple CXRs (Figure).

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Conclusions: Increased travel distance is an independent factor that impacts CXR utilization after CT removal, highlighting that thoracic surgery patients who travel longer distances for care may be treated differently than those who reside closer. Awareness of this potential bias may improve the design of efficient postoperative care pathways, especially in rural settings.

^Brief 5. Transaminases Are Better Biochemical Predictors of Choledocholithiasis Than Bilirubin and Alkaline Phosphatase

***Thomas Peponis**, *Nikolaos Kokoroskos, *Jae Moo Lee,
*April Mendoza, *Martin Rosenthal, *Noelle Saillant,
Haytham Kaafarani, *David King, George Velmahos,
*Peter Fagenholz

Massachusetts General Hospital, Boston, MA

Objective: We hypothesized that elevated transaminases (ALT and AST) are independent predictors of common bile duct (CBD) stones and have better sensitivity and specificity compared to the more commonly used bilirubin and alkaline phosphatase (ALP).

Design: Retrospective study.

Setting: Acute Care Surgery Service of an academic tertiary center.

Patients: All adult patients who underwent a laparoscopic cholecystectomy between 2010 and 2018.

Main Outcome Measures: The sensitivity, specificity, and area under ROC curve for AST > 120, ALT > 165, ALP > 230, and bilirubin >= 4 to identify choledocholithiasis. Liver function tests were captured on admission. Choledocholithiasis was confirmed via either an intraoperative cholangiogram, ERCP, or MRCP. We used three times the upper limit of normal for the AST, ALT, and ALP, and bilirubin ≥4, as is currently used in choledocholithiasis diagnostic guidelines. Multivariable logistic regression was performed to identify independent predictors of choledocholithiasis.

Results: A total of 1,036 patients, who underwent laparoscopic cholecystectomy, were included in the study. Of them, 210 (20.3%) were confirmed to have choledocholithiasis. Elevated bilirubin had a sensitivity of 23% and specificity of 95%, ALP was 28% sensitive and 93% specific, AST was 63% sensitive and 80% specific, and ALT was 52% sensitive and 82% specific. The area under ROC curve was highest for AST (0.71), followed by ALT (0.67), ALP (0.61), and bilirubin (0.59). In multivariate analysis, the only independent predictors for choledocholithiasis were AST >120 (OR 3.7, CI 1.4–8.2), age >60 (OR 1.8, CI 1.2–2.9), and bilirubin >4 (OR 2.4, CI 1.8–3.3).

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^Brief Report Award Eligible

Conclusions: Elevation of AST is a more accurate marker in the prediction of choledocholithiasis compared to the more traditionally used bilirubin and ALP. Transaminases should be featured in choledocholithiasis screening and detection algorithms.

2:00 PM – 2:30 PM

**COFFEE BREAK: VISIT
EXHIBITS & POSTERS**

Viger A-C (Lower Lobby)

2:30 PM – 3:00 PM

GUEST SPEAKER

Salle De Bal Ballroom (Lower Lobby)

**Being an Academic Surgeon in the
Canadian Healthcare System: The
Good, the Bad, and the Ugly**

Gerald M. Fried

*McGill University Health Centre,
Montreal, QC*

FRIDAY

Scientific Session II

3:00 PM – 5:00 PM

Salle De Bal Ballroom (Lower Lobby)

Moderator: **Barbara A. Ward**
 Catherine C. Chen

Podium papers (8-minute presentation/5-minute discussion).

Brief papers (3-minute presentation/2-minute discussion).

+6. A Standardized Ultrasound Reporting Template for Pediatric Appendicitis Improves Diagnostic Rates and Decreases CT Utilization Among Both Pediatric and Non-Pediatric Radiologists: An Analysis of 3539 Patients

***Samuel Miller**, *Yuqi Zhang, Michael G. Caty,
Emily R. Christison-Lagay, Robert A. Cowles,
David H. Stitelman, *Thomas R. Goodman,
*Cicero T. Silva, *Beth L. Emerson, *Brian Dillon,
*Lisa Sagnella, Doruk Ozgediz, *Daniel G. Solomon
Yale University School of Medicine, New Haven, CT

Objective: Data suggests that standardized reporting templates for ultrasounds performed to diagnose pediatric appendicitis improve the likelihood of a diagnostic study. To date, these findings have not been reproduced outside of freestanding children's hospitals. We sought to evaluate the implementation of a standardized reporting tool in a Pediatric Emergency room where overnight/weekend ultrasounds are read by non-pediatric trained radiologists.

Design: Retrospective cohort.

Setting: Tertiary referral children's hospital within an adult general hospital.

* NESS Non-Members

+ RPE Eligible

Patients: 4–16 yo evaluated for acute nonperforated appendicitis.

Interventions: Institution of a standardized reporting tool.

Main Outcome Measures: Rate of diagnostic studies (defined as a visualized appendix with a conclusion about the presence/absence of inflammation), repeat ultrasounds and computed tomography were collected by blinded abstractors.

Results: Between 2013–2018, 3539 individual children were evaluated radiographically for appendicitis (1421 by pediatric radiologists, 2118 by adult radiologists). 4082 US were performed (1765 by pediatric radiologists, 2317 by adult radiologists). Repeat radiographic exams were required 11.6% of the time (7.5% for pediatric radiologists, 14.7% for adult radiologists, $p < 0.00001$). Template utilization improved the rate of diagnostic studies for both pediatric (79.5% vs 83.9%, $p = 0.07$) and adult radiologists (57.1% vs 81.6%, $p = 0.0001$). Template utilization reduced the rate of subsequent CT scan for both groups (6.7% vs 2.8% $p = 0.006$ for pediatric radiologists, 9.0% vs 4.6% $p = 0.09$ for adult radiologists)

Conclusions: This is the first demonstration of the efficacy of a standardized US reporting template to improve the diagnostic rate of US for pediatric appendicitis and reduce the need for CT scans by non-pediatric radiologists. We hope this data will increase the utilization of this tool at our institution, and possibly non-children's hospitals where US are performed entirely by adult radiologists.

**+7. Care Discontinuity in Emergency General Surgery:
Does Hospital Quality Matter?**

***Manuel Castillo-Angeles, *Molly Jarman, *Daniel J. Sturgeon,
*Zara Cooper, Ali Salim, Joaquim Havens**
Brigham and Women's Hospital, Boston, MA

Objective: Changes in care providers and hospitals following emergency general surgery (care discontinuity) are associated with increased morbidity and mortality. The cause of these worse outcomes is unknown. Our goal was to determine if the hospital quality contributes to the outcomes of readmitted emergency general surgery patients with and without care discontinuity.

Design: Retrospective analysis of the Medicare inpatient Claims file (2007–2015).

Setting: Data collected by Medicare from more than 45 million beneficiaries across the US.

Patients: All inpatients that underwent one of 7 EGS procedures shown to represent 80% of EGS volume, complications, and mortality nationally.

Interventions: Care discontinuity was defined as readmission within 30 days to non-index hospitals. Hospital quality was determined by hospital-level risk-adjusted mortality rates by EGS procedure and categorized into high (HQ) and low (LQ).

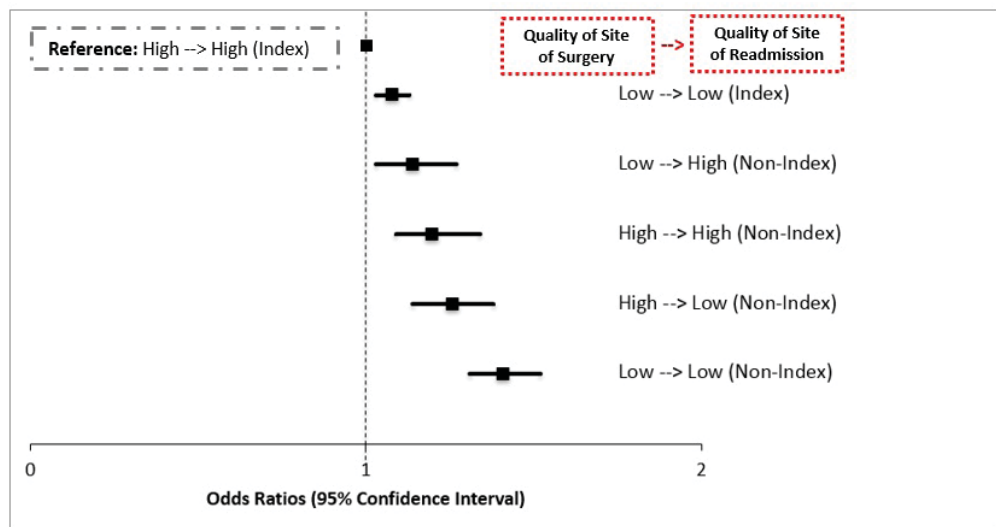
Main Outcome Measures: The primary outcome was overall mortality.

Results: There were 918,564 EGS patients, of which 79,948 were readmitted within 30 days of discharge. Care discontinuity was independently associated with mortality (OR 1.22; 95% CI 1.17–1.28). When readmitted patients were stratified by quality of index and readmitting hospital we found mortality was associated with the quality of both the index hospital and the readmitting hospital. The highest mortality rate was observed in patients with index admissions at low quality hospitals and readmission to low quality non-index hospitals (Figure 1).

* NESS Non-Members

+ RPE Eligible

Figure 1. Multivariate analysis of transition of care associated with mortality in readmitted Emergency General Surgery Patients. Model adjusted for age, sex, race/ethnicity, Charlson Comorbidity Index score, hospital region, teaching status, number of beds, and EGS type of procedure.



Conclusions: Both care discontinuity and hospital quality are independently associated with mortality in EGS patients. These data support maintaining continuity of care even at low performing hospitals.

FRIDAY

+8. Improved Mortality in Necrotizing Pancreatitis with a Multidisciplinary Minimally Invasive Step Up Approach: Comparison to a Modern Open Necrosectomy Cohort

***Casey M. Luckhurst**, *Ahmed E. Elsharkawy, *Ahmed I. Eid, *Majed El Hechi, *Lydia M. Maurer, Haytham M. Kaafarani, *Ashraf Thabet, *David G. Forcione, Carlos Fernandez-Del Castillo, Keith D. Lillemoe, *Peter J. Fagenholz
Massachusetts General Hospital, Boston, MA

Objective: Evaluate the mortality of a minimally invasive step-up (MIS) approach to necrotizing pancreatitis (NP) compared to open surgical necrosectomy (OSN).

Design: Observational cohort study with retrospective comparison. 1 year follow up.

Setting: Single tertiary referral center. 2006–2019.

Patients: Of 184 patients who underwent intervention for NP, n = 88 underwent OSN and n = 94 had an MIS approach. We excluded patients with prior OSN/MIS at other institutions before transfer (n = 8). Groups were compared using age, gender, ASA, APACHE II, etiology, and presence of infection. Patients were followed for 1 year after first intervention, with 100% follow up.

Interventions: Until 2013 we exclusively used an open transperitoneal approach to necrosectomy. Beginning in 2013 we transitioned to an MIS approach. MIS interventions included percutaneous drainage (PD) alone, endoscopic transgastric necrosectomy (ETN), video-assisted retroperitoneal debridement (VARD), sinus tract endoscopic necrosectomy (STE), or a combination of techniques, with selective use of OSN.

Main Outcome Measure: Primary outcome was mortality at one year following first NP intervention.

Results: There was no difference in baseline characteristics, except for etiology (p = 0.015). MIS Group: 11% (n = 10) treated with PD, 31% (n = 29) with ETN, 13% (n = 12) with VARD, 12% (n = 11) with STE, and 27% (n = 26) with a combination of techniques. Overall mortality was 2% (n = 2) with MIS compared to 13% (n = 11) in the OSN group (p = 0.008).

* NESS Non-Members

+ RPE Eligible

Patient Characteristics	2006-2012	2013-2019	p-value
	n (%) [n=88]	n (%) [n=94]	
Age, median (IQR)	56.0 (47.5, 66.5)	54.0 (44.0, 65.0)	0.35
Female	24 (27%)	28 (30%)	0.71
ASA Classification			
I	1 (1%)	5 (5%)	0.099
II	39 (44%)	28 (30%)	
III	46 (52%)	55 (59%)	
IV	2 (2%)	5 (5%)	
V	0 (0%)	0 (0%)	
Etiology			0.015
Alcohol	26 (30%)	32 (34%)	
Hypertriglyceridemia	7 (8%)	1 (1%)	
Lithiasis	28 (32%)	35 (37%)	
Post-ERCP	5 (6%)	7 (7%)	
Post-operative	7 (8%)	0 (0%)	
Other	15 (17%)	19 (20%)	
APACHE II score, median (IQR)	8.0 (6.0, 14.5)	10.0 (7.0, 15.0)	0.12
Infected Necrosis	62 (70%)	62 (66%)	0.52
1-year mortality	11 (13%)	2 (2%)	0.008

Conclusions: Adoption of a multidisciplinary MIS approach to pancreatic necrosectomy has resulted in a 6-fold decrease in mortality. A multidisciplinary approach with a variety of techniques is necessary for optimal care of these complex patients.

+9. Contrast Enhanced Computed Tomography During Normothermic Machine Perfusion of Kidneys

***Matthew Harris¹, *Jenna DiRito¹², *Taras Lysy¹,
*Shin Rong Lee¹, *Nabil Boutagy¹, *Susann Spindler¹,
Peter Yoo¹, *Sarah Hosgood², David Mulligan¹,
*Michael Nicholson², *Albert Sinusas¹, *Gregory Tietjen¹,
*Danielle Haakinson¹**

¹Yale University School of Medicine, New Haven, CT;

²University of Cambridge, Cambridge, United Kingdom

Objective: To develop tools for non-invasive assessment of transplant-declined human kidneys using contrast-enhanced computed tomography (CT) during cold storage and normothermic machine perfusion (NMP).

Design: Pilot experimental study to establish feasibility and methodology.

Setting: Yale Translational Research Imaging Center.

Participants: 9 transplant-declined human kidneys obtained from New England Donor Services under approved ethical protocol. 20 porcine kidneys procured from euthanized pigs at Yale animal research facilities under IUCUC approved protocols.

Intervention: NMP and contrast-enhanced CT.

Main Outcome: Normalized accessible vascular volume.

Results: Performed contrast-enhanced CT on 20 porcine kidneys and 9 human kidneys using a constant pressure infusion with crystalloid after cold storage. Subsequently, perfused 2 pig and 2 human kidneys with oxygenated red blood cells at normothermic temperatures for 30 minutes using an adapted pediatric cardiac bypass circuit. During perfusion, performed contrast-enhanced CTs at early, mid, and late time points. Used custom MATLAB code to analyze DICOM images and calculate normalized contrast volumes to reflect accessible vasculature. Normalized vascular volume of one kidney increased 133% when imaged during NMP compared to prior cold storage imaging (Figure 1).

* NESS Non-Members

+ RPE Eligible

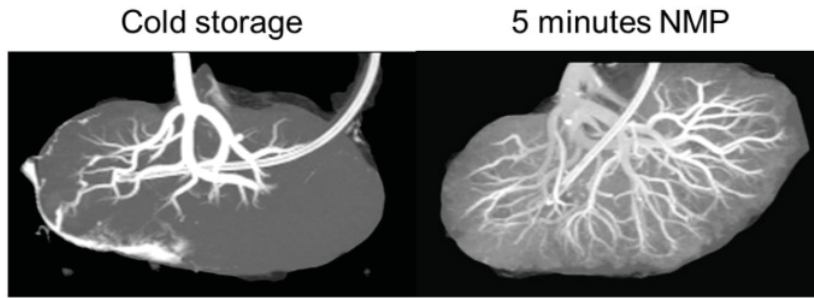


Fig.1: Kidney from a 69 yr old female donor after anoxic arrest with acute kidney injury on labs imaged after 43 hrs of cold ischemia. A) CT image after cold storage. B) 30 minutes later, after 5 minutes of NMP. 133% increase in normalized vascular volume from cold storage to NMP.

Conclusions: To our knowledge, this is the first described series of contrast-enhanced CT of ex-vivo human kidneys during NMP. Ex-vivo whole-organ CT is feasible during NMP and can enable dynamic, quantitative assessments of accessible vasculature and perfusion of marginal human kidneys. Our approach can be used before and after therapeutic interventions to control for the inherent variability of human organs.

#10. The Effect of Anticoagulation on Outcomes After Liver and Spleen Injuries: A Research Consortium of New England Centers for Trauma (ReCONNECT) Study

Bishwajit Bhattacharya¹, *Reza Askari², Kimberly A. Davis¹,
*Jon Dorfman³, *Ahmed I. Eid⁴, *Ahmed E. Elsharkawy⁴,
*George Kasotakis⁵, *Sandra Mackey⁶, *Stephen Odom⁷,
*Barbara U. Okafur², *Michael Rosenblatt⁶, *Alex Rudtisky⁵,
George Velmahos⁴, Adrian A. Maung¹

¹*Yale School of Medicine, New Haven, CT;* ²*Brigham and Women's Hospital, Boston, MA;* ³*UMass Medical School, Worcester, MA;* ⁴*Massachusetts General Hospital, Boston, MA;*
⁵*Boston University, Boston, MA;* ⁶*Lahey Clinic, Burlington, MA;*
⁷*Beth Israel Deaconess Medical Center, Boston, MA*

Objective: Study the effect of anticoagulation (AC) in patients with liver and or spleen injuries.

Design: Multicenter retrospective study.

Setting: Adult trauma centers.

Patients: Adult trauma patients with liver or spleen injury.

Main Outcomes: Transfusion requirements, success on non-operative management, LOS, mortality.

Results: 1254 patients (64 on AC) were analysed. AC patients were older (60.9 vs. 38.6 years, $p < 0.001$). 57.5% of patients had a splenic injury, 52.8% a liver injury and 10.5% both. The most common AC agent was warfarin (70.3%), the most common indication was atrial fibrillation (46.9%). There was no significant difference in injury grade between AC and non-AC patients. AC patients required a blood products more often (57.8 vs 40.1%, $p = 0.005$) especially FFP (42.1 vs 18.9%, $p < 0.01$). Among those transfused, non-AC patients required more PRBC's (5.7 vs 3.8 units, $p = 0.018$), similar amounts of FFP (3.2 vs 3.1 units, $p = 0.92$). The two groups had no significant difference in the rates of initial non-operative management (50% (AC) vs 55.7% (non-AC), $p = 0.3$) or failure of non-operative management (7.1 vs 3.5%, $p = 0.16$). Patients on AC were more likely to be managed initially with angiography (37.5 vs 20.3%, $p = 0.001$) while non-AC patients with surgery (23.9% vs 12.5%, $p = 0.03$). There was no significant difference in LOS and mortality.

* NESS Non-Members

New Member Award Eligible

Table 1

Demographics				
	All	AC	Non-AC	Comparison (AC vs Not)
Age	39.71 ± 19.01	60.88 ± 19.55	38.56 ± 18.30	p < 0.001
Gender (% Male)	68	70.3 (45)	67.9 (808)	Chi Square 0.163 p = 0.687
ISS (Mean ± SD)	22.37 ± 13.5	21.42 ± 13.6	22.42 ± 13.52	p = 0.566
Spleen % (n)	57.5 (721)	76.6 (49)	56.5 (672)	Chi Square 10.032 p = 0.002
Mean Spleen Grade	2.51 ± 1.256	2.35 ± 1.32	2.52 (1.25)	
Median Spleen Grade	2	2	2	p = 0.346
Spleen IQR (25–75)	2 (1–3)	2 (1–3)	2 (1–3)	
Liver % (n)	52.8 (662)	35.9 (23)	53.7 (639)	Chi Square 7.726 p = 0.005
Mean Liver Grade	2.31 ± 1.239	2 ± 1.13	2.32 ± 1.24	p = 0.218
Median Liver Grade	2	2	2	
Liver IQR (25–75)	2 (1–3)	2 (1–3)	2 (1–3)	
% Both	10.5	12.5 (8)	10.4 (124)	Chi Square 0.2798 p = 0.597

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Table 2

Outcomes	All	AC	Non-AC	Chi Square	P Value
Required Transfusion % (N)	40.9 (512)	57.8 (37)	40.1 (475)	7.922	0.005
Mean # PRBC (Limited to those transfused)	5.6 ± 8.4	3.8 ± 4.2	5.7 ± 8.7		0.018
Mean # FFP (Limited to those transfused)	3.2 ± 7.5	3.1 ± 4.0	3.2 ± 7.7		0.92
Mean # Plts ((Limited to those transfused)	1.7 ± 6.8	1.6 ± 4.4	1.8 ± 7.0		0.87
Initial Operative Management % (N)	23.4 (293)	12.5 (8)	23.9 (285)	4.45	0.035
Initial IR Management % (N)	21.2 (266)	37.5 (24)	20.3 (242)	10.71	0.001
Initial Non-OP Management % (N)	55.4 (695)	50 (32)	55.7 (663)	0.803	0.370
Failure of Non-Op Management (All)	3.7 (36)	7.1 (4)	3.5 (32)	1.9	0.168
Failure of Initial IR Management	8.3 (22)	16.7 (4)	7.4 (18)	2.5	0.117
Failure of Non-Op Management (No IR)	2.0 (14)	0 (0)	2.1 (14)	0.690	0.406
Subsequent IR Management (All)	3.4 (33)	0 (0)	3.6 (33)	2.115	0.146
ICU Admission	70.6 (886)	78.1 (50)	70.2 (836)	1.816	0.178
LOS Days Mean ± SD	9.6 ± 10.9	12.0 ± 11.6	9.4 ± 11.0		0.069
Mortality	8.0 (100)	4.7 (3)	8.2 (97)	0.993	0.319

Conclusions: The use of anticoagulation agents did not result in a difference in outcomes.

#11. Health Maintenance and Screening Among Residents

Erika Rangel, *Manuel Castillo Angeles, *Mehreen Kisat,
*Tovy Kamine, Reza Askari

Brigham and Women's Hospital, Boston, MA

Objective: Physicians in training are at increased risk for depression compared to other educated young adults. Depression negatively impacts academic performance, resident physical health and emotional well-being, and adversely affects patient care and outcomes. Physicians have higher rates of suicidal ideation and suicide than the general population, with women at greatest risk. Little is known about depression screening amongst residents. We aimed to assess depression screening rates among residents in New England teaching hospitals.

Design: Survey questionnaire.

Setting: Self-administered survey electronically distributed via program directors.

Patients: Physician residents from 181 New England programs across 12 different specialties.

Interventions: None.

Main Outcome Measures: Descriptive measures on medical health.

Results: 299 residents completed the survey. Median age: 30 ± 4 (median \pm IQR). 61%: female; 74%: white; 74%: academic programs. 42% had not seen a PCP for >1 year. 49% of residents had never been screened for depression, and men and women were screened with equal frequency.

Conclusions: Despite a high prevalence of depression and increased risk of suicide, only half of resident physicians undergo mental health screening. Barriers to self-care and help-seeking behavior should be explored. Wellness programs should explore confidential evaluation of trainees to ensure timely intervention for those suffering from depression.

* NESS Non-Members

New Member Award Eligible

**12. Background Checks and State-to-State Variation
in Firearm Suicide and Homicide Rates**

Frederick H. Millham

Newton Wellesley Hospital, Newton, MA

Objective: Firearm public policy is of interest to surgeons.

I examine the association of required background check (BG) prior to firearm purchase on the rate of change of state-specific firearm related death rates from suicide (FS) and homicide (FH) between 2014 and 2017.

Design: Retrospective cohort study employing hierarchical longitudinal mixed effects modeling with post-estimation marginal analysis, comparing FS and FH in the base year 2014 to each of three subsequent years. This method compares each state to itself thereby controlling for confounding socioeconomic differences among states. I abstracted FS and FH for each state from the CDC WISQARS database and BG requirements from publicly reported information.

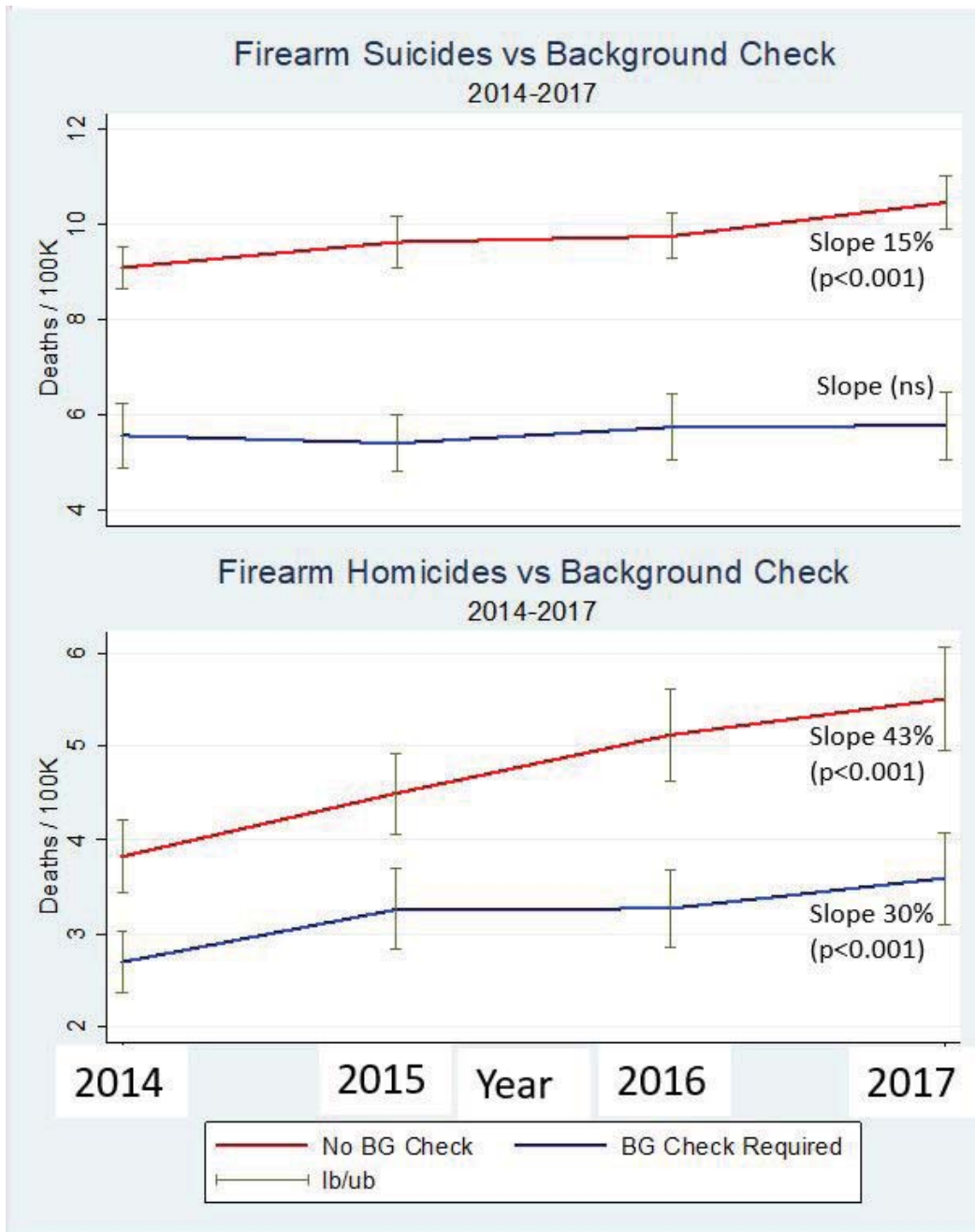
Setting: The United States.

Subjects: Each of the 50 United States.

Interventions: Background Checks prior to firearm purchase.

Main Outcome Measures: Firearm suicide and homicide rates for each state for each year 2014–2017.

Results: The 19 BG states experienced no change in FS rate (slope 4%, $p = \text{ns}$), while FS rate for the 31 non-BG states increased (slope 15%, $p < 0.001$). Both FH rates increased in both BG and non-BG (slopes 30% and 43% respectively, each $p \text{ value} < 0.001$). Together, non-BC states suffered over 2,000 excess FS per year.



Conclusions: States with BG experienced stable FS rates over the past 4 years, whereas those without BG experienced significant increases in FS rate. FH rates increases in both BG and non-BG states. Surgeons who pursue advocacy roles in firearms policy should advocate for BG as a policy associated with stable FS rates but not associated with FH.

+13. Treatment of Facial Fractures at a Level 1 Trauma Center: Do Medicaid and Non-Medicaid Enrollees Receive the Same Care?

***Amanda Fazzalari, *David Alfego, *Joseph Taylor Shortsleeve, *Qiming Shi, *Jomol Mathew, Demetrius Litwin, Mitchell A. Cahan**

University of Massachusetts Medical School, Worcester, MA

Objective: Timing of surgical treatment of facial fractures may vary with patient age, injury type, and presence of polytrauma. Previous studies using national datasets have suggested that trauma patients with government insurance experience fewer operations, longer length of hospital stay (LOS), and worse outcomes compared to privately insured patients.

The objective of this study is to compare frequency of surgery, time to surgery (TTS), LOS between patients with and without Medicaid insurance who suffer from facial fractures.

Design: Retrospective cohort study.

Setting: Level 1 Trauma Center.

Patients: All adult patients (N = 1,336) with mandibular (n = 220), orbital (n = 536), and midface (n = 580) fractures between 2009–2018. Statistical analyses were performed to assess differences in frequency of surgery, TTS, LOS, and mortality between Medicaid and Non-Medicaid enrollees (excluding Medicare).

Main Outcome Measures: Frequency of surgical treatment for facial fracture, TTS, LOS, and mortality.

Results: Of the patients included 78.8% were male, 83.5% were Caucasian, and 13.1% (175) were enrolled in Medicaid. Mechanism of injury was predominantly assault for Medicaid enrollees and falls or motor vehicle accidents for Non-Medicaid enrollees ($p < 0.001$). Both groups exhibited similar comorbidities, GCS, and rates of ICU admission. 496 patients underwent operative fracture treatment, with similar rates of surgery for mandibular and midface fractures between groups ($p = 0.128$). Medicaid enrollees with orbital fractures were less likely to undergo surgical correction (19.4 vs 34.5%, $p = 0.016$), despite similar fracture complexity. TTS, LOS, and mortality were similar in both groups.

* NESS Non-Members

+ RPE Eligible

Conclusions: Medicaid enrollees experienced less frequent operations for orbital fractures, despite similar fracture complexity and severity. Further studies are needed to identify social and geographic factors that may influence treatment of facial fractures among Medicaid and Non-Medicaid enrollees.

^Brief 6. Gender Representation by Specialty Track at Surgical Meetings: The American and Australasian Experiences

***Allison R. Wilcox¹, *Christine S. Lai², *Fellicia E. Stanzah²,
*Jessica G. Farrar², Sandra L. Wong¹**

¹Dartmouth-Hitchcock Medical Center, Lebanon, NH;

*²University of Adelaide, The Queen Elizabeth Hospital,
Adelaide, Australia*

Objective: Increasing attention is being paid to gender representation at surgical meetings worldwide, particularly regarding the number of panels whose speakers are all men. We analyzed the representation of women panelists, as well as the prevalence of men-only panels, at two prominent international academic surgical meetings.

Design: Data were abstracted from meeting programs and gender of panelists was determined. Descriptive analyses were performed.

Setting: American College of Surgeons (ACS) Clinical Congress and Royal Australasian College of Surgeons (RACS) Scientific Congress, 2013–2018.

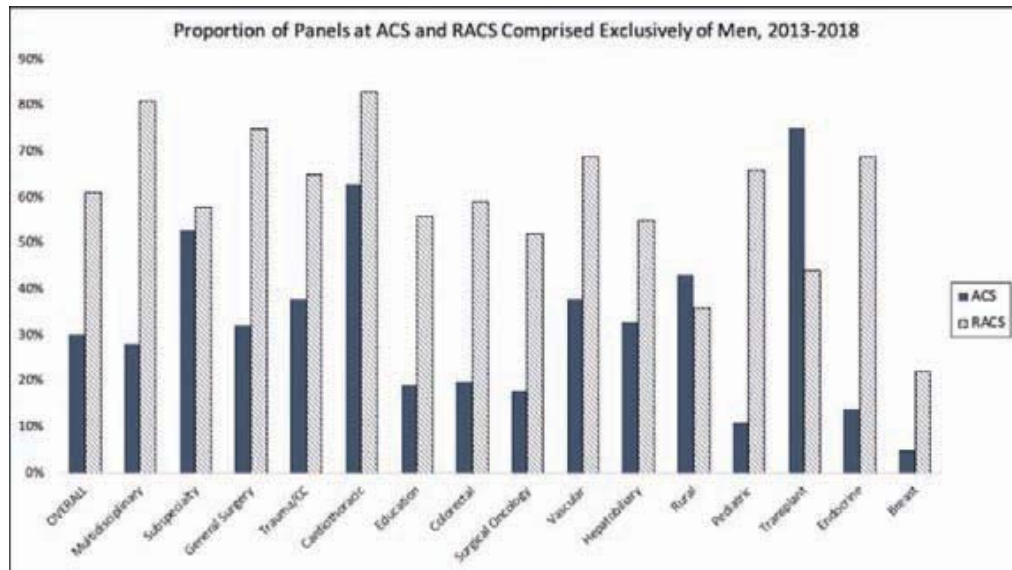
Patients (or Other Participants): Panelists at the ACS and RACS meetings.

Main Outcome Measures: 1.) Proportion of men-only panels at ACS and RACS by specialty track. 2.) Proportion of women panelists at ACS and RACS by specialty track.

Results: From 2013–2018, 30% (205/694) of panels at ACS and 61% (850/1388) of panels at RACS were comprised entirely of men. The specialty tracks with the highest proportion of men-only panels were Transplant (75%) and Cardiothoracic (63%) at ACS, and Cardiothoracic (83%) and Multidisciplinary/General Interest (81%) at RACS (Figure 1). At ACS, 28% (948/3363) of panelists were women compared to 22% (875/3874) at RACS. The highest proportion of women panelists were on panels in Breast (63%) and Endocrine (48%) tracks at ACS, and Education (84%) and Breast (44%) tracks at RACS.

* NESS Non-Members

^Brief Report Award Eligible



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Conclusions: There is a persistent difference in gender representation at surgical meetings, particularly within certain surgical subspecialties. Program chairs of these meetings could improve representation of women by focusing on who serves as panelists overall and within specialty tracks.

^Brief 7. Blood Gene Expression Profiles Support Early Changes in Immunometabolism in Patients Following Sleeve Gastrectomy

***Tammy Lo¹, *Keyvan Heshmati¹, Ali Tavakkoli¹,**

***Damien C. Croteau-Chonka², Eric G. Sheu¹**

¹Brigham and Women's Hospital, Boston, MA; ²Channing Division of Network Medicine, Boston, MA

Objective: To characterize immunologic changes induced by surgical weight loss that promote improvements in metabolic disease.

Design: Longitudinal, prospective human cohort study.

Setting: Single academic tertiary care hospital.

Patients: Adult, morbidly obese patients undergoing LSG without a history of immunologic disease, (N = 20; 75% female; mean age = 45.9 years; mean body mass index (BMI) = 44.0 ± 7.2 kg/m²).

Interventions: Laparoscopic sleeve gastrectomy (LSG).

Main Outcome Measures: Parameters of weight, co-morbidities, and trends in blood biomarkers were observed from pre-operative baseline to 1 year in 3-monthly interval follow-ups. Adipose tissue biopsies and whole blood leukocytes were collected peri-operatively and blood again every 3 months to facilitate RNA-sequencing. Paired-sample univariate differential gene expression analyses were performed using DESeq2. For this study, we focused on the early post-operative changes at 3 months.

Results: LSG led to a significant reduction in mean total body weight loss ($18.12 \pm 4.34\%$). Improvements in biomarkers such as adiponectin ($P < 0.05$), resistin ($P < 0.05$), C reactive protein, and interleukin-6 were also observed after LSG. Total white blood cell counts were reduced, but white cell composition was also altered after LSG, with a significant decrease in neutrophil percentage and increase in lymphocytes percentage. In a subset of six subjects, gene set enrichment analyses demonstrated that by 3 months LSG also induced significant blood gene expression changes in several key metabolic pathways in leukocytes (Figure 1).

* NESS Non-Members

^Brief Report Award Eligible

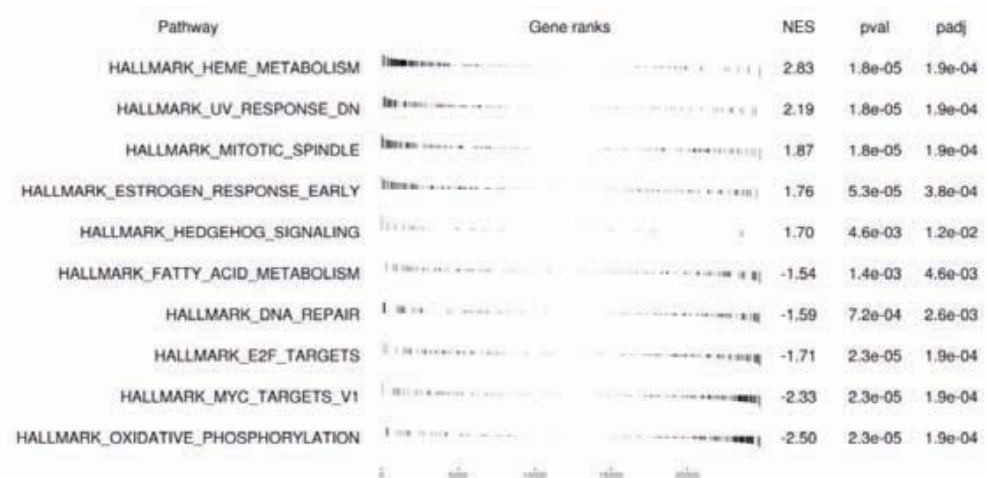


Figure 1. Top results from gene set enrichment analysis of differential gene expression profiles in whole blood comparing 3 months post-op to baseline.

Conclusions: LSG induces significant changes in the function and metabolism of leukocytes as early as 3 months post-operatively.

FRIDAY

^Brief 8. Ketorolac Is Not Associated with Adverse Outcomes Following Pancreaticoduodenectomy

***Whitney S. Brandt**, *Sara Abou Azar, *Raymond A. Jean,
*John W. Kunstman, Ronald R. Salem

Yale New Haven Hospital, New Haven, CT

Objective: Perioperative narcotic use contributes to the ongoing opioid crisis. Outcome optimization, including reducing opiate usage, is an ongoing goal of pancreatic surgery. Ketorolac, a frequent component of opiate-minimizing recovery pathways, has not been universally adopted over concerns regarding adverse events, including anastomotic fidelity. Thus, we examined ketorolac's effects on pancreatic fistula (PF) and related morbidity following pancreaticoduodenectomy (PD).

Design: Retrospective cohort.

Setting: Academic center.

Patients: 256 patients undergoing PD from 1/2013–9/2018.

Intervention: Postoperative ketorolac versus no ketorolac.

Outcome Measures: Development of clinically-relevant PF (CR-PF) as defined by international consensus was the primary outcome measure. Secondary outcomes included Fistula Risk Score (FRS)-adjusted PF incidence and cumulative operative morbidity.

Results: Of 256 patients, CR-PF occurred in 10.5% ($n = 27$). 202 patients received ketorolac prior to postoperative day 6 (78.9%) with a mean dose of 45.6 ± 27.4 mg/day. CR-PF occurred in 11.4% ($n = 23$) of those receiving ketorolac versus 7.4% ($n = 4$) that did not ($p = 0.47$). Among those receiving >150 mg of ketorolac during postoperative day 0–5 ($n = 130$, 50.8%), CR-PF occurred in 10.8% compared to 10.3% that did not ($p = 0.73$). Increased FRS correlated with CR-PF risk ($p = 0.006$); median FRS was 4 (range, 0–8). Overall CR-PF incidence was unaffected by ketorolac across all FRS categories ($p = \text{NS}$, all). Regression analysis with known PF risks (duct size, gland texture/pathology, BMI, blood loss) demonstrated ketorolac was not an independent CR-PF risk (OR 2.07 [0.57–7.52], $p = 0.27$). 16% of patients had operative drains. Major (Clavien ≥ 3) morbidity and 90-day mortality did not differ between groups ($p = \text{NS}$, all).

Conclusion: Ketorolac administration is not associated with increased risk of CR-PF or major morbidity following PD. These data suggest ketorolac can be safely employed in strategies to minimize opioid usage.

* NESS Non-Members

^Brief Report Award Eligible

5:00 PM – 5:45 PM

STATE CAUCUS MEETINGS

Connecticut	<i>Maisonnette A (36th Floor)</i>
Maine	<i>Maisonnette F (36th Floor)</i>
Massachusetts	<i>Salle De Bal Ballroom</i>
New Hampshire	<i>Maisonnette E (36th Floor)</i>
Rhode Island	<i>Maisonnette B (36th Floor)</i>
Vermont	<i>Maisonnette C (36th floor)</i>

FRIDAY

6:00 PM – 7:00 PM

WELCOME RECEPTION

Le Caf Conc (Lower Lobby)

SATURDAY, SEPTEMBER 14, 2019

9:00 AM – 1:00 PM

REGISTRATION

Ballroom Foyer (Lower Lobby)

9:00 AM – 1:00 PM

SPEAKER READY AREA

Ballroom Foyer (Lower Lobby)

7:00 AM – 10:45 AM

EXHIBIT HALL HOURS

Viger A-C (Lower Lobby)

7:00 AM – 8:00 AM

CONTINENTAL BREAKFAST

Viger A-C (Lower Lobby)

7:00 AM – 7:45 AM

POSTERS OF DISTINCTION BEST POSTER AWARD

Salle De Bal Ballroom

Moderator: Matthew A. Conway

BASIC SCIENCE FIRST PLACE AWARD – NESS RESIDENT AND FELLOW RESEARCH DAY

♦POD1.

Decreased Recurrence in Sarcoma Using Double-Loaded Paclitaxel-Eluting Polymer Films

***David A. Mahvi¹, *Catalina Bordeianu², *Ngoc-Quynh Chu¹,
*Jeremy Miller², *Mark W. Grinstaff², *Yolonda L. Colson³,
Chandrajit P. Raut¹**

*¹Brigham and Women's, Boston, MA; ²Boston University,
Boston, MA; ³Massachusetts General Hospital, Boston, MA*

Objective: Despite macroscopically complete resection, locoregional recurrence of sarcoma remains high. The efficacy of a novel double-loaded paclitaxel-eluting polymer film was assessed in two separate murine models of recurrent sarcoma.

Design: 1 × 1 cm poly (glycerol monostearate-co-caprolactone) polymer films were electrospun onto a polyglycolic acid buttress. Films were either loaded with no paclitaxel (unloaded), with paclitaxel covalently-bound

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♦ Poster of Distinction

to the polymer backbone (single-Pax), or with both covalently-bound and free paclitaxel (double-Pax). Cell-line CS-1 chondrosarcoma and patient-derived xenograft (PDX) LP-6 liposarcoma were grown subcutaneously in nude mice. Following R1 resection, mice were intraoperatively randomized to: 1.) Double-Pax film, 2.) Single-Pax film, 3.) Unloaded film, 4.) intraperitoneal (IP) paclitaxel, or 5.) no other therapy. Local recurrence and overall survival were assessed for 90 days.

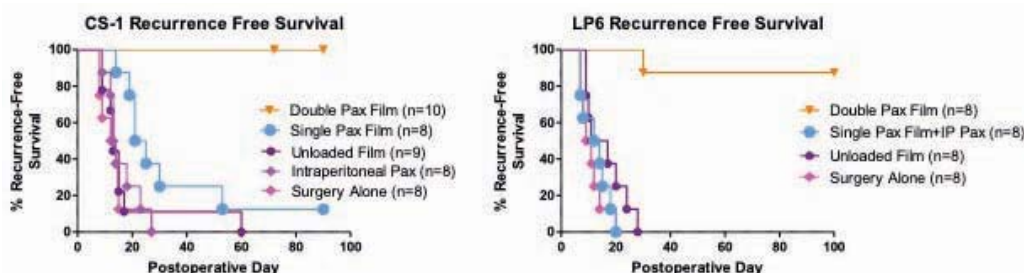
Setting: N/A.

Patients: None.

Interventions: See above.

Main Outcome Measures: Recurrence-free Survival.

Results: There were no recurrences within 90 days for the mice receiving double-Pax films for CS-1 and one recurrence for LP-6. The median time to locoregional recurrence in the CS-1 model was not reached for double-Pax films, 13 days for no treatment and unloaded film, 13.5 days for IP paclitaxel, and 23 days for single-Pax films ($p < 0.0001$). The median time to locoregional recurrence in the LP-6 model was not reached for double-Pax film, 10 days for no treatment, 14 days for unloaded film, and 13 days for single-Pax film + IP paclitaxel ($p = 0.0002$).



Conclusions: A novel paclitaxel-eluting polymer film double-loaded with both free and covalently-bound drug shows superior efficacy in preventing sarcoma recurrence in two separate murine models, including PDX liposarcoma.

♦**POD2. Innovative Process for Department-Wide Engagement in Quality Improvement: Experience from the Massachusetts General Hospital**

***Yanik J. Bababekov**, *David C. Chang, *Ya-Ching Hung,
*Yu-Tien Hsu, *Daniel Hashimoto, *Elan Witkowski,
*Alex B. Haynes, John T. Mullen, Allan M. Goldstein,
Keith D. Lillemoe

Massachusetts General Hospital, Boston, MA

Objective: Quality improvement (QI) initiatives commonly originate “top-down” from senior leadership as staff engagement is often sporadic.

Design: We describe our experience with a technology-enabled ideas contest to encourage participation of multiple stakeholders in a Department of Surgery (DoS) to solicit ideas for QI. We hypothesize that our novel process would stimulate engagement and assist DoS leadership in prioritizing QI initiatives.

Setting: Department of Surgery in a tertiary academic hospital.

Participants: Stakeholders in the DoS.

Interventions: Observational study of a process to engage a DoS in QI. The process had five phases: anonymous online submission of ideas by frontline staff; anonymous online crowd voting to rank ideas on a scale whether the DoS should implement each idea (1 = No, 3 = Maybe, 5 = Yes); ideas with scores $\geq 95^{\text{th}}$ percentile were invited to submit implementation plans; plans were reviewed by a multi-disciplinary panel to select a winning idea.

Main Outcome Measures: perception on whether the DoS should implement the proposed ideas.

Results: 152 ideas were submitted from 95 staff ($n = 850$, 11.2%). All Divisions ($n = 12$) and all staff roles ($n = 12$) submitted ideas. The greatest number of ideas were submitted by faculty (27.6%), patient service coordinators (18.4%), and residents (17.8%). The most common QI category was access to care (20%). 195 staff (22.9%) cast 3,559 votes. The mean score was 3.5 ± 0.5 . 10 ideas were objectively invited to submit implementation plans. 1 idea was awarded a grand prize of funding, project management, and leadership buy-in.

Conclusions: A web-enabled ideas contest was successful in engaging faculty, residents, and other critical role groups in QI. Moreover, the contest facilitated prioritization of ideas and identification of QI champions. A “bottom-up” approach to QI is feasible in an academic DoS.

* NESS Non-Members

♦ Poster of Distinction

♦**POD3. Chemoprevention by Bromodomain Inhibition in a Rodent Model of Hepatocellular Carcinoma**

*Shen Li¹, *Nourdine Hamdane², *Frank Jühling²,
*Gunisha Arora¹, *Mozhdeh Sojoodi¹, *Derek J. Erstad¹,
*Michael Lanuti¹, *Thomas F. Baumert², *Bryan C. Fuchs¹,
Kenneth K. Tanabe¹

¹Massachusetts General Hospital, Boston, MA; ²Institut de
Recherche sur les Maladies Virales et Hépatiques, Strasbourg,
France

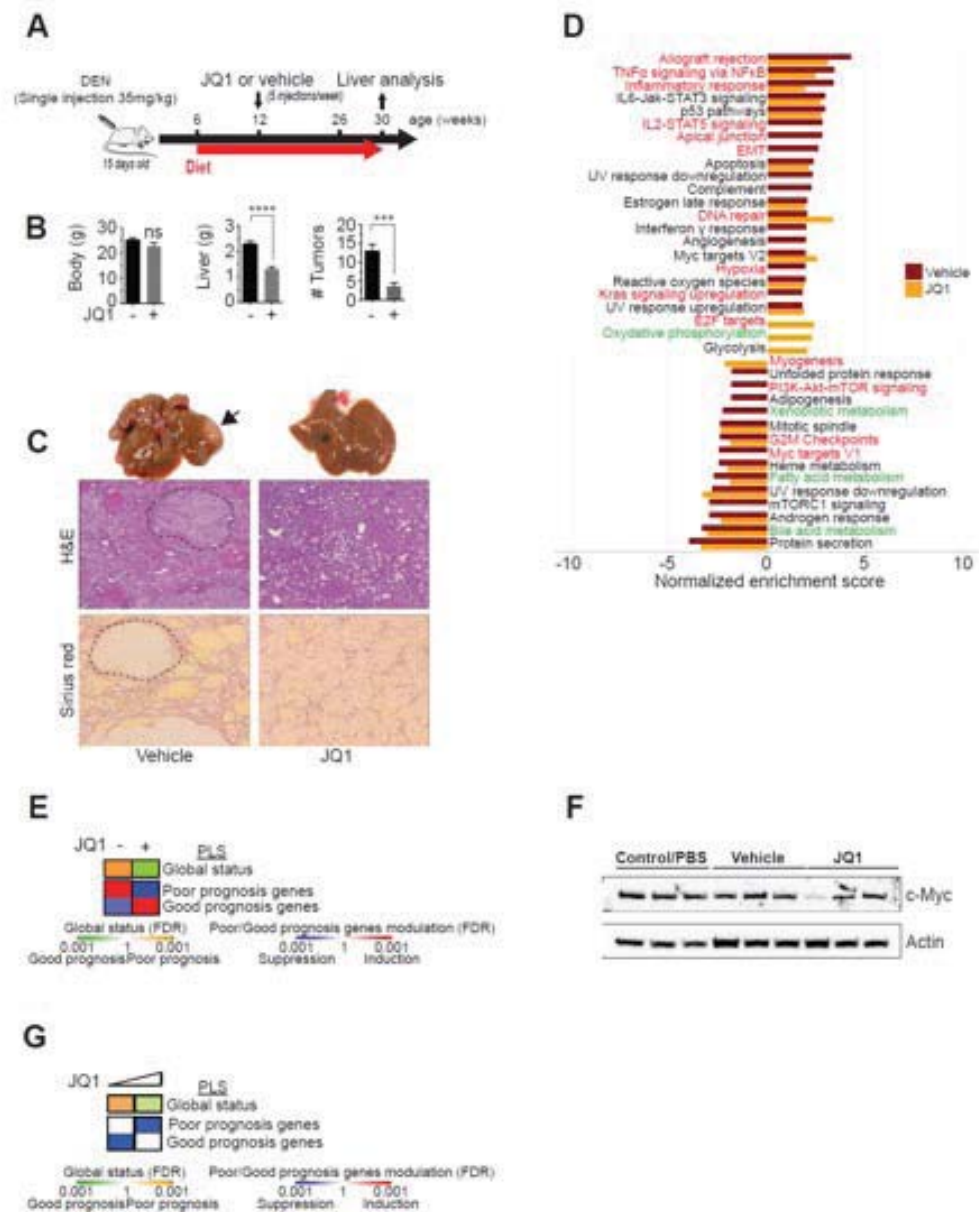
Introduction: Hepatocellular carcinoma (HCC) is a leading cause of mortality. The bromodomain family consists of BRD2, BRD3 and BRD4 proteins. BRD4 amplification has been implicated in HCC carcinogenesis. The hypothesis of this study is that BRD4 inhibitor JQ1 reduces cirrhosis and HCC development in a mouse model of HCC.

Methods: Male C57Bl/6 mice received an injection of diethylnitrosamine at day 15, followed by the initiation of a choline-deficient, L amino acid-defined high fat diet. This model reliably recapitulates histological and molecular features of HCC development with induction of fibrosis at 18 weeks and HCC nodules by 24 weeks. Mice were randomized to receive JQ1 or vehicle only. Livers were harvested and analyzed at 30 weeks.

Results: A significant decrease in the total of number of liver nodules after JQ1 treatment compared to vehicle control (13.3 ± 1.5 vs. 3.6 ± 0.9 ; $p < 0.001$) was observed. Liver sections were stained by picrosirius red to assess for fibrosis. JQ1 significantly reduced collagen deposition, and this histologic observation was confirmed by reduced expression of multiple pro-fibrotic genes. A clinical prognostic HCC risk gene signature was associated with higher risks of HCC in cirrhotic patients. Inhibition of BRD4 has been shown to reverse this high risk gene signature in an *in-vitro* model and patient-derived *ex vivo* liver tissue. In this study, RNA-Seq analysis revealed that JQ1 treatment reverted the HCC gene signature from a high risk to low risk profile.

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Conclusion: Overall our data supports that bromodomain inhibitors may be used to reduce fibrosis as well as prevent HCC.

♦**POD4. Tumor Deposits in Stage III Colon Cancer: Correlation with Other Histopathologic Variables, Prognostic Value and Risk Stratification**

Victor E. Pricolo^{1,2}, *Jon Steingrimsen³, *Tracey J. McDuffie¹, *Joshua M. McHale¹, *Brian McMillen¹, *Mark Shparber¹

¹Southcoast Health Charlton Memorial Hospital, Fall River, MA; ²Department of Medical Education, Alpert Medical School of Brown University, Providence, RI; ³Brown University School of Public Health, Providence, RI

Objective: NCCN guidelines for stage III colon cancer define low-risk vs high-risk patients on the basis of T (1–3 vs 4) and N (1 vs 2), with variable duration of adjuvant chemotherapy options. This study analyzes the impact of tumor deposits (TD) and additional histopathologic features, i.e. poor differentiation (PD), perineural invasion (PNI), and lymphovascular invasion (LVI), on overall survival.

Design: Retrospective analysis of prospectively collected data. Follow-up to 80 months.

Setting: National Cancer Data Base.

Patients: 48,905 stage III colon cancer patients treated with surgery plus chemotherapy from 2010 to 2015.

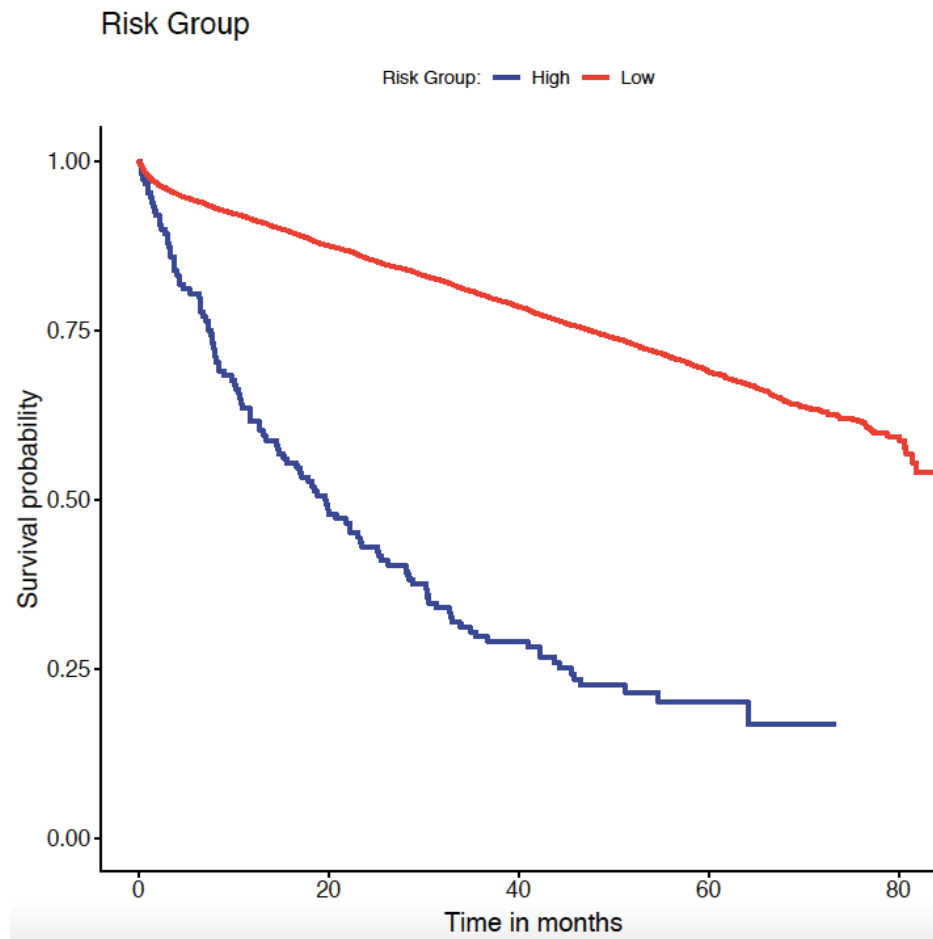
Interventions: Data extraction on cancer program type, insurance status, Charlson-Deyo score, gender, race, age at diagnosis, histopathologic variables, survival rates. Statistical analysis with log-rank test, Kaplan-Meier curves, Cox proportional hazard regression models.

Main Outcome Measures: Correlation of histopathologic variables (T and N status, TD, PD, PNI, LVI) with survival rates.

Results: Five-year survival probability was similar for LN+TD- (59.8%) and LN-TD+ patients (58.2%), but significantly worse for LN+TD+ (41.5%) ($p < 0.001$). The presence of LN+TD+ was more often associated with PD + (37.4%), PNI + (34.5%), and LVI + (69.1%), than LN+TD- or LN-TD+ ($p < 0.001$). The hazard ratios for each adverse covariate were: T4:1.24; ≥ 4 LN+:1.22; TD+:1.25; PD+:1.43; PNI+:1.17; LVI+:1.20; for a 5-year survival of 20.1% when all present (high-risk), vs 68.9% when all absent (low-risk) ($p < 0.001$) (Figure).

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LN- patients with $\geq 3\text{TD}+$ (N1c) had worse 5-year survival (51.4%) than those with 1–2TD+ (60.6%) ($p < 0.01$), but similar to $\geq 4\text{LN}+\text{TD}-$ (N2) (48.9%) and 1-3LN+TD+ (N1a-b) (50.7%).

Conclusions: This NCDB analysis quantifies the adverse impact of tumor deposits on prognosis for stage III colon cancer patients. Such data can refine risk stratification and may prompt reconsideration of staging, management and survivorship strategies.

♦**POD5. Specific Amino Acid Substitution As Well As RET Codon Location Influence Age of Onset and Penetrance of Pheochromocytoma in MEN2 Kindreds**

***Danielle B. Cameron**¹, Jill C. Rubinstein², Glenda G. Callender³,
*Catherine W. Dinauer³, Emily R. Christison-Lagay³

¹Massachusetts General Hospital, Boston, MA; ²Memorial Sloan Kettering Cancer Center, New York, NY; ³Yale School of Medicine, New Haven, CT

Objective: Risk categories by RET mutation in Multiple Endocrine Neoplasia Type 2A and 2B (MEN2) are well outlined for medullary thyroid cancer (MTC), but less defined for other components of the syndrome including pheochromocytoma. We sought to better define the age of onset and phenotypic penetrance of pheochromocytoma by specific mutation.

Design: Scoping Review of PubMed Indexed Papers and institution specific MEN2 kindreds.

Setting: Multi-institutional, multi-national data.

Patients: Patients within the PubMed indexed literature in whom Sanger Sequencing or Next Generation Sequencing identified a germline RET mutation and in whom data was available either regarding age of onset of pheochromocytoma or kindred incidence of pheochromocytoma.

Interventions: N/A.

Main Outcome Measures: Specific RET mutation by base-pair substitution or insertion-deletion, age of onset of pheochromocytoma, phenotypic penetrance of pheochromocytoma across kindred.

Results: A total of 104 patients with MEN2-associated pheochromocytoma were identified including 9 patients from Yale-New Haven Hospital. Twenty-three unique RET mutations were identified. Average age of onset ranged from 27 years (p.M918T) to 76 years (p.G533C). The most frequently occurring mutations were C634R (31% of all mutations), followed by p.C634Y (20%), p.C634S (7%), and p.C634W, p.C618R, and p.C634G (6% each). Within mutations at the 634 position, p.C634R had the earliest age of onset (34 yrs), while p.C634S had the latest average presentation (53 yrs). Phenotypic penetrance ranged from 12% (p.C611Y) to 61% (p.C634R).

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Conclusions: Specific RET mutation, not simply codon location as previously described, influences both the age of onset and phenotypic penetrance of pheochromocytoma. This information should be incorporated into future screening strategies and prognostication nomograms in patients with MEN2.

♦**POD6. Venous Thromboembolism Prophylaxis in Patients Undergoing Breast Surgery**

*Na Eun Kim¹, *Liam Conway-Pearson², *Kevin Bachrach²,
Maureen T. Kavanah¹, Jane E. Mendez³, Teviah E. Sachs¹,
*Thurston F. Drake¹, David McAneny¹, *Michael R. Cassidy¹

¹*Boston Medical Center, Boston, MA;* ²*Boston University School of Medicine, Boston, MA;* ³*Baptist Health South Florida, Miami, FL*

Objective: To evaluate compliance with and outcomes of a standardized venous thromboembolism (VTE) risk assessment and prophylaxis program, based on the Caprini model, for patients undergoing breast operations.

Design: Retrospective descriptive study.

Setting: Academic urban safety net and tertiary referral hospital.

Patients: Patients who underwent breast operations between 2011 and 2018, including local excision, partial, total or modified radical mastectomy with and without reconstruction.

Interventions: A mandatory standardized VTE risk assessment program, using the Caprini model, was implemented in 2011, along with corresponding risk-stratified prophylaxis regimens. Extended chemoprophylaxis (ECP) beyond discharge is recommended for high and highest-risk patients; surgeons may decline this option.

Main Outcome Measure: VTE, bleeding events, and adherence to recommended prophylaxis.

Results: Of 913 patients, 49.3% were categorized as low or moderate VTE risk, 43.6% were high-risk, and 7.1% were highest-risk. There were 6 VTE events, including 5 in the high-risk group, and 1 in the highest-risk group. One patient was diagnosed with VTE during the index admission. Five patients manifested VTEs after discharge, none of them had been prescribed ECP, contrary to protocol guidelines. Among patients in the high and highest risk category, 20.9% and 59.7%, respectively, were given ECP. Twenty bleeding events were managed non-operatively; only 3 patients required re-explorations. The overall incidence of bleeding was 2.04%, consistent with reported rates. No difference in bleeding complications was detected.

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Complications by Caprini Score

Type of Complication	Low/Moderate Risk (n = 434)	High Risk (n = 383)	Highest Risk (n = 62)	Total	% Total Patients
Patients discharged with ECP	2 (0.5%)	80 (20.9%)	37 (59.7%)		
Bleeding—no evacuation	7	11	2	20	1.78%
Bleeding—wound re-exploration	0	3	0	3	0.27%
VTE	0	5	1	6	0.53%
Surgical Site Infection	13	12	3	33	2.93%
Wound Complication	4	6	2	13	1.15%
VTE: venous thromboembolism	ECP: Extended Chemoprophylaxis				

Conclusions: The Caprini protocol can identify a subset of patients who may benefit from ECP after breast operations, as well as those who require no chemoprophylaxis.

♦POD7. **A Role for RAD51-Interacting POLQ SNPs in Papillary Thyroid Carcinogenesis**

*Jianliang Man, *Timothy Murtha, *Reju Korah, Tobias Carling
Yale, New Haven, CT

Introduction: Chromosomal translocations and fusion genes are commonly found in papillary thyroid carcinoma (PTC), suggesting a role for inaccurate repair of double-strand breaks (DSB) in PTC tumorigenesis. DNA polymerase theta (*POLQ*), a unique error-prone polymerase interacts with RAD51 recombinase to mediate DSB repair in mammalian cells. We hypothesized that single-nucleotide polymorphisms (SNP) of *POLQ* in RAD51 interaction domains may increase the risk for papillary thyroid tumorigenesis.

Methods: A cohort of 121 histologically confirmed fresh-frozen PTC specimens were identified. Genomic DNA was extracted, and SNPs within exons 17 and 29 of the *POLQ* gene were identified using a combination of Sanger method and next-generation sequencing. Allele frequencies were compared to population data from 1000 Genomes. Demographics and clinical characteristics were obtained from electronic medical records and associations were determined using Chi-square and Mann-Whitney tests.

Results: Two SNPs were significantly enriched within our PTC cohort when compared to population data: rs3218649 (16.4%, $p < 0.001$) and rs1381057 (9%, $p = 0.005$). One SNP, rs3218651, was found at significantly lower frequency (−13%, $p < 0.001$). The amino acid changes caused by rs3218649 (T982R) and rs3218651 (H1201R) are in the central domain of POLQ carrying RAD51 interaction sites. While the presence of rs3218649 correlated with an increase in frame-shift mutations ($p = 0.04$), tumors with rs1381057 were on average 0.5 cm larger (Mann-Whitney $p = 0.016$).

Conclusion: *POLQ* SNPs in RAD51 interaction domains have altered allele frequencies in our PTC cohort compared to the general population, suggesting that genetic variations in *POLQ* may contribute to PTC tumorigenesis, potentially by influencing POLQ-RAD51 interactions. Further studies are needed to elucidate the impact of *POLQ* SNPs on the clinical behavior of PTC.

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♦**POD8. RYGB Mediated Lipid Metabolism Changes
Contribute to T2D Resolution**

**Tammy Lo, *Renuka Subramaniam, Eric G. Sheu, Ali Tavakkoli
Brigham and Women's Hospital, Boston, MA*

Objective: Roux-en-Y gastric bypass (RYGB) induces weight loss and type-2 diabetes remission. We hypothesized that RYGB benefits metabolically via benefits driven by changes in gut nutrient metabolism, which in turns alter portal vein milieu.

Design: Sprague-Dawley rats were randomized to sham or RYGB. Systemic and portal blood samplings were performed by jugular and portal vein catheterization 5 weeks after surgery. Roux (Rx), biliopancreatic (BP) and common (CL) limbs in RYGB rats along with their respective sham counterparts were harvested. Lipid metabolites characterization was performed by a lipidomics strategy using liquid chromatography coupled to mass spectrometry. RNA expressions of fatty acid (FA) uptake transporters and FA β -oxidation proteins were measured.

Setting: Academic research laboratories.

Patients: N/A.

Interventions: RYGB comprised of a stapled, divided gastric pouch with a 16 cm BP limb and a 10 cm Rx limb. Sham rats received a jejunal transection and re-anastomosis.

Main Outcome Measures: N/A.

Results: RYGB led to a -21.6% weight change vs. 11.4% in Sham rats ($p < 0.001$). RYGB rats showed an improvement in glucose tolerance at 4 weeks. Diglycerides and triglycerides levels were downregulated in portal serum reflective of the decrease in intestinal absorption. Upregulation of longer chain phospholipids (phosphatidylcholine) was seen after RYGB. RNA expressions of FA uptake transporters (*fatp1*, *cd36*) and intracellular FA binding protein 2 (*fabp2*) were reduced after RYGB. Gene expression for FA β -oxidation (*slc27a2*, *slc22a5*, *cpt1b*, *cpt2*) has also significantly downregulated.

Conclusions: Changes in intestinal FA uptake and enterocyte FA β -oxidation after RYGB leads to changes in intestinal energy utilization and subsequent changes in portal vein milieu, which in turn may lead to improving hepatic glucose utilization.

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♦**POD9. Optimizing Follow-Up of Incidental Findings: A Structured Survey of Primary Care Providers**

*Stephanie D. Talutis¹, *Ellen Childs², *Philip E. Knapp¹,
*Avneesh Gupta¹, *Cleopatra Ferrao¹, David McAneny¹,
*F. Thurston Drake¹

¹Boston University, Boston, MA; ²Boston University School of Public Health, Boston, MA

Objective: Understand management strategies among PCPs for incidental pulmonary nodules (PNs) and adrenal nodules (ANs).

Design: Surveys of practice patterns for incidental PNs/ANs.

Setting: Emailed surveys.

Participants: PCPs.

Interventions: Participants were randomly assigned to a survey ± guidelines for management of incidentalomas.

Main Outcome Measures: Participants were asked about management strategies and barriers faced, then asked to consider clinical vignettes. Responses were compared between those with/without guidelines.

Results: On average, PCPs encounter 4 (SD = 6) incidentalomas/month, half from studies ordered by another provider. The most important resources to guide follow-up are radiology report recommendations (PN = 80%, AN = 74%) and Up-To-Date (PN = 59%, AN = 65%). While 48% of PCPs had encountered an incidental PN diagnosed as lung cancer, substantially fewer (<10%) had encountered adrenal pathologies among incidental ANs. For PNs, the most significant barrier was insufficient time/support to follow results longitudinally (69%). For ANs, it was uncertainty about tests to order (68%). Themes regarding the “ideal” system: automated report-delivery and follow-up tests, longitudinal tracking tools, “virtual consultations,” and decision guides within EMR. Differences between groups with and without guidelines were observed. Access to guidelines was significantly associated with a correct choice among lower-risk AN scenarios; there was little impact for higher-risk scenarios (Table).

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Table: Survey Scenario Responses

	Any Correct Answer		
	With Guidelines n = 43	Without Guidelines n = 37	p value
Adrenal Scenarios			
Lower risk lesion - likely non-functional adenoma	76.7% (33)	37.8% (14)	0.001*
Lower risk lesion - possibly functional adenoma (Conn Syndrome)	100% (43)	89.2% (33)	0.042*
Higher risk lesion - likely metastatic lesion	95.3% (41)	91.9% (34)	0.66
Higher risk lesion - likely pheochromocytoma	97.7% (42)	86.5% (32)	0.09
Pulmonary Scenarios			
Low risk scenario - never smoker, 5mm nodule	95.3% (41)	67.6% (25)	0.002*
High risk scenario - current smoker, 4mm nodule	90.7% (39)	89.2% (33)	1.00

Survey response rate 24%

* Significance defined as 2-sided p <0.05

Conclusions: PCP input is necessary to design an effective system. Easy access to straightforward clinical guidelines may improve decision-making, especially for lower-risk lesions that still require action. The radiology report is the most utilized source of information guiding next steps. Strategies to improve follow-up must focus beyond simply alerting PCPs and should include decision guides, tracking capabilities, and EMR-integration.

- ♦**POD10. PHD Inhibition Accelerates Lung Growth in a Murine Model of Unilateral Pneumonectomy**
 *Victoria Ko, *Duy T. Dao, *Lorenzo Anez-Bustillos,
 *Lumeng J. Yu, *Bennet S. Cho, *Amy Pan, Mark Puder
Boston Children's Hospital, Boston, MA

Objective: Pulmonary hypoplasia (PH) remains a major cause of morbidity and mortality in newborns with congenital diaphragmatic hernia (CDH). PH is characterized by immature lung growth and development. VEGF has been demonstrated to promote pulmonary growth via angiogenesis. FG-4592, a prolyl hydroxylase inhibitor, increases endogenous VEGF by preventing the degradation of upstream regulatory factors, specifically HIF-2 α , a well-known modulator of pulmonary development. We investigated the role of FG-4592 in accelerating lung growth.

Design: Mice were randomized into two groups, treatment with FG-4592 or control.

Setting: Laboratory.

Participants: Fifty-nine eight-week old mice.

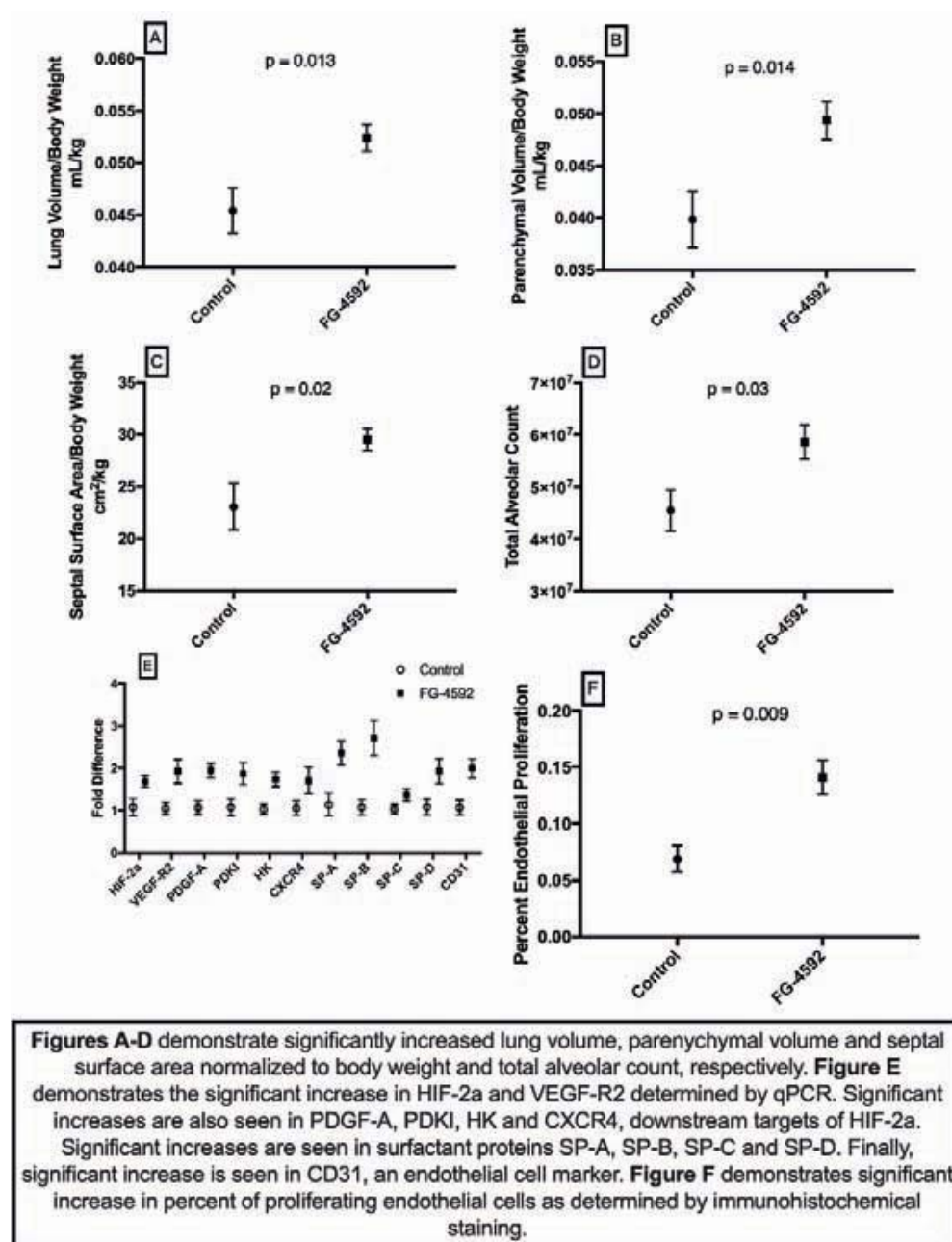
Interventions: Left pneumonectomy followed by twice daily intraperitoneal injections of FG-4592 or control.

Main Outcome Measures: On postoperative day four, lung tissue was harvested for lung volume measurements, morphometrics, RNA analysis and immunohistochemical staining.

Results: FG-4592 treatment demonstrated significant increase in lung volume. Morphometric data demonstrated significant increases in parenchymal volume, alveolar volume and total alveolar count. Quantitative PCR revealed significant increase in HIF-2 α and VEGF-R2, the principle receptor of VEGF. Significant increases were seen in downstream targets of HIF-2 α , surfactant proteins and CD31, an endothelial cell marker. This was correlated with a significant increase in the percentage of proliferating endothelial cells on immunohistochemistry.

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Conclusions: FG-4592 administration accelerates pulmonary growth after unilateral pneumonectomy likely mediated through the upregulation of HIF-2 α and VEGF. FG-4592 is currently in Phase III clinical trials for the treatment of anemia with minimal immediate side effects. Therefore, translation to use in the treatment of PH and diseases of pulmonary development such as CDH could proceed expeditiously.

P11. The Effect of the Business Cycle on the Living Organ Donation Rate: Evidence and Implications

Sean S. Lee¹, Michael W. Sielski², Kevin P. Charpentier^{1,3}

¹The Warren Alpert Medical School of Brown University, Providence, RI; ²Brown University, Providence, RI;

³Department of Surgery, Rhode Island Hospital, Providence, RI

Objective: We study the contribution of the economic environment to an individual's decision to donate an organ by examining the relationship between the unemployment rate, a commonly used indicator of macro-economic health, and the living donation rate. We test the hypothesis that economic downturns may reduce the living donation rate by causing financial and emotional distress among potential donors.

Design: Retrospective cohort study.

Setting: General community.

Patients: 120,662 donations from living, working-age donors.

Interventions: None.

Main Outcome Measure(s): Estimates from regression of living donation rates on the unemployment rate.

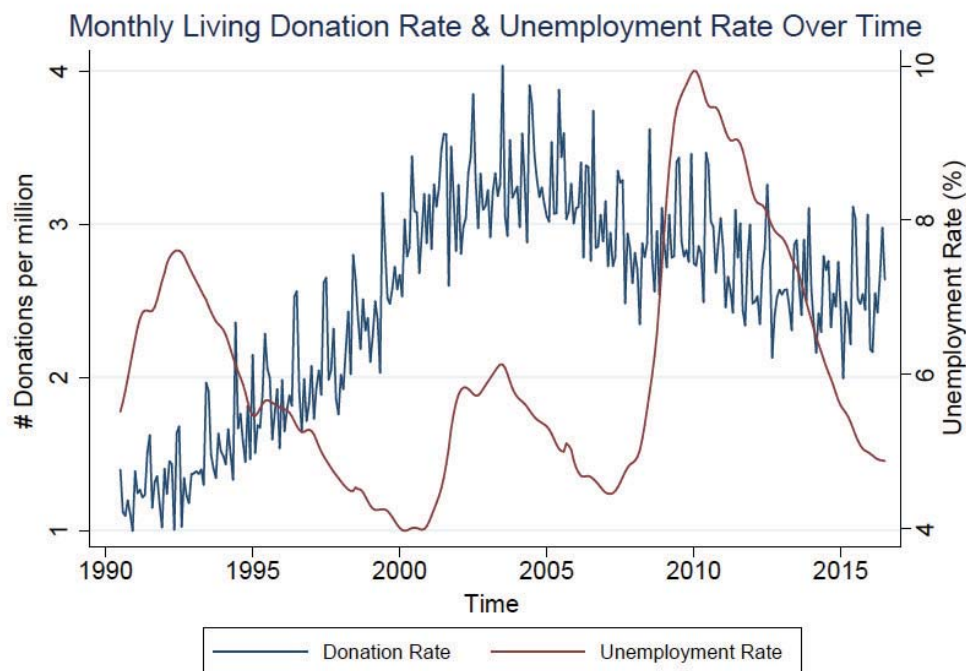


Table: Effect of the Unemployment Rate on the Living Donation Rate (Per Million), Fixed-Effects Model

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	All	Working-Age	Working-Age Females	Working-Age Males	Working-Age Whites	Working-Age Non-Whites	Ages 65 and Up
Effect of unemployment	0.009	0.018	0.026	0.009	0.063	0.060	0.004
(standard error)	(0.019)	(0.031)	(0.039)	(0.034)	(0.035)	(0.132)	(0.012)
Average living donation rate (per million)	1.53	2.64	3.13	2.14	2.93	3.78	0.17
[standard deviation]	[1.07]	[1.90]	[2.74]	[2.22]	[2.11]	[6.91]	[0.94]

Notes: The unit of observation is the state-month. Each column represents a different sample used when constructing the living organ donation rate. Specification (1) uses all donors. Specification (2) uses the working-age population, where the working-age population is defined as persons between the ages of 25 and 64, inclusive. Specifications (3) and (4) repeat specification (2) restricting the sample to females and males, respectively. Specifications (5) and (6) repeats specification (2) for whites and non-whites, respectively, and restricting t to be between July 2000 and July 2016. Specification (7) uses the population of individuals ages 65 and up, inclusive. In all specifications, the living organ donation rate is calculated as the total number of living organ donations from the population of interest divided by the number of a million of people in that population of interest. The first row reports the coefficient on the unemployment rate from a two-way fixed-effects regression model with controls for state and calendar month. In all specifications, the unemployment rate for each state-month is calculated as the total number of unemployed divided by the number of people in the labor force, multiplied by 100. The second row reports the standard error on this coefficient. Standard errors are clustered by state and calendar month. The third row reports the number of observations in the estimation sample. The fourth row reports the mean donation rate among the estimation sample. The fifth row reports the standard deviation of this mean.

Results: Graphical analysis reveals that, unlike the unemployment rate, the donation rate is non-cyclical over time, implying little correlation between the two factors (Figure). This motivating evidence is corroborated by regression models using state and calendar month fixed effects, where we find no significant association between the unemployment and donation rates (Table). Our analysis finds that this pattern holds even when restricting to demographic groups that may be impacted more significantly by the unemployment rate.

Conclusions: Our findings indicate that the unemployment rate is not associated with the donation rate, suggesting that the economic environment plays a minimal role in the decision to donate.

P12. Racial Disparities in Body Image Satisfaction Following Bariatric Surgery

***Danny Mou¹, *Claire de Vries¹, *Rene Wiezer², *Simon Nienhuijs³, *Ronald Liem⁴, *Maarten Hoogbergen³, *Dennis Makarawung⁵, *Regan Bergmark¹, *Anne Klassen⁶, Ali Tavakkoli¹, *Andrea Pusic¹, *RN van Ween⁷**

¹Brigham and Women's Hospital, Boston, MA; ²Sint Antonius Ziekenhuis, Gouda, Netherlands³Catharina Ziekenhuis, Eindhoven, Netherlands; ⁴Groene Hart Hospital, Gouda, Netherlands; ⁵Sint Antonius Ziekenhuis, Nieuwegein, Netherlands; ⁶McMasters University, Hamilton, ON, Canada; ⁷OLVG West, Amsterdam, Netherlands

Background: Bariatric surgery has the potential to improve body image and appearance as measured by patient reported outcomes (PROs). However, there may differences in body image satisfaction based on race.

Design: PRO data was measured with the BODY-Q, a PRO instrument designed for bariatric surgery patients. Linear mixed models were used to analyze associations with race and BODY-Q outcomes from preoperative to 4 months postoperatively.

Patients: The sample included participants from a multicenter, prospective, longitudinal cohort study collecting clinical and PRO data before and after bariatric surgery.

Intervention: Patients completed the BODY-Q instrument before and after surgery.

Main outcome Measures: Primary endpoints included PRO scores reflecting body image, satisfaction with body, buttocks, hips/thighs, and abdomen.

Results: We analyzed 564 bariatric surgery patients. Non-Caucasians had lower age ($p < 0.0001$), higher rates of hypertension ($p = 0.009$) and osteo-articular disease ($p < 0.0001$). There were no significant differences in BODY-Q scores before bariatric surgery. While weight loss at 4 months was similar between Caucasians and non-Caucasians, Caucasians improved significantly more on BODY-Q scales measuring body image ($p = 0.014$) and satisfaction with body ($p < 0.001$), buttocks ($p = 0.001$), hips and outer thighs ($p = 0.011$) and abdomen ($p = 0.014$).

Conclusions: Body image and satisfaction with appearance following bariatric surgery varied significantly by race. These data suggest the existence of different standards of preferred body types.

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Patient Semographics and BMI Before and After Bariatric Surgery

		Caucasian (n = 453)	Non-caucasian (n = 111)	P
Preoperative				
	Mean age (years)	46	37	<0.0001
	Female	374	100	0.347
	Mean BMI (kg/m ²)	43	44	0.278
Bariatric Surgery				
	Procedure type			0.370
	Primary gastric bypass	276	63	
	Primary sleeve gastrectomy	150	42	
	Revisional surgery	11	2	
4-Months Post-Operative				
	% TWL (4 months)	21.9	20.2	0.070
	BMI change	-9.35	-8.65	0.209

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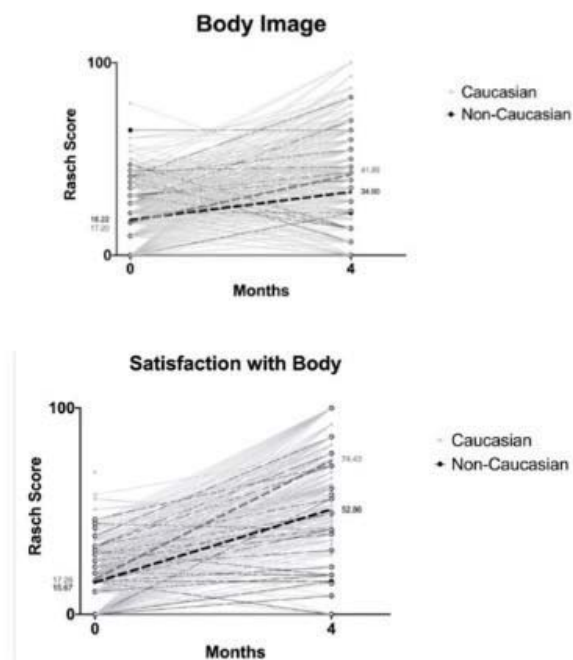


Figure 1. The improvement in patient body image and satisfaction with body scores after bariatric surgery differed significantly by race.

P13. The Association of Primary Language with Outcomes After Cancer Operations at a Single Tertiary Referral Center and Safety Net Hospital

***Frederick A. Godley IV, *Timothy Feeney, *Christine Park, *Michael R. Cassidy, *Teviah E. Sachs, David McAneny, Jennifer F. Tseng, *Frederick T. Drake**

Boston University School of Medicine, Boston, MA

Objective: To determine whether a difference in outcomes exists for non-English-speaking patients compared to English-speaking patients after operations commonly performed to treat cancer. We hypothesized that language discordance between providers and patients was an independent risk factor for worse outcomes.

Design: Retrospective cohort study (January 2012 to December 2017). Operations were identified based on current procedural terminology code. Logistic and negative binomial regression were used to adjust for baseline comorbidities, case risk, and socioeconomic factors. Cox proportional hazard modeling was used to evaluate mortality.

Setting: Urban, tertiary referral and safety-net hospital.

Patients (or Other Participants): Adult patients were stratified as English-speaking (ENG), Spanish/Creole-speaking (SpCr), or Non-English, Non-Spanish/Creole speaking (NENS).

Interventions: N/A.

Main Outcome Measure(s): 30-day readmission, length of stay (LOS), and all-cause mortality.

Results: 2470 patients were included. Most operations were low risk (87.2%) and there was no difference in case risk between language groups. Patients in non-English groups were more likely to be uninsured/self-pay and lived in neighborhoods with lower median income. After adjustment we found no difference in the odds of readmission for SpCr vs ENG (Odds Ratio 1.00, 95% CI [0.65–1.52]) or NENS vs ENG (1.36 [0.85–2.12]). There was no difference in LOS. Among patients who died, there was no difference in the hazard of mortality: SpCr vs ENG (HR (2.07 [0.91–4.72]), NENS vs ENG (1.29 [0.51–3.29])).

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Conclusions: We found no association between language and outcomes after cancer operations. This lack of difference may reflect system-level efficacy at treating non-English speaking patients. It may also suggest that communication barriers do not have an independent impact on the outcomes measured here. Other outcomes, e.g., patient satisfaction, might show different results.

P14. How to Reduce Unnecessary Postoperative Labs After Elective General Surgery

Eleah D. Porter¹, *Julia L. Kelly¹, *Lye-Yeng Wong²,
*Allison R. Wilcox¹, Christina V. Angeles^{1,2}

¹*Dartmouth-Hitchcock Medical Center, Lebanon, NH;*

²*Geisel School of Medicine, Hanover, NH*

Objective: Laboratory tests are often obtained empirically post-surgery without specific indications. Our goal was to 1.) assess utilization and clinical impact of routine postoperative labs (POLs) and 2.) evaluate provider perceptions of their necessity and how to reduce occurrence.

Design:

1. Retrospective cohort study of patients undergoing routine (no documented clinical indication or concern) POLs.
2. 15-item validated questionnaire administered to providers.

Setting:

1. Academic medical center.
2. Two teaching hospitals: academic-center and community-affiliated.

Patients:

1. Adult elective general surgery patients admitted for ≤ 48 hours, January–June 2018.
2. Surgical trainees (ST) and independent practitioners (IP).

Main Outcome Measures:

1. Lab-driven change in clinical care.
2. Provider survey responses.

Results:

1. 345 patients met inclusion. Routine POLs were obtained on 87% (301/345) of patients, of which 89% (269/301) had an abnormality by institutional lab thresholds. Lab results prompted a change in care in 11% (33/301) of tested patients (e.g., electrolyte repletion).

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2. A convenience sample of 78 providers were administered survey (32 STs, 46 IPs). Overall, 86% agreed with the statement that unnecessary routine POLs are ordered and 85% attributed this practice to “habit.” However, STs and IPs did not universally agree, as STs were significantly more likely to attribute “concern a senior member will ask” in comparison to IPs (63% vs. 48%, $p = 0.014$). There was no consensus regarding a single intervention to reduce practice, but the most common answers were cost transparency (33%) and faculty role modeling (27%).

Conclusions: Routine POL testing after elective general surgery has limited clinical impact. Surgical providers agree that unnecessary POLs are ordered and varied survey responses suggest that a multimodal approach will be needed to reduce empiric POL testing.

P15. Repeat Dosing in the Retinoic Acid Model of Transamniotic Stem Cell Therapy for Spina Bifida

***Sarah Tracy**¹, ***Alexander Chalpin**¹, ***Stefanie Lazow**¹,
***Ina Kycia**², ***Christopher Chan**³, ***Adam Finkelstein**⁴,
***David Zurakowski**², **Dario Fauza**²

¹*Boston Children's Hospital and Beth Israel Deaconess Medical Center, Boston, MA;* ²*Boston Children's Hospital, Boston, MA;* ³*Boston University, Boston, MA;* ⁴*Lafayette College, Easton, PA*

Objective: We sought to examine the impact of repeat dosing in trans-amniotic stem cell therapy (TRASCET) for spina bifida in the rodent model.

Design: Time-dated Sprague-Dawley fetuses with retinoic acid-induced neural tube defects were divided into three groups: one untreated (n = 32) and two groups receiving volume-matched intra-amniotic injections of concentrated, labeled amniotic fluid mesenchymal stem cells (afMSCs) at either one (n = 52), or two (n = 99) time-points in gestation. Defect coverage was categorized histologically by the presence of an overlying neoskin at term. Statistical comparisons were by the Wald test (p < 0.05).

Results: Fetal survival to term was 85% (44/52) after a single injection and 38% (38/99) after two injections (p < 0.001). Among those with isolated spina bifida (n = 82), there was a statistically significant higher defect coverage rate (partial or complete) after a single injection vs. dual injection (p = 0.019) and vs. no treatment (p < 0.001), with no significant differences between the dual injection and untreated groups (p = 0.357). Labeled cells were detected comparably in both treatment groups, homing to bone.

Conclusions: Transamniotic stem cell therapy appears to lead to a lasting host response to the injected donor cells. Further mechanistic insight into this response could lead to additional non-surgical strategies for pre-natal coverage of spina bifida.

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P16. Impact of Delay in ICU Transfers on the Rates of ICU Readmissions: An Unintended Randomized Study

*Stephen E. Ranney, Ajai K. Malhotra, *Peter Callas,
*Lloyd Patashnick, *Samy Ramadan, *Jennifer Gratton,
*Amy Sharpe, *Deirdre LaFrance, Margaret A. Tandoh,
William E. Charash, *Gary C. An, *Tim H. Lee

University of Vermont Medical Center, Burlington, VT

Objective: Determine if delayed ICU transfer is protective against unplanned ICU re-admission or ICU bounce-back (ICUbb).

Design: Retrospective, cohort study with inadvertent randomization using a trauma repository.

Setting: Rural, academic, Level 1 verified Trauma Center.

Patients: All adult, trauma patients admitted to the ICU at any point during their hospitalization over a 10-year period (January 2008–April 2018).

Interventions: Patients were inadvertently randomized to early or delayed ICU transfer by inherent hospital inefficiencies and limited bed availability. We defined delayed transfer as physical transfer from the ICU greater than 24 hours after placing a transfer order.

Main Outcome Measures: Rate of ICUbb between delayed and early ICU transfer.

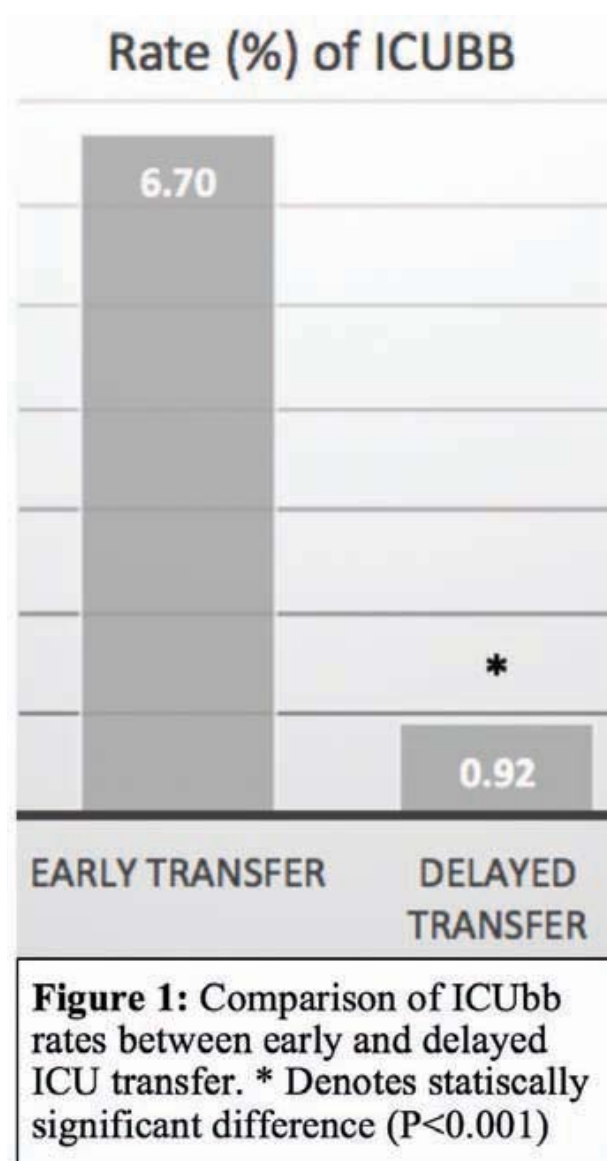
Results: Of the 3,500 patients admitted to the ICU, 134 (3.8%) experienced ICUBB. The early and delayed groups were comparably matched (Table 1). 118/1,761 (6.7%) of the early group and 16/1,739 (0.92%) of the delayed group experienced an ICUbb. This was statistically different ($P < 0.05$). Delayed transfer was independently protective against ICUbb (OR = 0.123; 95% CI 0.076–0.219).

Conclusions: This study utilizes unintended randomization due to inherent hospital inefficiency to demonstrate that additional ICU time is protective against ICUbb. Further studies should identify specific care in the ICU that protects against ICUbb as well as better identify patients that may benefit from additional ICU time.

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	Transfer Time		P-Value
	Early (n=1,761)	Delayed (n=1,739)	
Mean Age	52.54 (\pm 23.3)	52.09 (\pm 22.7)	0.56
Mean CCI	2.07 (\pm 2.6)	1.88 (\pm 2.5)	0.02*
Median ISS	17 (10, 22)	16 (9, 24)	0.08
Mean Local Risk Score	10.42 (\pm 7.5)	10.01 (\pm 7.5)	0.10
ICUBB	118 (6.7%)	16 (0.92%)	<0.001

Table 1: Patient & injury characteristics and outcomes between early and delayed transfer.



P17. Routine Blood Count Monitoring Is Unnecessary After Uncomplicated Appendectomy

Eleah D. Porter¹, *Lye-Yeng Wong², *Allison R. Wilcox¹,
Jenaya L. Goldwag¹, *Spencer W. Trooboff¹, Eric D. Martin^{1,2},
*Alexandra Briggs^{1,2}, Christina V. Angeles^{1,2},
*Andrea B. Wolffing^{1,2}

¹Dartmouth-Hitchcock Medical Center, Lebanon, NH;

²Geisel School of Medicine, Hanover, NH

Objective: Laboratory tests are often obtained empirically post-surgery without specific indications. Our goal was to assess the incidence and utility of routine blood count (BC) monitoring in adults after appendectomy for uncomplicated appendicitis.

Design: Retrospective cohort study of patients undergoing routine (no documented clinical indication or concern) BC monitoring (CBC or H&H lab) within 24 hours of surgery.

Setting: Academic quaternary care center.

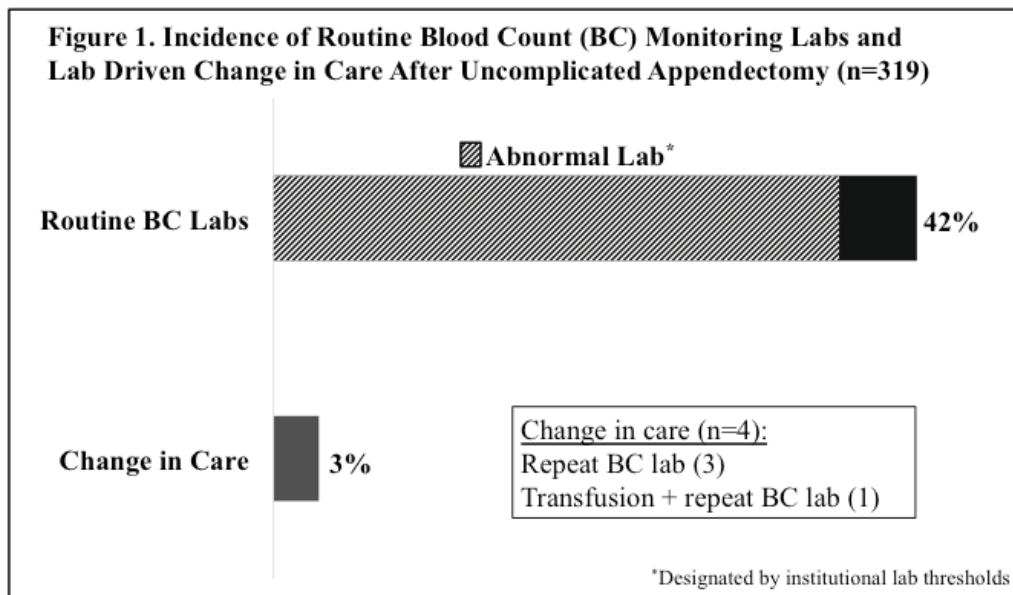
Patients: Adult patients post-appendectomy for uncomplicated appendicitis (simple or suppurative) from 2013–2018.

Interventions: N/A.

Main Outcome Measures: 1.) Lab driven change in clinical care 2.) 30-day mortality, readmission and intra-abdominal/pelvic abscess formation.

Results: Over the study period, 319 patients met inclusion criteria. Routine BC monitoring labs were obtained on 42% (134/319) of patients, of which 89% (119/134) had an abnormality by institutional lab thresholds. Lab results prompted a change in care in only 3% (4/134) of tested patients (Figure 1). On univariate analysis, patients undergoing routine BC monitoring were significantly older, had more comorbidities and had an ASA class ≥ 3 (all $p < 0.001$) compared to those not tested. Routine BC monitoring was also associated with suppurative appendicitis ($p = 0.007$), open surgery ($p < 0.001$) and higher blood loss ($p < 0.001$). There were no differences in 30-day mortality, readmission or post-operative intra-abdominal/pelvic abscess between those who did and did not undergo routine BC monitoring.

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Conclusions: Routine post-appendectomy BC monitoring does not impact clinical care or outcomes in adults with uncomplicated appendicitis. Quality initiatives should be pursued to decrease utilization of empiric laboratory testing and reserve use for patients with specific post-operative clinical concerns.

P18. Neighborhood Risk: Socioeconomic Status and Hospital Admission for Pediatric Burn Patients in Rhode Island

***Mary A. Palilonis¹**, *Lauren Schlichting², *Michelle L. Rogers², David T. Harrington¹, *Patrick M. Vivier²

¹*Brown University/Rhode Island Hospital, Providence, RI;*

²*Hassenfeld Child Health Innovation Institute, Providence, RI*

Objective: To evaluate the association between socioeconomic status and the likelihood of admission for Emergency Department (ED) visits for pediatric burn injury in Rhode Island.

Design: A retrospective database review of pediatric ED visits from a statewide hospital system.

Setting: Most pediatric ED services in Rhode Island are provided by one hospital network, which includes the state's only children's hospital and burn center. This network accounts for approximately 90% of the state's pediatric inpatient stays and more than two thirds of pediatric ED visits (unpublished data).

Patients: Patients 0–17 years old presenting to the ED for burn injury from January 1, 2005–December 31, 2014.

Main Outcome Measures: Socioeconomic status was assigned using an eight factor Neighborhood Risk Index (NRI) created from census block group data, with a higher score indicative of lower socioeconomic status. The outcome measure was ED visits admitted to inpatient care.

Results: We analyzed a sample of 1,845 pediatric ED visits for burn injuries. Most visits were discharged from the ED (88.4%) while 10.5% were admitted to inpatient care and 1.0% were transferred to another hospital. In a multivariable logistic regression, patients from high risk areas ($\geq 75^{\text{th}}$ percentile NRI) had 1.58 higher odds of inpatient admission compared to patients from low risk areas ($< 75^{\text{th}}$ percentile NRI) (95% CI: 1.08–2.30), after adjusting for age, gender, ethnicity, distance to hospital and previous ED visit for burn injury in the past 30 days.

Conclusions: Our study showed that burn injury patients from the highest risk socioeconomic areas had a higher likelihood of inpatient admission for children in Rhode Island. Further research is needed to determine what factors associated with socioeconomic status impact this finding.

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P19. Evaluation of a Preceptorship Model on the Third Year General Surgery Clerkship

***Alaina D. Geary, *Luise I.M. Pernar, *Cullen O. Carter**

Boston Medical Center, Boston, MA

Objective: Evaluation of student performance after introduction of preceptorship model.

Design: Case-control study.

Setting: 3rd year surgical clerkship sites associated with Boston Medical Center.

Participants: Subjects drawn from a convenience sample of 3rd year medical students rotating on the surgical clerkship.

Intervention: A preceptorship model was introduced at two of seven core general surgery clerkship sites between 05/2017 and 05/2018. In contrast to the standard structure, where students are assigned to cases and clinics, preceptorship students are assigned to attendings and follow the attending's schedules for the rotation.

Main Outcome Measures: Student performance data including final grades, clinical evaluations, and end-of-rotation shelf examination scores, were collected from 05/2016 to 11/2018. End-of-rotation formative and summative comments were also collected. Preceptorship performance was compared to the standard structure overall and in quartiles. Comments were assessed for length. All quantitative analyses were performed in R-studio.

Results: 276 students were included; 41 rotated on a clerkship with a preceptorship. Overall, there was no difference in student performance across the two clerkship structures. When assessed by quartile, below average preceptorship students had higher clinical grades than standard structure students (45 vs. 44 $p < 0.04$). Above and below average preceptorship students had higher shelf exam scores than standard clerkship students (80 vs. 79 $p < 0.02$, 76 vs. 73 $p < 0.001$). Formative and summative evaluations for preceptorship students were noted to be longer (46 words vs. 22 words $p < 0.001$, 137 vs. 71 $p < 0.001$).

Conclusions: This study supports that average performing students benefit from direct attending surgeon attention. This model may be useful in captivating students that may not have otherwise been engaged.

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P20. Discharge Destination Following Emergent Major Colectomy: An Analysis of Preoperative and Intraoperative Predictive Factors

Mehida Rojas-Alexandre, *David A. Mahvi, *Pamela Lu, *Richard Urman, *Jason S. Gold, Edward E. Whang
Brigham and Women's Hospital, Boston, MA

Objective: To identify preoperative and intraoperative factors associated with increased risk for non-home discharge destination after elective major colectomy.

Design: Major colectomies were identified in the NSQIP Targeted Colectomy Dataset (years 2012 through 2017) defined by CPT code. Univariate and multivariate logistic regression analyses were performed for all preoperative and intraoperative variables (after multiple imputation to account for missing variables) to identify predictors of non-home discharge destination.

Setting: None.

Patients: Patients with unknown discharge destination or who expired during initial hospitalization were excluded, leaving 22,668 patients for analysis.

Interventions: None.

Main Outcome Measures: Home vs. non-home discharge after major colectomies.

Results: Overall, 7072 (31.2%) patients were discharged to rehab, skilled care, or acute care facilities. Preoperative factors associated with non-home discharge on multivariate analysis included female gender, older age, non-independent functional status, COPD, preoperative sepsis, elevated creatinine, and hypoalbuminemia (all $p < 0.001$). Intraoperative factors significantly predictive of discharge destination on multivariate analysis included dirty or infected wound classification, open surgery, and concurrent colostomy or cholecystectomy (all $p < 0.05$). Patients discharged non-home had longer initial lengths of stay (19.5 vs. 11.0 days, $p < 0.001$), higher readmission rates (14.0% vs. 12.1%, $p < 0.001$), and higher reoperation rates (14.6% vs. 5.8%, $p < 0.001$).

Conclusions: Several preoperative and intraoperative factors are associated with increased risk for non-home discharge after major colectomy. These data can aid in patient counseling and facilitate postoperative disposition planning.

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P21. Participant Evaluation of a Novel, Multi-Institution Coach Training Workshop for Practicing Surgeons

***Jason C. Pradarelli^{1,2}, *Steven Yule^{1,2}, *Kurt W. Lowery²,
*Jim Knight^{3,4}, Douglas S. Smink^{1,2}**

*¹Brigham and Women's Hospital, Boston, MA; ²Ariadne Labs, Boston, MA; ³Instructional Coaching Group, Lawrence, KS;
⁴University of Kansas, Lawrence, KS*

Objective: To design and evaluate a training workshop to equip surgeons with core principles and practical skills of surgical coaching.

Design: Post-training evaluation.

Setting: Surgical Coaching for Operative Performance Enhancement (SCOPE) program, a professional development initiative for practicing surgeons at four large academic medical centers.

Participants: Volunteer sample of attending surgeons who participated in the SCOPE program's Coach Training Workshop.

Intervention: A 3-hour Coach Training Workshop was developed to teach all participants the core principles and key behaviors of surgical coaching, using evidence from the fields of surgery and education. The workshop involved three major components: (i) understanding surgical coaching via the coaching mindset, (ii) applying coaching principles to a surgical context, and (iii) practicing surgical coaching via video-based simulation. The post-training survey comprised 11 questions: nine Likert-style questions and two free-response items.

Main Outcome: Participant satisfaction and confidence.

Results: Thirty-seven of 46 surgeons who participated in the workshop completed the evaluation (80% completion rate). Overall, 89% of surgeons rated the workshop "good" or "excellent". All surgeons agreed that the workshop helped them "gain practical skills to be a surgical coach," and all but one perceived feeling "more confident to coach a peer surgeon because of the coaching workshop." When asked if they would recommend the workshop to a colleague, 84% responded "probably yes" or "definitely yes". Recommendations for improving the workshop included expanding hands-on coaching practice and providing preparatory materials to participants.

Conclusions: This evidence-based coach training workshop was rated positively by practicing surgeons in a surgical coaching program. With focused training workshops, practicing surgeons can gain the skills and confidence needed to coach peer surgeons.

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P22. Enhanced Recovery After Surgery: Effects on Narcotic Usage in a Community Hospital

Craig Hawkins, *Lynne Pinkham, *Melissa Streeter,
*Aaron Koch

Mid Coast Hospital, Brunswick, ME

Objective: The opioid epidemic is alarming. The overuse of narcotic prescriptions has been contributory. We chose to examine the narcotic needs of our patients prior to the initiation of the Enhanced Recovery After Surgery (ERAS) protocol and after its implementation.

Setting: Community Hospital.

Design: Retrospective study of consecutive patients Pre/post ERAS implementation.

Patients: During 2018, 319 patients underwent hysterectomy (130), total joint replacement (140), and colectomy (49). Incorporating an integrated/interdisciplinary team with standardized protocols for patient centered care with respect to preoperative patient education, intraoperative fluid management, and multimodal perioperative pain management, we measured utilization of preoperative medication, Tap blocks, pain medication in PACU, timing of oral pain medication post operatively, ileus, length of stay, pain medication used post operatively.

Results:

Hysterectomy	Pre ERAS	Post ERAS
Same day discharge	45%	98%
Length of stay phase 2 recovery	375 min	160 min
Opiate use in Post Anesthesia Care Unit—PACU	100%	80%
Opiate use in Ambulatory Care Unit—ACU	70%	32%
Opiate use at home		40% for 1.25 days
Colectomy	Pre ERAS	Post ERAS
Preop oral pain meds	0%	98%
Tap Block	48%	82%
Opiates in PACU	100%	51%
Oral Pain meds	Post op day 0 16%	Post op day 0– 29%

continued

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Hysterectomy	Pre ERAS	Post ERAS
Ileus	30%	8%
Total Joints	Pre ERAS	Post ERAS
Average morphine equivalents in PACU	22	3
Average total morphine equivalents	144	67
Average morphine equivalents /day	42	23
Length of Stay	3.53	2.96

Conclusions: We observed a dramatic reduction in narcotic needs post operatively (20–87% decrease) in Post Anesthesia Care Unit, Greater than 50% reduction in narcotics in Ambulatory Care Unit, earlier transition to oral pain meds after colectomy, and approximately 50% reduction in narcotics after joint replacement.

P23. Hospital-Based Variations in Geriatric Surgical Safety for Emergency Operations

***Robert D. Becher**, *Michael P. DeWane, *Nitin Sukumar,
*Marilyn J. Stolar, *Thomas M. Gill, *Cheryl K. Zogg,
Kevin M. Schuster, Adrian A. Maung, Kimberly A. Davis
Yale School of Medicine, New Haven, CT

Objective: To quantify the variations in hospital standardized mortality associated with emergency operations in geriatric patients, and determine whether the differences can be explained by patient- and hospital-level characteristics among outlier-hospitals.

Design: Retrospective cohort study.

Setting: Acute care hospitals.

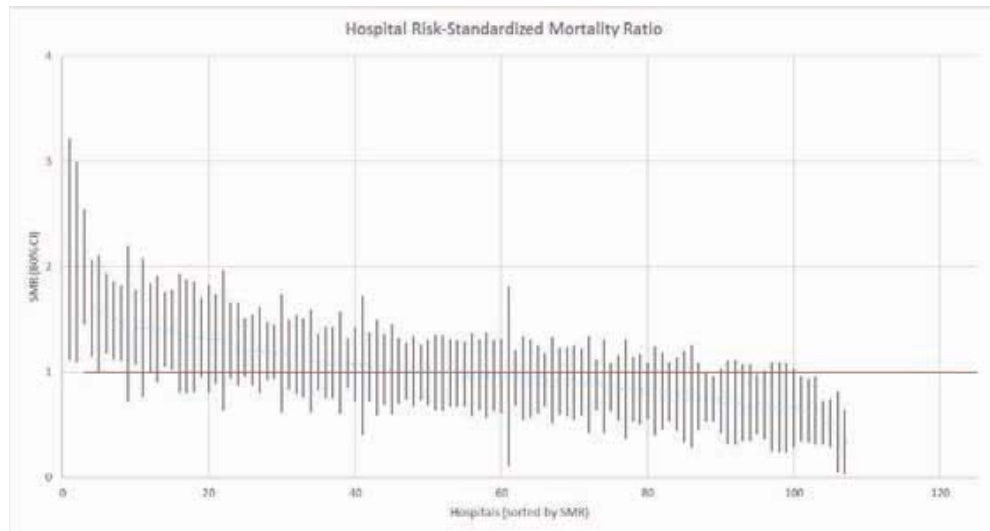
Patients: 65-years-and-older who underwent one of eight common emergency general surgery (EGS) operations identified using the California Inpatient Database (2010–2011).

Main Outcome Measures: Risk-adjusted hospital-level standardized mortality ratio (SMR; ratio of observed-to-expected in-hospital deaths; average SMR = 1.0). High-SMR (>1.0) and low-SMR (<1.0) outlier-hospitals (80% confidence interval not crossing SMR = 1.0) were compared.

Results: 24,207 patients were included from 107 hospitals. SMR (Figure) varied widely, from 2.3 (highest) to 0.3 (lowest). 11 hospitals (10.3%) were poor-performing high-SMR-outliers, while 10 hospitals (9.3%) were exceptional-performing low-SMR-outliers. SMR was 3-times worse in the high-SMR compared to the low-SMR-outlier group (1.7 vs 0.6; $p < 0.001$); the average number of EGS operations per institution in the two outlier groups was not significantly different (208 vs 261, respectively). Patient-level (age; gender; van-Walraven-comorbidity-score) and hospital-level (trauma center status; high-tech hospitals; teaching hospitals; hospital size >100 beds; rural location) characteristics were equivalent among outlier-hospitals.

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Conclusions: Significant hospital variation exists in standardized mortality after common general surgery operations done emergently in older patients. At over 10% of institutions there is substantial excess-mortality. The patient- and hospital-level characteristics studied do not explain the EGS survival-differential across institutions. These findings confirm that more work needs to be done to optimally integrate emergency surgery services across institutions to deliver high-value, low-mortality care to every geriatric surgical patient.

P24. Downregulation of Cytochrome P450 4B1 Is Associated with Large, Hormone-Inactive Adrenocortical Adenomas

***Thomas R. Schneider**^{1,2}, ***Norman G. Nicolson**^{2,3},
***Reju Korah**^{2,3}, **Tobias Carling**^{2,3}

¹*Frank H. Netter MD School of Medicine, North Haven, CT;*

²*Yale Endocrine Neoplasia Laboratory, New Haven, CT;* ³*Yale School of Medicine, Department of Surgery, New Haven, CT*

Objective: Cytochrome P450 4B1 (*CYP4B1*) is an extrahepatic member of the cytochrome P450 superfamily. *CYP4B1* is known to be involved in cholesterol metabolism, and previous studies suggest that its silencing may play an important role in the development of adrenocortical tumors. In order to better understand its role in adrenocortical tumorigenesis, we sought to characterize the expression and function of *CYP4B1* in adrenocortical adenomas (ACAs).

Design: Expression levels of *CYP4B1* were determined by RT-qPCR. *CYP4B1* protein expression relative to normal adrenal cortex was determined by immunohistochemistry, and colocalization of *CYP4B1* with known mediators of lipid peroxidation and autophagy was investigated with tricolor immunohistochemistry. Clinical correlations were explored to define potential associations with *CYP4B1* gene expression.

Setting: Academic medical center.

Patients: Tumor samples were obtained from patients who underwent an adrenalectomy for adrenocortical adenoma, and tumors were categorized according to their hormone secretion phenotype: aldosterone (n = 10), cortisol (n = 10), or non-secreting (n = 10). Control samples (n = 11) were collected from histologically normal, adenoma-adjacent tissue.

Main Outcome Measures: Association of *CYP4B1* expression with tumor characteristics including hormone secretion phenotype, tumor size, and molecular features.

Results: *CYP4B1* expression was significantly suppressed in endocrine-inactive adenomas compared to control tissue ($p < 0.01$) and aldosterone-producing adenomas ($p < 0.01$) but not compared to cortisol-producing adenomas ($p = 0.61$). Immunohistochemistry confirmed markedly reduced expression of *CYP4B1* in endocrine-inactive tumors. Furthermore, *CYP4B1* expression was negatively correlated with ACA

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tumor size ($p < 0.01$). Immunohistochemical analysis suggested potential roles for *CYP4B1* in regulating lipid peroxidation and autophagy signaling in the adrenal cortex.

Conclusions: Silencing of *CYP4B1* may interfere with cholesterol metabolism and autophagy response in endocrine-inactive adrenal tumors, thereby facilitating larger growth compared with their aldosterone-secreting counterparts.

P25. Incidence of Fascial Defects at Prior Stoma Sites in Patients with Colorectal Cancer

Jenaya L. Goldwag, *Lauren R. Wilson, *Srinivas J. Ivatury,
*Michael J. Tsapakos, *Matthew Z. Wilson

Dartmouth Hitchcock Medical Center, Lebanon, NH

Objective: Stoma reversal sites are a common location for incisional hernias. We aim to estimate the incidence and risk factors for fascial defects at previous stoma sites in patients with a history of colorectal cancer.

Design: Retrospective cohort study.

Setting: An academic tertiary referral center.

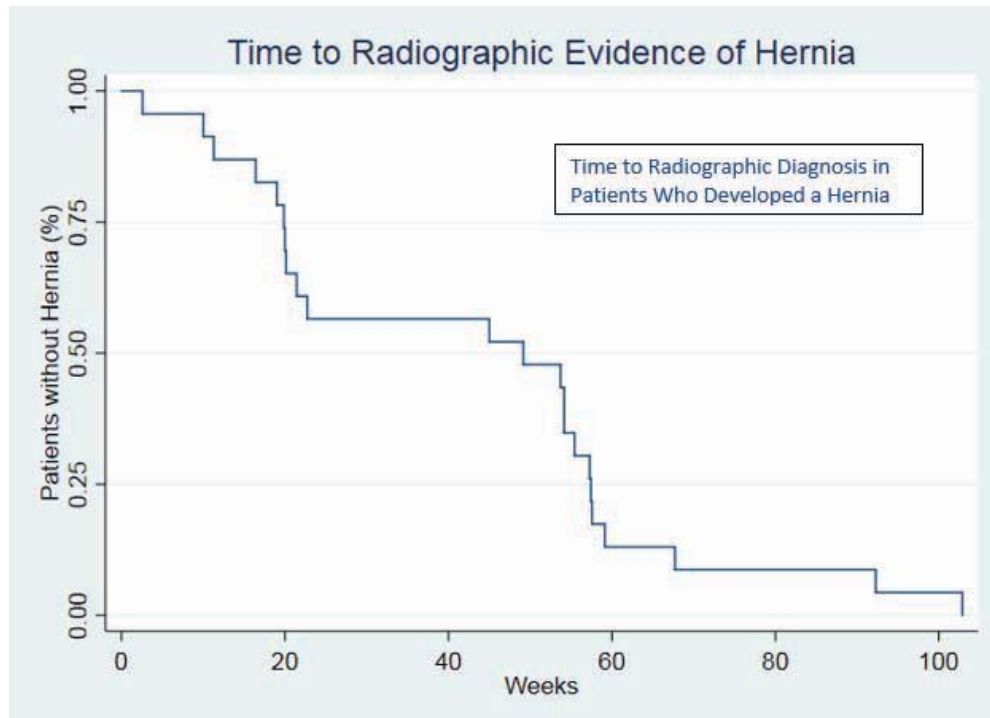
Patients: Adult patients diagnosed with colorectal cancer, identified by ICD9/10 codes, who underwent stoma reversal, identified by CPT codes, from 2011–2018 and had at least one post-operative CT scan performed.

Main Outcome Measures: Fascial defect identified on post stoma reversal CT scan.

Results: Of 92 patents included, 52 (57%) were male, with mean age 58 years at stoma reversal, 81 (87%) were diagnosed with rectal cancer, and 11 (12%) with colon cancer. Fascial defects were noted in 45 (49%) patients, with stoma site hernias containing bowel or intraabdominal fat present in 24 (26%) patients. There were no differences in temporal occurrence of defect development, either posterior defect or hernia, after stoma reversal ($p = 0.133$). Posterior sheath defects were not associated with subsequent hernia development and most hernias occurred within two years. BMI ≥ 30 was associated with significantly increased risk of stoma site hernia on multivariate analyses (OR 11.9, 95% CI 2.41–58.94, $p = 0.002$), but smoking, hypertension, stoma type, pathologic stage, and chemotherapy within 90 days were not found to be significant.

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Conclusions: The incidence of stoma site hernias is high. Obesity appears to be a significant risk factor for development of these hernias and most hernias occur quickly following surgery.

P26. Tracking Outcomes of Tracheoesophageal Fistula and Esophageal Atresia in Pediatric Population

***Ishna Sharma, *Shefali Thaker, *Todd Jensen, Christine Finck**
Connecticut Children's Medical Center, Hartford, CT

Objective: The objective of this study was to conduct a retrospective chart review of patients with a rare congenital deformity, tracheoesophageal fistula (TEF) and esophageal atresia (EA). The goal was to identify important variables to inform clinical pathways and prospective database creation. Current national surgical quality databases do not track TEF/EA-specific data points such as TEF-type and incidence of postoperative complications such as GERD and esophageal stricture.

Design: Cohort study with minimum 1 year post-procedure follow-up.

Setting: Urban pediatric tertiary hospital.

Patients: All patients diagnosed with EA/TEF between 2005 and 2019 were identified using ICD 9/10 codes, amounting to 43 patients. 64.3% of patients were female and 35.7% male. 4 patients were not included in subgroup analysis: 2 had missing variables, 1 passed away before surgical intervention, and 1 has not yet undergone surgical intervention.

Interventions: Surgical intervention.

Main Outcome Measures: Data for 35 variables were abstracted. SPSS 16.0 software was used for descriptive statistics.

Results: 77.5% of cases were type C, 12.5% type A, 7.5% type H, and 2.5% type D. 15% were long gap type. 100% patients received postoperative fluorogram, with mean postoperative day 7.73. 53.8% had postoperative esophageal strictures, and 66.7% had postoperative gastroesophageal reflux disease. Of those who had strictures, 77.2% of patients required at least 3 postoperative dilations for stricture, with overall mean 6 dilations. 26.2% of patients developed tracheomalacia; of these, 2 underwent thoracoscopic aortopexy. 7.9% patients had TEF recurrence requiring intervention.

Conclusions: We conclude that although a rare congenital anomaly, a database dedicated to EA/TEF at a pediatric hospital can aid in reviewing trends in outcomes and inform standardization of management.

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P27. Increased Disease Severity in Patients Suffering from Appendicitis with Cultures Growing *Streptococcus Anginosus*

***Allison R. Wilcox¹, *Olivia A. Sacks², *Laura E. Baumann¹, Eleah D. Porter¹, Daniel P. Croitoru¹, *Reto M. Baertschiger¹**

¹*Dartmouth-Hitchcock Medical Center, Lebanon, NH;*

²*Geisel School of Medicine at Dartmouth, Hanover, NH*

Objective: *Streptococcus anginosus* (SA) are a subgroup of normal gut flora with pathogenic propensity toward abscess formation. A recent UK study found increased disease severity in pediatric patients growing SA in the setting of appendicitis. The aim of our study is to evaluate the clinical significance of appendicitis-associated SA in the pediatric population at our institution.

Design: Retrospective cohort.

Setting: Rural, quaternary care center in New England.

Patients: Pediatric patients (≤ 17) with ICD 9/10 code diagnosed appendicitis and corresponding intra-abdominal or pelvic fluid culture from 10/1/2012–9/30/2017. Patients dichotomized by culture result: SA(+) vs. SA(–).

Intervention: N/A.

Main Outcome Measures: Disease severity within 1-year follow-up, measured by readmission rate, length of stay for all appendicitis-related admissions, duration of antibiotics, and post-appendectomy intra-abdominal or pelvic abscess.

Results: 77 patients met inclusion criteria; 27 patients had SA(+) peritoneal cultures. All patients underwent appendectomy within one year. There was no difference in age or gender between SA(+) and SA(–) patients. SA(+) patients had significantly longer antibiotic duration than SA(–) patients (19.0 vs 13.7 days, respectively; $p < 0.05$). There was also a trend toward higher readmission rate (33% vs 18%, $p = 0.13$) and development of post-appendectomy abscess (22% vs 10%, $p = 0.14$) in SA(+) patients (Table 1).

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Table 1. Patient Demographics, Diagnostic Factors, and Measures of Disease Severity

	<i>S. anginosus</i> Positive (N=27)	<i>S. anginosus</i> Negative (N=50)	p-value
Age, mean (SD)	10.6 (3.8)	10.7 (4.3)	0.95
Male, N (%)	19 (70)	29 (58)	0.33
Appendectomy within study period, N (%)	27 (100)	50 (100)	-
Imaging on Initial Admission, N (%)	20 (74)	45 (90)	0.15
Type of Initial Imaging (n=65), N (%)			
Ultrasound	8 (40)	25 (56)	0.36
CT	12 (60)	19 (42)	
MRI	0 (0)	1 (2)	
Abscess on Initial Imaging, N (%)	9 (45)	9 (20)	0.04*
Initial WBC, mean (SD) [¥]	18.7 (5.8)	16.6 (5.3)	0.12
Initial % Neutrophils, mean (SD) [¥]	80.8 (12.3)	80.5 (9.8)	0.93
Total Length of Stay ^δ , N (%)			
<48 Hours	3 (11)	16 (32)	0.65
48-72 Hours	4 (15)	10 (20)	
>72 Hours	20 (74)	24 (48)	
Median Length of Stay ^δ (range)	3.78 (0.63-12.9)	2.86 (0.57-17.7)	-
Readmission [∇] , N (%)	9 (33)	9 (18)	0.13
Post-appendectomy Abscess [£] , N (%)	6 (22)	5 (10)	0.14
Total Antibiotic Duration ^β , mean days (SD)	19.0 (1.6-8.5)	13.7 (10.1-10.8)	0.02*

[¥] For WBC mean, n=76 and for % Neutrophil mean, n=71; 1 excluded for having no labs collected on admission; 6 excluded for having no differential run on initial labs and therefore no neutrophil count

^δ Cumulative length of stay at our institution for all admissions related to ICD-9/10 diagnosed appendicitis

[∇] Number of patients who required at least one readmission for appendicitis within our study period

[£] Intra-abdominal or pelvic abscess identified on post-operative imaging at our institution on index visit or associated readmissions after appendectomy

^β Total antibiotic duration for all inpatient and outpatient regimens related to ICD-9/10 diagnosed appendicitis

* Significance set at an alpha level of p<0.05

Conclusions: Although limited by population size, our findings corroborate those seen in the UK study that appendicitis-associated SA is associated with increased disease severity in pediatric patients. To our knowledge, ours are the first documented SA results in pediatric patients with appendicitis in North America. Further study is warranted.

P28. Post-Operative Opioid Prescription and Usage Patterns: Impact of Public Awareness and State Mandated Prescription Policy Implementation

***Mayo H. Fujii**¹, Ajai K. Malhotra¹, *Ethan Jones¹,
*Thomas P. Ahern², *Loic Fabricant¹, *Christos Colovos¹

¹*University of Vermont Medical Center, Burlington, VT;*

²*University of Vermont Larner College of Medicine,
Burlington, VT*

Objective: To compare post-discharge opioid prescribing, use and patient satisfaction before and after implementation of a state-mandated policy on opioid prescribing.

Design: Patient telephone questionnaire data obtained 1–2 weeks post-discharge. Electronic medical record data obtained 30 days post-discharge.

Setting: 562-bed tertiary-care academic medical center.

Patients: A consecutive sample of patients undergoing 15 common surgical procedures across four specialties within our 3-year prospective database (PRE: July 2016–June 2017, n = 365; POST: September 2017–February 2019, n = 768).

Interventions: State-mandated policy change on opioid prescribing implemented in July 2017.

Main Outcome Measures: Amount of opioid medication prescribed and used in morphine milligram equivalents (MME), prescription refill rate, patient-reported adequacy of prescription size.

Results: Statistically significant decrease in median MME prescribed and used across all procedures ($p < 0.05$ for both—see Table). Proportion of patients not prescribed any opioid increased (PRE: 12.7%, POST: 26.0%, $p < 0.05$). There was no statistically significant change in refill rates (PRE: 5.5%, POST 6.3%, $p > 0.05$) nor in the proportion of patients reporting inadequate prescription size (PRE: 11%, POST: 12.3%, $p > 0.05$).

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Table: Median Opioid Prescribed and Used Across Common Procedures Before and After Policy Change

	PRE (n = 365)	POST (n = 768)
MME Prescribed (IQR)*	96 (50–160)	64 (0–80)
MME Used (IQR)*	18 (0–80)	0 (0–40)

*p < 0.05

Conclusions: After the implementation of a state-mandated policy change on opioid prescribing, there were statistically significant decreases in the amount of opioid medication prescribed and used, and comparable patient-reported satisfaction with the amount prescribed after common surgical procedures.

P29. Correlation of Stomach Morphology with Gastrointestinal Hormone Response Following Laparoscopic Sleeve Gastrectomy

Richard A. Perugini, *Kashayar M. Rafatzand, *Laura Alonso, John K. Kelly, Donald R. Czerniach, Philip Cohen

University of Massachusetts Medical School, Worcester, MA

Objective: The mechanism by which laparoscopic sleeve gastrectomy (LSG) induces weight loss is not understood. We hypothesize that LSG induces changes in gastrointestinal hormones involved in satiety (Glp-1) and hunger (ghrelin). Further, we hypothesize variations of stomach morphology post-LSG may lead to variable impact on these hormones.

Design: Pilot study.

Setting: Bariatric Surgery program in a tertiary care setting.

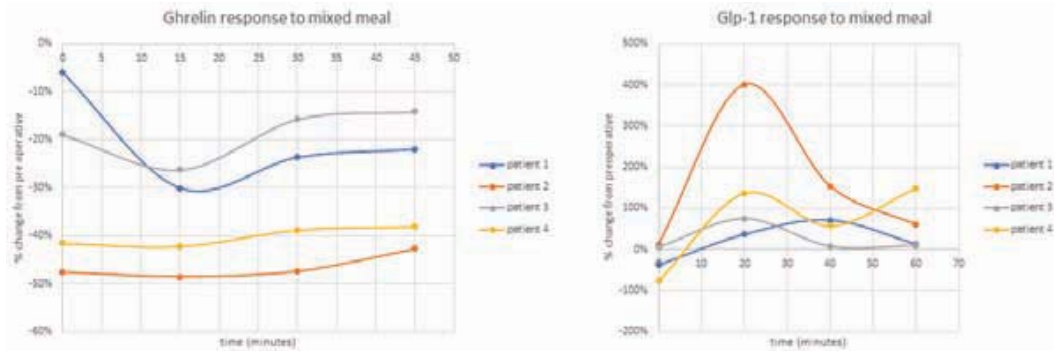
Patients: 4 patients (1 male, 3 female) cleared for LSG by a multidisciplinary team; age 31 ± 9 ; BMI 44 ± 3 .

Interventions: LSG.

Main Outcome Measures: 1.) Glp-1 levels and ghrelin levels in response to a mixed meal pre-LSG and 3 months post-LSG; 2.) blinded descriptive assessments (e.g. size, shape, contractions) of stomach using dynamic MRI pre-LSG and 3 months post-LSG; 3.) % excess BMI points lost (% EBMI).

Results: Ghrelin levels were significantly reduced following LSG, with a range of -19% to -47% . Peak postprandial Glp-1 levels were increased following LSG, with a range of 36% to 400% . There was considerable variation in these hormonal changes. We identified retained fundic pouches in the patients with more modest postoperative changes in ghrelin and in Glp-1. One of the two subjects with modest hormonal changes had significantly lower postoperative weight loss six months after LSG (21% EBMI vs $54\text{--}87\%$ EBMI).

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Conclusions: We confirmed the beneficial, but variable impact of LSG on postprandial Glp-1 and ghrelin levels. We have also identified retained fundic pouch as a possible cause of suboptimal hormonal impact. We believe further investigation can allow optimization of the technique of LSG.

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P30. Risk Factors of Mortality in Patients with Necrotizing Soft Tissue Infection

***Mahsa Shariat, *Ramsis Ramsis, *Manuel Castillo Angeles, *Mehreen Kisat, *Deepika Nehra, Reza Askari**
Brigham and Women's Hospital, Boston, MA

Objective: To Identify risk factors associated with mortality in patients with necrotizing soft tissue infection (NSTI)

Design: Retrospective study of patients with NSTI.

Setting: Two urban, tertiary-care, academic hospitals.

Patients: All adult patients (≥ 18 years of age) who were treated for necrotizing soft tissue infection between 1995 to 2015 at 2 tertiary care hospitals were included.

Interventions: None.

Main Outcome Measures: In-hospital mortality.

	Survival Group (n=434)	Mortality Group (n=75)	OR	CI	P Value
Age ≥ 65	N=96	N=37	3.746	1.75-7.97	P=0.001
Pressor/Inotropic support	89	48	4.24	2-9	P<0.001
Time to Antibiotics from Initial symptoms ≥ 24 hours	12	12	8.04	2-31	0.003
Platelet $<150,000$	77	47	5	2.1-11.6	P<0.001
Creatinine ≥ 1.2	174	63	7.1	2.7-18.44	P<0.001
Appropriate antibiotics use	385	60	0.33	0.12-0.91	P=0.033
Diabetes	191	22	0.562	0.244-1.29	P=0.177
Liver disease	9	6	4.03	0.793-20.50	P=0.093
Necrosis on admission	151	40	1.34	0.634-2.86	P=0.43
Admission WBC	Mean ≥ 15.5	Mean ≥ 10.27	0.978	0.934-1.02	P=0.343
Admission INR	Mean ≥ 1.42	Mean ≥ 1.93	1.25	0.843-1.8	P=0.265
Time to Surgery less than 12 hours	275	34	1.040	0.457-2.368	P=0.617

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Results: Of 509 patients, 75 did not survive to discharge (14.7%). The median age of the patients was 57 (IQR 46.6–67). Majority of the patients were male (57.2%). Independent factors associated with in-hospital mortality were age ≥ 65 (Odds ratio [OR], 3.73; 95% Confidence Interval [CI], 1.75–7.9, $p = 0.001$), need for pressor and inotropic support ([OR], 4.24; 95% [CI], 2–9, $p < 0.001$), delay in initiation of antibiotics of >24 hours ([OR], 8.04; 95% [CI], 2–31.6, $p = 0.003$), admission platelet count less than 150,000 ([OR], 4.95; 95% [CI], 2.1–11.6, $p < 0.001$) and admission creatinine higher than 1.2 ([OR], 7.16; 95% [CI], 2.7–18.4, $p < 0.001$). Receiving appropriate antibiotics was significantly associated with decreased mortality. ([OR], 0.33; 95% [CI], 0.12–0.91, $p = 0.033$).

Conclusions: Older age, elevated creatinine, thrombocytopenia, hemodynamic instability, and delay in initiation of antibiotics is associated with mortality in patients with NSTI.

P31. Postnatal Fate of Donor Mesenchymal Stem Cells After Transamniotic Stem Cell Therapy

***Sarah Tracy¹, *Alexander Chalpin¹, *Stefanie Lazow¹,
*Ina Kycia², *Adam Finkelstein³, *Christopher Chan⁴,
*David Zurakowski², Dario Fauza²**

¹Boston Children's Hospital and Beth Israel Deaconess Medical Center, Boston, MA; ²Boston Children's Hospital, Boston, MA; ³Lafayette College, Easton, PA; ⁴Boston University, Boston, MA

Objective: Donor mesenchymal stem cell (MSC) homing in the fetus after transamniotic stem cell therapy (TRASCET) involves hematogenous routing in the prenatal period. Regulatory feasibility of clinical trials of TRASCET hinges on the postnatal fate of donor MSCs, as potential malignization of cells is a concern. We sought to examine MSC fate after birth in a normal syngeneic model.

Design: After IACUC approval, Lewis rat fetuses (n = 91) were divided into two groups based on the content of volume-matched intra-amniotic injections performed on gestational day 17 (term = 21–22 days): either a concentrated suspension of amniotic fluid-derived MSCs (afMSCs) labeled with a luciferase reporter gene (n = 38), or an acellular suspension of recombinant luciferase (n = 53). Infused afMSCs consisted of Lewis rat cells with mesenchymal progenitor identity confirmed by flow cytometry, carrying the reporter gene after lentiviral transduction. Samples from 14 anatomical sites (heart, lung, brain, liver, spleen, pancreas, bowel, kidney, thyroid, skin, skeletal muscle, thymus, peripheral blood and bone marrow) from survivors were screened for luciferase activity via microplate luminometry at 16 days of postnatal life (P16). Donor cell presence in available term placentas was also screened to confirm their viability. Statistical analysis was by logistic regression and the Wald test (p < 0.05).

Results: Overall survival to P16 was 32%. When controlled by the acellular luciferase injections, donor afMSCs were not identified at any of the anatomical sites, in any neonate, as measured in relative light units (all p > 0.05). Donor afMSC presence was confirmed in term placentas.

Conclusions: Donor mesenchymal stem cells are not detectable at any anatomical site in the neonatal rat pup after concentrated intra-amniotic injection. This finding points to the safety and prospective viability of clinical trials of this novel therapy.

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P32. Eliminating Opioids from Breast Conserving Surgery: A Perioperative Pain Management Pathway

*Ravinder Kang¹, *Jackson T. Read², *Adam C. Glaser²,
*Richard J. Barth Jr.¹

¹*Dartmouth Hitchcock Medical Center, Lebanon, NH;*

²*Geisel School of Medicine at Dartmouth, Hanover, NH*

Objective: Current opioid prescribing guidelines for partial mastectomy (PM) and PM with sentinel lymph node biopsy (PM-SLNB) recommend 10–15 oxycodone pills for postoperative pain. At our institution, we prescribed opioids to 74% of PM and 95% of PM-SLNB patients between 2015–2016. In January 2017, we sought to eliminate opioids following breast conserving surgery by implementing a perioperative pathway.

Design: Retrospective review.

Setting: Academic medical center.

Participants: Patients who underwent a PM or PM-SLNB between 01/2017–12/2018.

Interventions: The pathway consisted of 1.) preoperative acetaminophen, 2.) pre-excisional administration of local anesthetic, 3.) wound infiltration with bupivacaine, and 4.) perioperative ketorolac. All patients were given the expectation that opioids would not be required and were counseled to manage their postoperative pain with a combination of acetaminophen and ibuprofen.

Main Outcome Measure: The percentage of patients whose postoperative pain was managed without opioids.

Results: 265 patients (mean age: 62 ± 13 years) underwent surgery: 48% underwent PM alone and 52% underwent PM-SLNB. We excluded 8 patients with postoperative complications leaving 257 for analysis. 90% of these patients received at least 3 elements of the pathway. Thirty-five patients (14%) required opioids in the PACU; 9 of these were discharged with an opioid prescription. Overall, 28/257 (11%) patients were discharged with an opioid prescription (9% of PM and 13% of PM-SLNB patients). Yet, 35% did not fill their prescription. Therefore, 93% of all patients (95% of PM and 91% of PM-SLNB) were managed without opioids. Two patients (1%) who were discharged without a prescription called within 7 days with pain and were prescribed opioids.

Conclusion: When a multimodal non-opioid pain pathway was implemented, more than 90% of patients undergoing breast conserving surgery did not require postoperative opioids.

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P33. Integrin VLA3 Mediates Endothelial Barrier Damage by Human Sepsis Patient Neutrophils In Vitro

***Chelsey C. Ciambella¹**, *Catherine M. Dickinson¹,
David S. Heffernan¹, *Minsoo Kim², William G. Cioffi¹,
*Jonathan S. Reichner¹

¹*Brown University School of Medicine, Division of Surgical Research, Rhode Island Hospital, Providence, RI, Providence, RI;* ²*University of Rochester, Department of Microbiology and Immunology, Center for Vaccine Biology and Immunology, Rochester, NY*

Objective: Integrin VLA3 is significantly up-regulated in human neutrophils during sepsis. Our aim is to determine the role of VLA3 in an in vitro model of neutrophil-induced damage of endothelial barrier function.

Design: Prospective study.

Setting: Surgical and Trauma intensive care units at Level 1 Trauma Center.

Patients: Septic patients were identified as those with two or more SIRS criteria with a source of infection confirmed by clinical evidence or microbiological data. Trauma patients were those with injuries severe enough to warrant ICU admission. Patients were enrolled within 24 hours of their diagnosis or admission. Blood was collected from patients and healthy volunteers the same day.

Interventions: Neutrophils were isolated by dextran sedimentation, pretreated with anti-VLA3 antibody or isotype control, and allowed to adhere to TNF α -activated human umbilical vein endothelial cell monolayers.

Main Outcome Measure: Electrical cell-substrate impedance sensing was used to quantify real-time barrier disruption after neutrophil adhesion.

Results: Neutrophils from healthy donors and TICU patients did not induce significant differences in barrier function, measured as a decrease in normalized resistance (nR). Neutrophils from sepsis patients, however, induced a significantly loss of barrier function compared to neutrophils from healthy donors (nR = 0.67 ± 0.08 vs 0.87 ± 0.05 at 120 min; $p < 0.05$) or TICU patients (nR = 0.67 ± 0.08 vs. 0.83 ± 0.06 at 120 min;

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$p < 0.05$). Neutrophils from sepsis patients that were pre-treated with the VLA3 blocking antibody showed significantly less damage than isotype control ($nR = 0.88 \pm 0.05$ vs. 0.68 ± 0.07 at 120 min; $p < 0.05$).

Conclusions: Functional blocking of integrin VLA3 attenuated the loss of barrier function by septic patient neutrophils supporting the hypothesis that VLA3 mediates barrier dysfunction. Therefore, VLA3 may serve as a therapeutic target in the treatment of endothelial dysfunction in sepsis.

P34. Surgical and Oncologic Outcomes of Open Versus Laparoscopic Distal Pancreatectomy in a Low-Volume Setting

***Susanna W. de Geus, *Kurt S. Schultz, *Timothy Feeney, *Sing Chau Ng, *Thurston F. Drake, David McAneny, Jennifer F. Tseng, Teviah E. Sachs**
Boston Medical Center, Boston, MA

Objective: Published studies promoting minimally invasive pancreatectomy have been criticized for high-volume and/or single center bias. We sought to compare surgical and oncologic outcomes of patients with pancreatic cancer who underwent laparoscopic distal pancreatectomy (LDP) versus open distal pancreatectomy (ODP) in lower-volume hospitals.

Design: Retrospective cohort study.

Setting: Low-volume hospitals (≤ 5 distal pancreatectomies per year).

Patients: Patients ≥ 18 years old with any pancreatic cancer who underwent distal pancreatectomy at a low-volume center between 2010 and 2014 were identified from the National Cancer Database (NCDB). Propensity scores were created for the odds of undergoing LDP. Patients were matched 1:1 based on propensity score.

Interventions: LDP vs. ODP.

Main Outcome Measures: 30-day mortality, 90-day mortality, median hospital length of stay (LOS), unplanned 30-day readmission, surgical margins, number of lymph nodes harvested, and survival.

Results: Of the 2,842 eligible patients, 902 (31.7%) underwent LDP and 1,940 (68.3%) underwent ODP. Overall, 203 (22.5%) laparoscopic cases were converted to open. After matching, LDP was predictive of decreased 90-day mortality (3.6% vs. 5.9%; $p = 0.0196$), shorter LOS (6 vs. 7 days; $p < 0.0001$), and fewer positive resection margins (12.5% vs. 18.5%; $p = 0.0004$). There were no differences with respect to 30-day mortality (1.7% vs. 2.9%; $p = 0.0823$), readmission (9.6% vs. 7.4%; $p = 0.0920$), and number of lymph nodes harvested (7 vs. 8 nodes; $p = 0.2113$). For

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pancreatic adenocarcinoma patients demonstrated similar median overall survival for patients who underwent LDP versus ODP (23.4 vs. 22.3 months; log-rank $p = 0.2460$) after propensity-score matching.

Conclusions: The results of this study suggest that, even in low-volume settings, LDP is associated with reduced 90-day mortality, shorter length of hospital stay, and lower rates of positive resection margins in well-selected patients.

P35. The Financial Burden of Thyroid Cancer Treatment

***Shen Li, *Sarah Duncan, *Anam Choudhary,
*Simran Budhwani, Benjamin C. James**

Beth Israel Deaconess Medical Center, Boston, MA

Background: Thyroid cancer has been reported to have the highest bankruptcy rate compared to all of cancer types. Despite these findings, there have been no studies evaluating the financial impact of thyroid cancer at a granular level. In this study, we sought to assess the effects of thyroid cancer survivorship and its financial impact on patients.

Method: A single institution database was used to identify thyroid cancer survivors. Patients were contacted by phone to complete a survey that included questions regarding personal demographics, annual income, financial loss after surgery, bankruptcy rate, concern for disease recurrence, as well as anxiety of medical bills.

Results: 64 patients who underwent thyroid surgery for thyroid cancer (9–39 months post-operation) completed the financial burden survey. The majority of patients reported an annual household income >\$150,000 (n = 19, 32.2%). 23.4% of respondents reported a negative financial impact (n = 15) and 21.9% reported lost income after cancer diagnosis (n = 14). 78.6% reported a loss of <\$10,000 and none filed for bankruptcy. However, 28.2% reported worrying about medical bills (n = 18) and over 50% worried about cancer recurrence affecting their responsibilities at home or work (n = 33). Finally, 26.6% of respondents did not feel they were adequately informed about costs related to their diagnosis (n = 17).

Conclusion: Projecting the economic burden of cancer is becoming increasingly important for health care policy makers. In this study we demonstrated that despite being mostly well-educated, and financially affluent, thyroid cancer survivors are still vulnerable to the financial burden associated with thyroid cancer. This includes the lack of preparation by the provider, lost wages, bills, emotional stress despite being surgically cured.

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P36. Online Patient Portal Use Is Associated with Decreased Time to Deceased Donor Renal Transplant in Patients on Hemodialysis

*Polina V. Zmijewski^{1,2}, *Eliza Decroce- Movson²,
*Steven E. Reinert³, *Meaghan M. Mallette¹, *Jason T. Machan^{1,2},
Paul E. Morrissey^{1,2}, *Adena J. Osband^{1,2}

¹Rhode Island Hospital, Providence, RI; ²The Warren Alpert Medical School of Brown University, Providence, RI;

³Lifespan Information Services, Providence, RI

Objective: To study the effects of the use of online patient portals that allow patients to track their appointments, labs, and provider visit notes on achievement of renal transplantation.

Design: Retrospective chart review.

Setting: Two outpatient dialysis centers associated with a tertiary care institution.

Patients: We studied 258 hemodialysis (HD) patients. Users (n = 38) were defined as patients who had >1 login. Users in the bottom quartile logged in <1 time every 2 months and users in the top quartile logged in at least 6.9 times per month. 10% of females in our study were defined as users vs. 18% of males (p = 0.08). Caucasians were more likely to be users of the portal relative to African Americans (21.4% vs 10.5%) (p = 0.03). 16.8% of English-speaking patients were users of the portal vs. 9.6% of non- English-speaking patients (p = 0.14).

Interventions: Use of online patient portal.

Main Outcome Measures: Time until renal transplant.

Results: 0% of users at 3 years after initiation of HD were the recipients of deceased donor kidney transplant vs. 5.7% of non-users. At 4 years, 7.1% of users were transplanted vs. 9.5% of non-users. At 5 years, 34.3% of users were transplanted vs. 10.7% of non-users. There was statistically significant divergence of the curves, with the greatest difference observed at 5 years (p = 0.007). Furthermore, increased number of logins per month was associated with shortened time to renal transplantation (p = 0.016).

Conclusions: Online portal use is associated with a higher likelihood of being approved as a transplant candidate and a shorter time on the wait list to receive an organ.

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P37. Socioeconomic Disparity in the Surgical Management and Outcomes of Familial Adenomatous Polyposis (FAP) Disease at Children's Hospitals

***Briana Leung, Michael Tirabassi**

Baystate Medical Center, Springfield, MA

Objective: To determine whether type of healthcare insurance correlated with differences in the surgical management of FAP and outcomes.

Design: Retrospective database study.

Patients: Using the 2016 HCUP Kids' Inpatient Database (KID), discharges with a diagnosis of benign neoplasm of the colon (ICD-10-CM: D12.2-D12.6) and a procedure code of total abdominal colectomy (ICD-10-CM: 0DTE4ZZ & 0DTE0ZZ) or total proctocolectomy (ICD-10-CM: 0DTP4ZZ & 0DTP0ZZ) were identified. Out of 247 patients with a benign neoplasm diagnosis, 77 (31.2%) underwent a total abdominal colectomy (TAC) or total proctocolectomy (TP).

Main Outcome Measures: The primary outcome measure was presence of postoperative complications. Secondary measures included age (<18 or ≥18 years old), income quartile (1st to 4th quartile), creation of ileostomy, total hospital charges and length of stay. Fisher's exact test ($\alpha < 0.2$) was used to evaluate associations between insurance type and various measures.

Characteristics of Children with FAP Who Underwent TAC or TP Stratified by Insurance Type						
	<18 yo	Ileostomy	Low Income	Complications	Median Cost	Median LOS (Days)
Medicaid	77% (24/31)	61% (19/31)	36% (11/31)	55% (17/31)	\$99k	6
Private	51% (22/43)	42% (18/43)	15% (5/43)	37% (16/43)	\$67k	5

Results: 40.3% (31/77) had Medicaid, 55.8% (43/77) had private insurance, and 2.6% (2/77) had other insurance. Medicaid was associated with being <18 years old at time of TAC or TP ($p = 0.029$), creation of a diverting ileostomy ($p = 0.157$), being in the lowest income quartile ($p = 0.092$), and presence of a postoperative complication ($p = 0.159$). Urinary retention and ileus were the most common complications. Medicaid was also associated with higher total charges ($p = 0.019$) and greater length of stay ($p = 0.171$).

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Conclusions: Medicaid insurance correlated with various disparities in FAP management and outcomes compared to private insurance, including younger age at operation, presence of postoperative complication(s), higher costs, and longer length of stay.

P38. Diuresis As an indicator of the Resolution of Ileus

***Robin Riley**, *Sarah Kelso, *Tom Ahern, James Murphy
University of Vermont Medical Center, Burlington, VT

Objective: Studies show that none of the current indicators accurately predict the timing of ileus resolution. We hypothesize that auto-diuresis is an early indicator of ileus resolution.

Design: Retrospective cohort study.

Setting: This study included a series of pediatric surgical patients with laparotomies from 9/30/2016 to 2/15/2019 at a tertiary care center.

Patients (or Other Participants): Twenty-seven patients were included, with 33 total surgeries. This was a consecutive series of patients treated by our two pediatric surgeons. Five surgeries were excluded for lack of fluid status information, and one surgery was excluded because of re-exploration for an unresolved ileus.

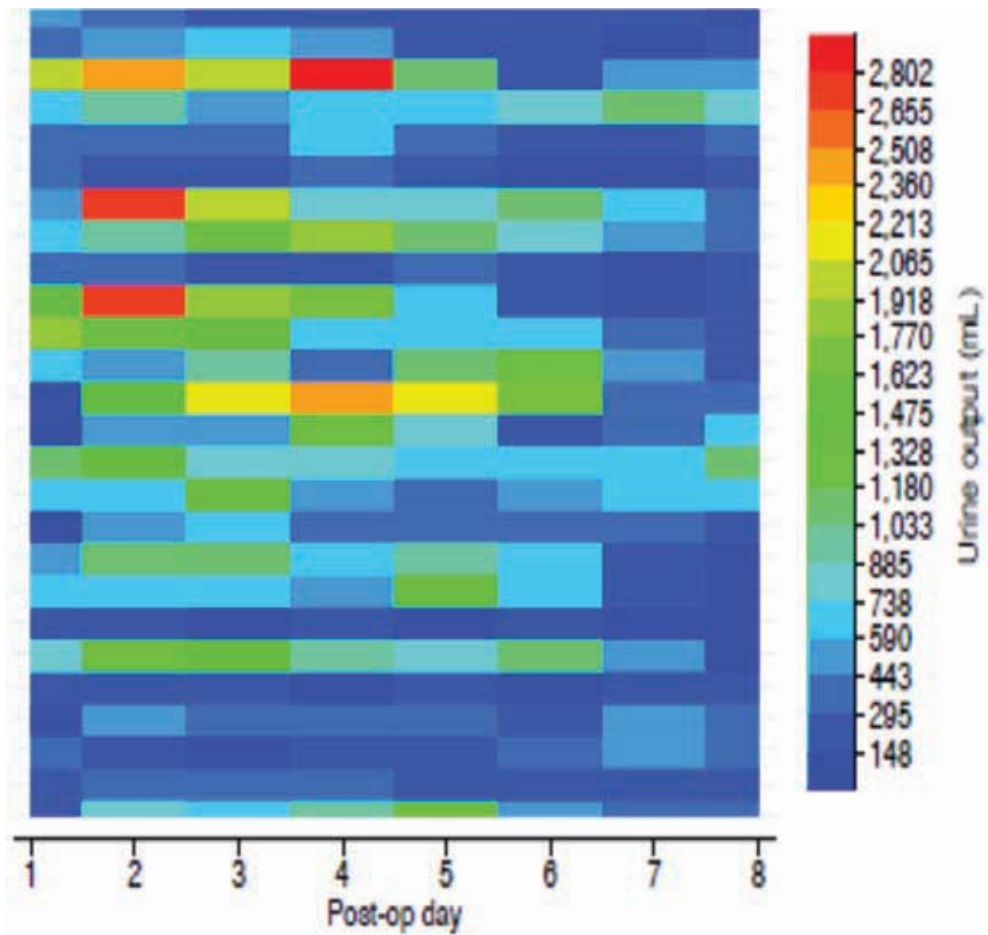
Intervention(s): Open abdominal surgery.

Main Outcome Measure(s): The post-operative urinary output and timing of diuresis and how that related to the timing of first flatus or bowel movement was our main outcome.

Results: An accelerated failure time model was created to estimate the association between increased urinary output and time to first flatus or stool. Median time to first flatus or stool was 2.5 days.

Daily post-operative urine output was profiled on a lasagna plot that shows considerable inter-patient variability in postoperative urine output profiles (Figure 1). Diuresis was associated with a shorter time to first flatus or stool (HR per 100 cc increase = 1.07, 95% CI: 0.998, 1.15; P = 0.058).

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Conclusions: We conclude that auto-diuresis may be an early indicator of ileus resolution, but evaluation of a larger data set with more information about oral intake and potentially confounding patient factors is necessary.

Scientific Session III

7:45 AM – 8:40 AM

Salle De Bal Ballroom (Lower Lobby)

**Co-Moderators: Marlene Cutitar
David McAneny**

Podium papers (8-minute presentation/5-minute discussion).

Brief papers (3-minute presentation/2-minute discussion).

+14. Four Factor Prothrombin Complex Concentrate Compared to Fresh Frozen Plasma in Patients on Warfarin with Traumatic Intracranial Hemorrhage: A Real-World Analysis

***Shunella Lumas, *Walter Hsiang, *Eunice Baik,
*Robert D. Becher, Kimberly A. Davis, Kevin M. Schuster**
Yale School of Medicine, New Haven, CT

Objective: To assess the real-world impact of recently available 4-factor prothrombin complex concentrate (PCC) on patients with traumatic intracranial hemorrhage (ICH) on warfarin, we compared outcomes among patients who received PCC, fresh frozen plasma (FFP) or no warfarin reversal (NR).

Design: Retrospective analysis using regression models adjusted for admission INR, demographics, comorbidities, concomitant antiplatelet therapy, head AIS and GCS.

Setting: Academic level I trauma center.

Patients: Patients admitted 2012–2018, on pre-injury warfarin and with traumatic subarachnoid hemorrhage (SAH), subdural hemorrhage (SDH), epidural hemorrhage (EPH), and/or intraparenchymal hemorrhage (IPH).

Interventions: None.

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+ RPE Eligible

Main Outcome Measures: ICH progression, mortality, need for craniotomy, hospital length of stay (LOS).

Results: Of 150 patients on pre-injury warfarin, 41 patients received FFP, 60 received PCC and 49 NR. Demographics, admission INR and injury severity were similar. Progression of bleed was paradoxically less likely in patients not reversed, and similar between agents (table). Predictors of progression on multivariable analysis included male gender (OR 2.73 95% CI 1.25–5.99), SDH (OR 0.37 95% CI 0.14–0.99), PCC compared to no reversal (OR 3.91 95% CI 1.43–10.64). Warfarin reversal was not associated with craniotomy, mortality or LOS. Over time reversal increased from 68% to 79%, FFP decreased from 68% to 3% and PCC increased from 0% to 76%, $p < 0.001$ for trend.

	FFP n = 41	4-Factor PCC n = 60	No Reversal n = 49	p-Value
Age: mean (SD)	81.2 (9.7)	81.9 (8.1)	81.4 (7.3)	0.889
Male gender n (%)	18 (43.9)	35 (58.3)	24 (49.0)	0.334
Head AIS: median (IQR)	1 (1–2)	2 (1–3)	2 (1–3)	0.864
Admission INR: mean (SD)	2.9 (1.9)	2.8 (1.3)	2.0 (1.4)	0.006
Time to INR ≤ 1.2 (hours)	21 (15–36)	10.5 (6–17.5)	n/a	0.002
Mortality: n (%)	0 (0.0)	2 (3.3)	2 (4.1)	0.448
Length of Stay: median (IQR)	6 (3–13)	4 (3–7)	4 (2–5)	0.024
ICH progression: n (%)	21 (51.2)	26 (43.3)	10 (20.4)	0.006
Need for craniotomy n (%)	8 (19.5)	9 (15.0)	3 (6.1)	0.157

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Conclusions: Male gender and use of PCC were associated with progression of ICH. Choice of reversal agent did not impact need for surgery, LOS or mortality. Some ICH patients may not require warfarin reversal.

15. The Impact of Fresh Frozen Plasma to Packed Red Blood Cell Ratio on Mortality in Traumatic Hemorrhage: A Nationwide Analysis

***Charlie J. Nederpelt**, *Majed el Hechi, *Alexander Bonde,
*Napaporn Kongkaewpaisan, *Nikos Kokoroskos,
*April E. Mendoza, *Noelle N. Saillant, *Martin G. Rosenthal,
*Peter J. Fagenholz, *David R. King, *David C. Chang,
George V. Velmahos, Haytham M.A. Kaafarani
Massachusetts General Hospital, Boston, MA

Objective: The optimal ratio of fresh frozen plasma (FFP) to packed red blood cells (PRBC) in trauma remains unclear. We sought to study the association between FFP:PRBC and early mortality in the hemorrhaging trauma patient.

Design: Retrospective nationwide cohort.

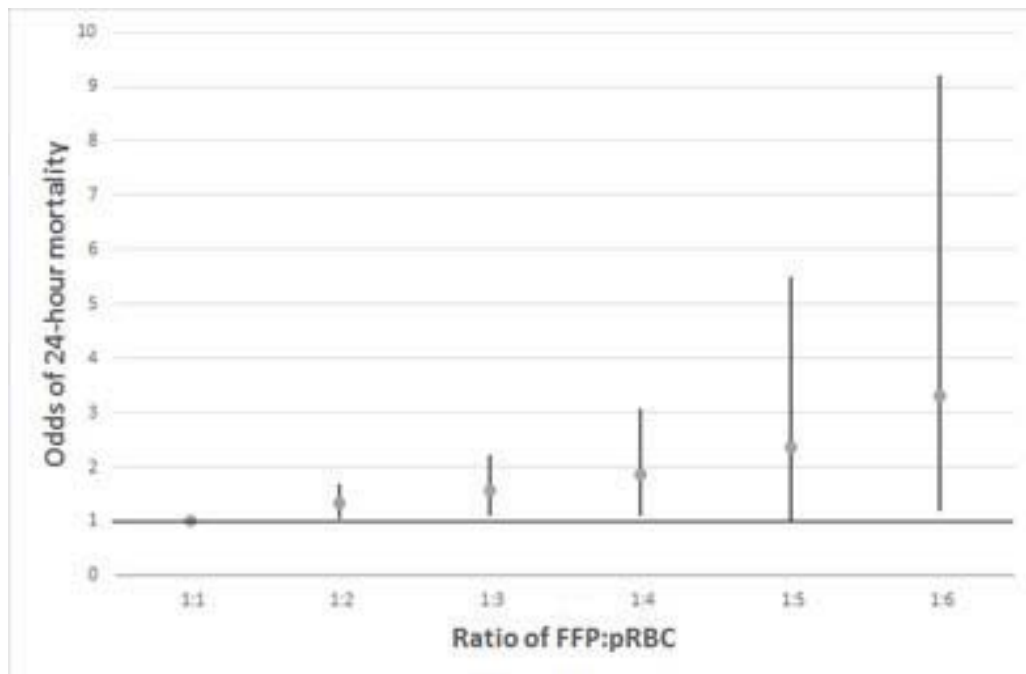
Setting: All TQIP participating hospitals (2013–2016).

Patients: We included all trauma patients who were transfused ≥ 10 pRBCs and ≥ 1 FFP within 24 hours. We excluded transferred patients and those who died in the emergency department or had missing/inaccurate transfusion data. Patients were assigned to six FFP:PRBC cohorts (range 1:1 to 1:6) only if the ratio was similar at 4 and 24 hours and were excluded otherwise.

Main Outcome Measure: Multivariable analyses correcting for all confounders [age, demographics, comorbidities, vital signs, injury severity scale (ISS) and mechanism, procedures performed] were derived to study the independent relationship between FFP:PRBC and 24-hour mortality.

Results: Out of 1,002,595 patients, 4,427 patients were included. Mean age was 40 years, 79% were males, 61% had blunt trauma, and median ISS was 29. Most patients were transfused in a 1:1, 1:2, or 1:3 ratio (31%, 41%, and 11%, respectively); mortality ranged between 28% for 1:1 and 62% for 1:4. In multivariable analyses, the odds of mortality independently and incrementally increased to 1.32 [1.05–1.68] for a 1:2 ratio, 1.85 [1.11–3.08] for 1:4, and as high as 3.32 [1.20–9.22] for 1:6 (Figure 1, all $p < 0.05$).

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Conclusions: A 1:1 FFP:PRBC ratio is associated with the lowest mortality in the hemorrhaging trauma patient and mortality gradually increases with decreasing ratios.

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+16. Have We Missed the Mark on Patient Education Materials for Colorectal Cancer?

***Ravinder Kang¹, *Elizabeth A. Carpenter-Song²,
*Catherine H. Saunders³, *Spencer W. Trooboff¹,
*Jesse A. Columbo¹, *Kayla O. Moore³, *Philip P. Goodney¹,
Sandra L. Wong¹, Srinivas J. Ivatury¹**

¹Dartmouth Hitchcock Medical Center, Lebanon, NH;

²Dartmouth College, Department of Anthropology, Hanover,

NH; ³The Dartmouth Institute for Health Policy and Clinical Practice, Hanover, NH

Objective: To critically evaluate colorectal cancer(CRC) patient education materials.

Design: Mixed-methods study.

Setting: Semi-structured interviews were conducted at medical centers across New England and at a regional colorectal society meeting. Focus groups were held at an academic medical center.

Patients/Participants: English-speaking, adult CRC patients in survivorship and their caregivers, and board-certified colorectal surgeons were purposively sampled.

Interventions: We assessed patient education materials for CRC from the National Cancer Institute(NCI), the National Comprehensive Cancer Network(NCCN), and the American Society of Colon and Rectal Surgeons(ASCRS) for reading-grade-level using the Flesch-Kincaid formula and for understandability and actionability using the Patient Education Material Assessment Tool (PEMAT). We qualitatively assessed material via semi-structured interviews with CRC surgeons (n = 10) and focus groups with CRC patients and caregivers (n = 5).

Main Outcome Measure(s): Reading-grade-level(target:6thgrade), understandability, and actionability scores and the qualitative assessment of materials.

Results: The readability of these materials varied from 7th to 11th grade-reading-level. The actionability of materials also varied; the NCCN materials scored highest on PEMAT, (82.5 ± 1.7%) followed by ASCRS (50.0 ± 8.2%) and NCI materials (23.3 ± 6.7%) (Figure 1). Patients noted that these materials had insufficient information regarding postoperative home care and resources for emotional support. While, surgeons felt

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+ RPE Eligible

details regarding standard postoperative care and general prognostic information were lacking. Both surgeons and patients identified a critical gap in all materials' discussion of bowel function changes.

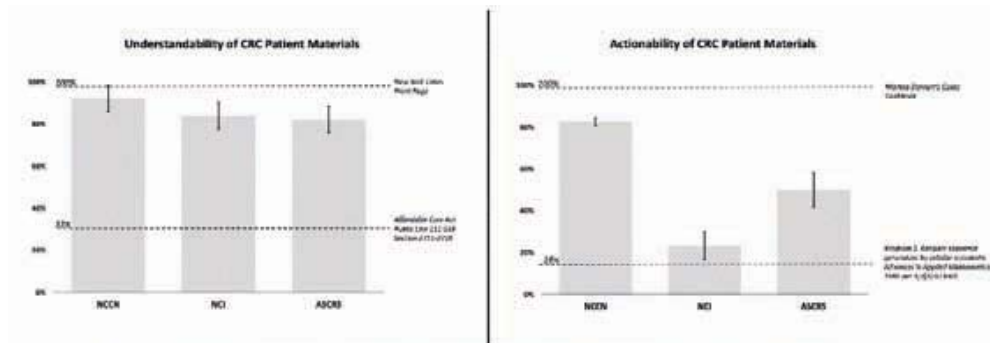


Figure 1: Displays the average understandability and actionability scores as assessed by PEMAT. Non-medical materials were also reviewed to provide a reference.

Conclusions: Current well-accepted patient education materials for CRC fail to meet our patients' needs. They are written at a high reading-grade level, vary in their usability, and neglect details regarding functional recovery.

+17. Bowel Resection for Melanoma Progressing After Immunotherapy with Checkpoint Inhibitors

***Nicholas D. Klemen¹**, *Sara Abou Azar¹, *Melinda Wang¹,
*Paul L. Feingold¹, Dale Han², Kurt Roberts¹, *Vikram Reddy¹,
*Kelly Olino¹, Ronald S. Salem¹, *Sarah Weiss¹,
*Harriet Kluger¹, *Mario Sznol¹, Charles Cha¹

¹*Yale University School of Medicine, New Haven, CT;*

²*Oregon Health and Science University, Portland, OR*

Objective: Determine survival after bowel resection (BR) in patients with melanoma treated with checkpoint inhibitors (CPI).

Design: Retrospective review.

Setting: Single-institution.

Patients: stage IV melanoma patients treated with CPI and requiring BR for progressive disease.

Interventions: laparotomy or laparoscopy.

Main Outcome Measures: Indication for BR, disease-specific survival (DSS).

Results: 23 patients underwent BR after CPI for progressive melanoma; 3 were asymptomatic, 12 symptomatic and 8 emergent. After resection, 9 patients had controlled (regressing, stable or absent) residual disease (CRD) while 14 had progressive residual disease (PRD). The median time from CPI to BR was 12 months for all patients, but was 36 months vs. 8 months for CRD and PRD patients respectively ($P = 0.012$). At a median follow-up of 48 months after BR, median DSS was not met and 18 months for CRD and PRD patients respectively ($P = 0.037$), and five-year DSS was 83% and 35%. 7 of 8 emergency BR were in PRD patients, resulting in 5-year DSS of 47%.

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+ RPE Eligible

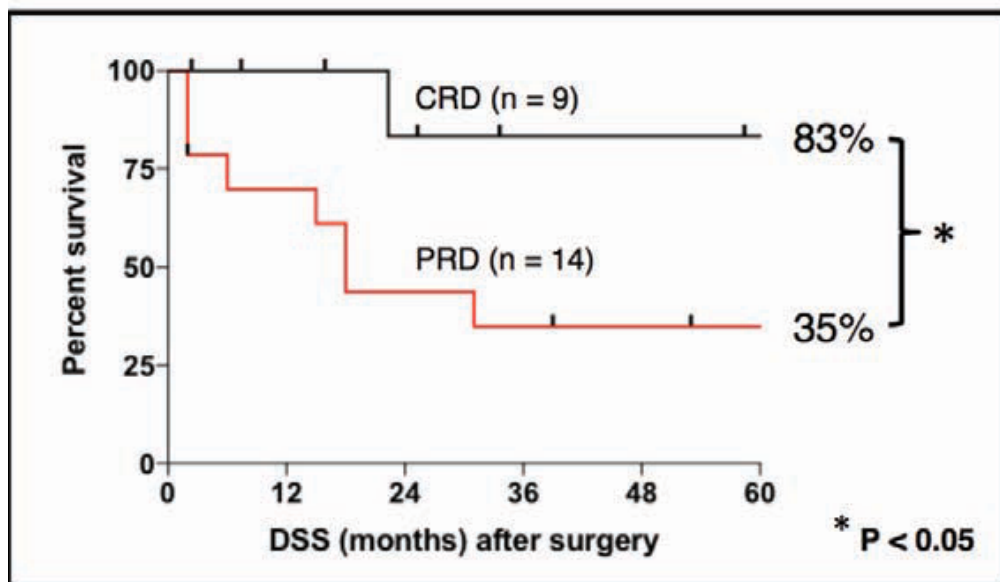


Figure 1: DSS after surgery. Patients were stratified according to residual disease status after BR.

Conclusions: BR in patients with CRD is associated with excellent DSS. BR in the context of PRD, performed emergently in 7 of 14 cases, still was associated with 5-year DSS of 35%. These data suggest patients who are medically fit for surgery should be considered for BR regardless of residual disease status because long survival may still be possible.

SATURDAY

8:40 AM – 8:55 AM

INTRODUCTION OF NEW MEMBERS

Salle De Bal Ballroom (Lower Lobby)

Paper of the Year & Scientific Session IV

8:55 AM – 10:10 AM

Salle De Bal Ballroom (Lower Lobby)

**Co-Moderators: Carlos E. Marroquin
Margaret A. Tandoh**

Podium papers (8-minute presentation/5-minute discussion).

Brief papers (3-minute presentation/2-minute discussion).

**18. Lessons Learned from the Study of 10,000 Patients
with Soft Tissue Sarcoma**

Murray F. Brennan, Cristina R. Antonescu, Nicole Moraco,
Samuel Singer

Memorial Sloan Kettering Cancer Center, New York, NY

Background and Objective: The management of rare tumors is difficult because of limited information on natural history. Our objective was to describe a long-term comprehensive prospective database with the assumption that with careful attention to patient, predisposing tumor and treatment variables, valuable knowledge could be obtained that could guide management.

Methods: In July of 1982, we began a prospective database of all adult patients admitted to our institution for a surgical procedure for soft tissue sarcoma. Patients were included if they had primary, locally recurrent or metastatic disease undergoing a surgical procedure.

Results: Over 3 decades, we entered 10,000 patients into our prospective soft tissue sarcoma database. Data were entered on a weekly or biweekly schedule with full participation of a multidisciplinary team and a dedicated sarcoma pathologist. Extensive information is available from this database. In this article, we describe distribution by site, histopathology, sex, size, and grade. We utilize this information along with outcome data for local recurrence, distant recurrence, disease specific, and overall survival. The value of molecular diagnosis is illustrated.

Table 1: Distribution of 10,000 Soft Tissue Sarcomas in Adult Patients Admitted for Surgery at Memorial Sloan Kettering Cancer Center Between July 1, 1982 and May 31, 2013

Characteristic	No. Patients (%)
Site (n = 10,000)	
Lower extremity	2830 (28%)
Visceral	2213 (22%)
Retroperitoneal/intra-abdominal	1601 (16%)
Upper extremity	1157 (12%)
Trunk	990 (10%)
Other	1209 (12%)
Histology (n = 10,000)	
Liposarcoma	1965 (20%)
Leiomyosarcoma	1399 (14%)
Undifferentiated pleomorphic sarcoma	1378 (14%)
Gastrointestinal stromal tumor	863 (9%)
Synovial	515 (5%)
Myxofibrosarcoma	521 (5%)
Fibrosarcoma	258 (3%)
Malignant peripheral nerve sheath tumor	256 (2%)
Other	2845 (28%)
Sex (n = 10,000)	
Female	5088 (51%)
Male	4912 (49%)
Primary grade* (n = 9076)	
High	5841 (64%)
Low	3235 (36%)
Primary size* (n = 9291)	
≤5 cm	2950 (32%)
5–10 cm	2812 (30%)
≥10 cm	3529 (38%)
Primary extremity size* (n = 3803)	
≤5 cm	1324 (35%)
5–10 cm	1195 (31%)
≥10 cm	1284 (34%)

*In patients who present with local or metastatic recurrence, characteristics of size and grade of the primary lesions are not always able to be known.

Conclusions: Continuous prospective long-term databases are important to obtain knowledge particularly for rare tumors. Such data can be a rich resource for the development of prognostic indicators including nomograms and can be analyzed by Bayesian Belief Networks. These long-term data linked to collection of tumor and germ-line tissue at the time of an initial procedure will remain a resource for future decades.

+19. Is Abdominal Ultrasound a Useful Adjunct to Abdominal Radiograph in Neonates with Necrotizing Enterocolitis?

*Sarah Tracy¹, *Stefanie Lazow¹, *Ilse Castro-Aragon²,
*Alan Fujii², *Judy Estroff¹, *Richard Parad³,
*David Zurakowski¹, Catherine Chen¹

¹Boston Children's Hospital, Boston, MA; ²Boston Medical Center, Boston, MA; ³Brigham and Women's Hospital, Boston, MA

Objective(s): Serial abdominal radiographs (AXR) have been the criterion standard imaging study for diagnosis and monitoring of necrotizing enterocolitis (NEC). However, abdominal ultrasound (AUS) is emerging as an attractive adjunct. We sought to evaluate concordance between AUS and AXR findings of pneumatosis and portal venous gas in neonates with suspected NEC.

Design: Multi-center retrospective review. Findings were abstracted from reports.

Setting: Hospitalized care.

Patients: Seventy patients from three level III–IV NICUs with clinical concern for NEC from 2009–2018. Eleven patients underwent cardiac surgery (other than PDA ligation) in the neonatal period. Patients had at least one AXR followed by an AUS within 48 hours. Indications for AUS and AXR included symptoms concerning for NEC or previous abnormal studies.

Interventions: N/A.

Main Outcome Measure(s): Concordance between AUS and AXR findings of pneumatosis and portal venous gas in patients with suspected NEC.

Results: Seventy patients had a total of 108 paired studies. Agreement between the two imaging modalities was 64% (Kappa = 0.32, 95% CI 0.13–0.50) and 65% (Kappa = 0.04, 95% CI 0.00–0.66) in the subgroup of cardiac surgery patients. Of the discordant pairings, 33/39 (85%) had a positive AUS (Table 1).

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+ RPE Eligible

Table 1. Concordance Analysis for Pneumatosis (PI) and/or Portal Venous Gas (PVG): Non-cardiac Surgery and Cardiac Surgery cohorts

PI and/or PVG		Paired studies	Additional AUS findings				After AUS		
AXR	AUS	N = 91 N = 17	BWT	EFF	FFC	FA	Surgery within 1 week	Antibiotic course (d) Median (IQR)	Mortality within 1 week
+	+	23	8	7	3	0	2	14 (12-14)*	1
		1 ⁺	0	0	0	0	0	0 (0-0)	0
-	-	35	6	4	4	1	6	11 (2-19) [☆]	2
		10	1	0	0	0	0	6 (0-10)	0
+	-	4	1	1	0	0	2	1 (0-20)	0
		2	1	0	0	0	0	14 [△]	0
-	+	29	5	3	3	2	3	14 (12-15) [◇]	2
		4	0	0	0	0	0	6 (1-10)	0

⁺One patient with equivocal PI on AXR and a single echogenic focus next to the umbilical venous catheter was not treated after imaging. *n=1, [☆]n=3, and [◇]n=2 paired studies were excluded from antibiotic analysis because patient(s) died mid-treatment course. [△]n=2 paired studies, IQR not calculated. BWT = bowel wall thickening, EFF = echogenic free fluid, FFC = focal fluid collection, and FA = free air.

Conclusions: Abdominal ultrasound and radiograph have, at best, moderate concordance for pneumatosis and/or portal venous gas in typical neonatal intensive care unit populations. When abdominal ultrasound is done along with radiographs, it may provide useful additional information to help make the diagnosis of necrotizing enterocolitis and guide medical management.

**CLINICAL SCIENCE SECOND PLACE
AWARD – NESS RESIDENT AND FELLOW
RESEARCH DAY**

**+20. Defining Risk and Risk Factors for Unplanned
ICU Admission of Trauma Patients: Developing a
Predictive Risk Score**

***Stephen E. Ranney**, Ajai K. Malhotra, ***Peter Callas**,
***Lloyd Patashnick**, ***Samy Ramadan**, ***Jennifer Gratton**,
***Amy Sharpe**, ***Deidre LaFrance**, Margaret A. Tandoh,
William E. Charash, ***Gary C. An**, ***Tim H. Lee**

University of Vermont Medical Center, Burlington, VT

Objective: Identify risk factors of unplanned ICU admissions (upICUad) in trauma patients and develop a predictive risk score for upICUad.

Design: Retrospective, cohort study using the Trauma Research Repository.

Setting: Rural, academic, ACS verified Level-1 Trauma Center.

Patients: Adult, trauma patients admitted to the floor from the emergency department over a 10-year period (January, 2008 to April, 2018).

Interventions: Trauma patients admitted to the floor who experienced an upICUad were compared to similar patients without an upICUad.

Main Outcome Measures: Patient characteristics [age, Charlson Comorbidity Index (CCI)] and body-region injury severity (AIS scores) were analyzed using univariate methods and multivariate logistic regression to identify independently associated risk factors. A predictive risk score for ICUad was developed by assigning weighted values based on log-risk coefficients to identified risk factors.

Results: 7,206 patients met criteria of which 155 (2.1%) experienced an upICUad. Age, CCI, and severe injuries (AIS greater than or equal to 3) to chest, spine, and lower extremities were identified as independent risk factors for upICUad (Table 1). Increasing risk score was associated with higher rates of upICUad (Figure 1).

Conclusions: Increasing age, higher CCI, and severe injuries to chest, spine, and lower extremities are associated with upICUad. A score <20 indicates low risk of upICUad, while a score >20 suggests high risk of upICUad and may warrant direct admission to the ICU.

* NESS Non-Members

+ RPE Eligible

Table 1: Odds Ratios (95% CI) of independent predictors of upICUad

Thorax AIS ≥ 3	3.69 (2.35-5.80)
Spine AIS ≥ 3	2.30 (1.25-4.21)
L Extr. AIS ≥ 3	1.94 (1.34-2.80)
Age (per 10 yr.)	1.28 (1.36-1.42)
CCI (per 5pts)	2.10 (1.66-2.66)

Figure 1: Percent of Patients with upICUad by Risk Score

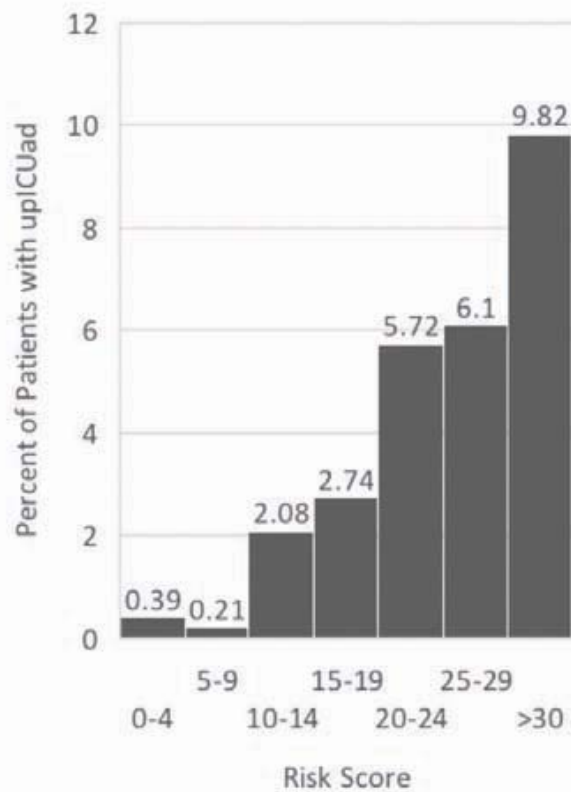


Figure 1: Distribution plot showing the rate of upICUad by Risk Score.

21. Completion of Multimodality Therapy Mitigates the Adverse Impact of Postoperative Complications on Survival in Patients Undergoing Gastrectomy for Advanced Gastric Cancer

***Selena Li¹, *Aparna Parikh², John Mullen²**

¹Harvard Medical School, Cambridge, MA; ²Massachusetts General Hospital, Boston, MA

Objective: To determine the impact of postoperative complications (POCs) on multimodality therapy (MMT) completion rates and overall survival (OS) in advanced gastric cancer patients.

Design: Single institution, retrospective cohort study.

Setting: Academic medical center.

Patients: 206 patients with advanced gastric cancer undergoing curative-intent surgery from 2001–2015, excluding T1/T2 N0 and M1 disease and 90-day deaths.

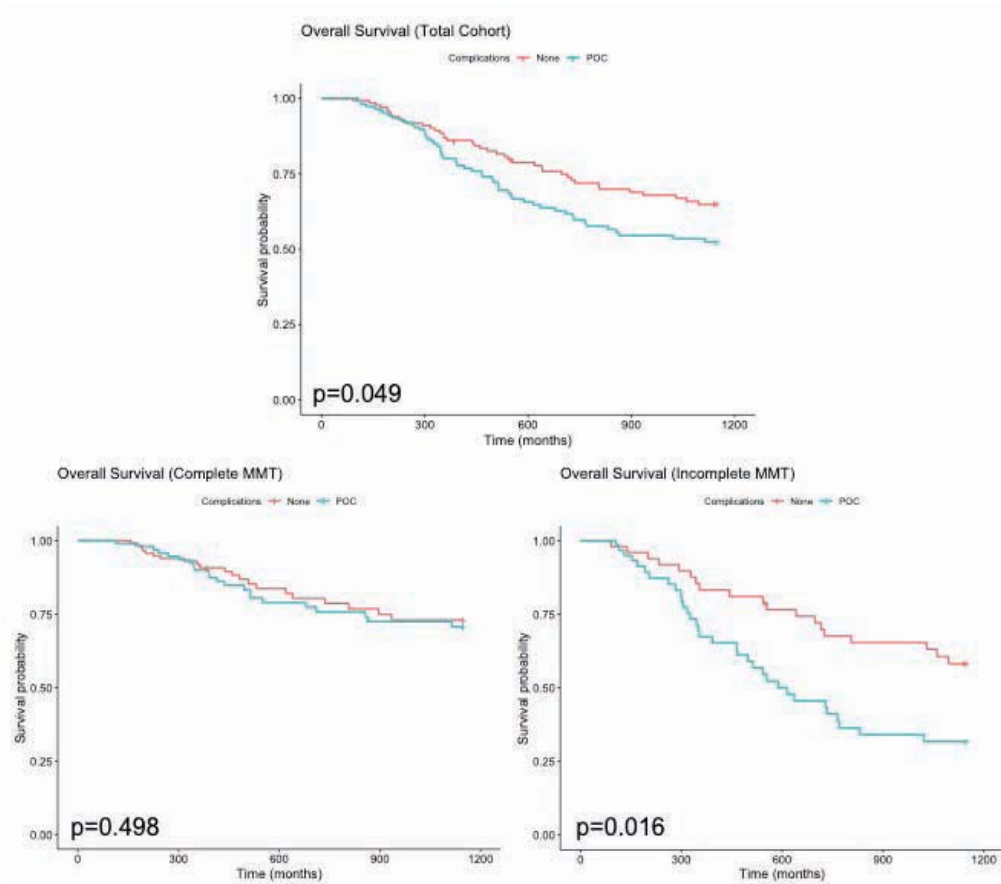
Interventions: MMT for advanced gastric cancer.

Main Outcome Measures: OS and MMT completion rates.

Results: A total of 120 patients underwent surgery first (47.5% completed MMT), 58 received perioperative chemotherapy (50% completed MMT), and 28 received total neoadjuvant therapy (all MMT prior to surgery, TNT). Clavien-Dindo grade II/III/IV POCs occurred in 102 (49.5%) patients. At a median follow-up of 37 months, patients with a POC had a 3-year OS of 38.5%, compared to 52.9% ($P = 0.040$) in those without. In contrast, there was no difference in 3-year OS rates (32.8% vs 41.2%, $P = 0.483$) between patients with and without a POC who completed all intended MMT. On multivariate analysis, non-TNT patients who experienced a POC were less likely to complete all intended MMT (HR 0.49, $P = 0.034$), and a POC in these patients had a significant impact on OS (HR 2.19, $P = 0.016$), whereas it did not in patients who completed MMT (HR 1.13, $P = 0.704$).

SATURDAY

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Conclusions: Postoperative complications adversely affect long-term survival after gastrectomy for gastric cancer, at least in part via lower completion rates of MMT. Treatment strategies that ensure MMT completion, such as TNT, may be preferable, particularly for patients at high risk for POCs.

22. Long-Term Improvement After Ileocectomy in Pediatric Crohn's Disease

*Julie Monteagudo¹, *Hans M. Huber²,
*Catherine M. Dickinson², *Jason Shapiro²,
Francois I. Luks²

¹Hasbro Children's Hospital and Alpert Medical School of Brown University, Providence, RI; ²Alpert Medical School of Brown University, Providence, RI

Objective: Surgical intervention for Crohn's disease (CD) has been mostly limited to treatment of complications, such as abscess formation, severe strictures and fistulas. Escalation of medical therapy is often the only option, but growth and nutrition maintenance remain difficult. In severe disease limited to the terminal ileum, ileocectomy can be offered, but the long-term results are not fully known. We hypothesize that ileocectomy for ileal CD is safe and offers good long-term outcomes including sustained weight gain and medical de-escalation.

Design: Retrospective study.

Setting: Tertiary children's hospital.

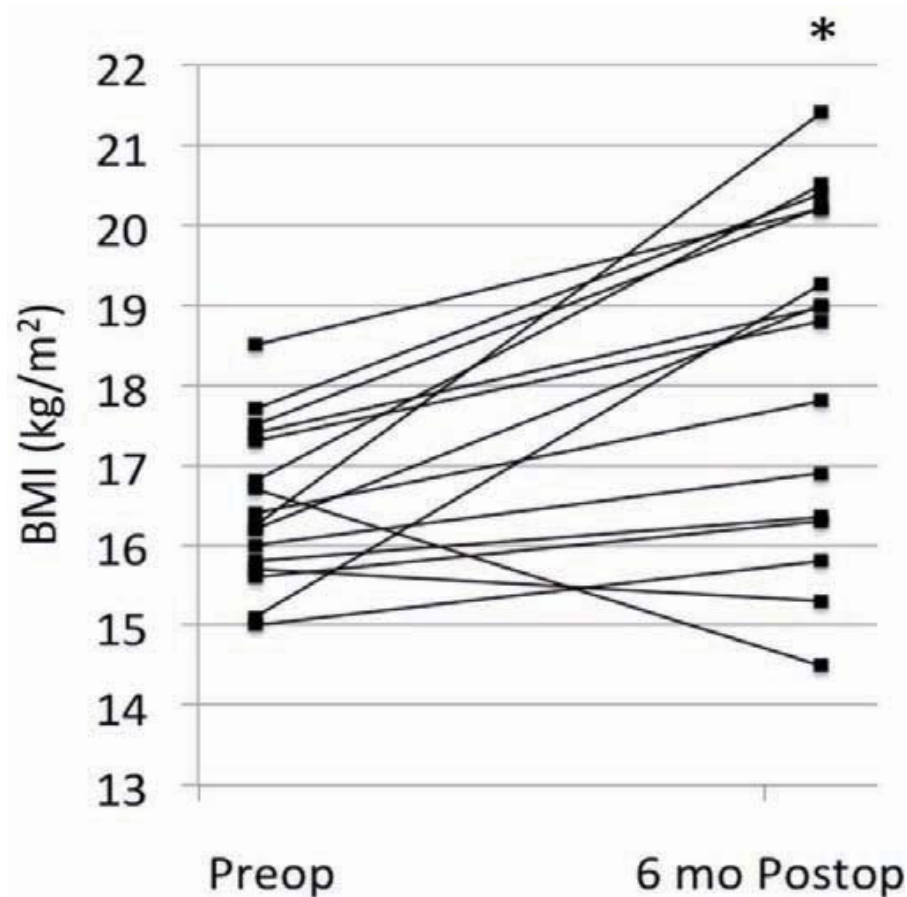
Patients: Males and females ≤ 18 years with CD.

Interventions: Ileocectomy.

Main Outcome Measures: Weight gain.

Results: 33 children from 3 to 18 years (median 15 years) underwent an ileocectomy. Median duration of illness prior to operation was 26 months (2–119 months). Six months postoperatively, median weight gain for the entire cohort was 4.6 kg; median BMI gain was 1.4 kg/m². All but 2 of the 16 patients who were initially underweight (BMI ≤ 18.5) gained weight postoperatively (Figure; $p < 0.05$, Wilcoxon Rank Sum) (Figure), from BMI of 16.5 ± 1.0 to 18.2 ± 2.1 , $p < 0.01$, Student t). Thirteen of 28 patients could be taken off anti-inflammatory medication. Only five patients required any additional surgical intervention (average follow-up 39 months).

* NESS Non-Members



^Brief 9. The Impact of the Enhanced Recovery After Surgery (ERAS) Pathway on Patients Undergoing Surgery for Soft Tissue Sarcoma (STS)

***Heather Lyu**, *Lily Saadat, Monica Bertagnolli, *Jiping Wang, *Elizabeth Baldini, *Matthias Stopfukuchen-Evans, Ronald Bleday, Chandrajit Raut

Brigham and Women's Hospital, Boston, MA

Objective: Patients undergoing surgery for STS can have high morbidity rates, including wound complications, particularly after preoperative radiation therapy (RT). The ERAS program is associated with improved outcomes, including decreased wound complication rates and length of stay (LOS). We launched an ERAS program for patients undergoing surgery for STS and report early outcomes.

Setting: A high volume sarcoma center.

Patients: All patients undergoing STS surgery with intent to treat with ERAS.

Design: Patients on the ERAS protocol were compared in a case-match analysis with patients undergoing surgery without ERAS. The non-ERAS cohort was retrospectively case-matched with the prospectively collected ERAS cohort by site of surgery, surgeon, sarcoma histology and treatment with preoperative radiation therapy.

Main Outcome Measures: Wound complications, acute postoperative outcomes, discharge to a facility, and LOS.

Results: 234 STS ERAS cases (July 2015–March 2018) were matched with 237 STS non-ERAS cases performed by three surgical oncologists (January 2012–March 2018). Wound dehiscence rates were significantly lower in the ERAS cohort compared to the non-ERAS cohort (2 [0.9%] vs 31 [13.1%], $p < 0.001$) and remained significant in the patients who received preoperative radiation (0 vs 11 [21.6%], $p = 0.004$) and who underwent surgery for extremity STS (0 vs 6 [0.7%], $p = 0.04$). Median LOS was significantly lower in the ERAS cohort (5 days [range 0–36] vs 6 days [range 0–67], $p = 0.003$). Discharge to a facility was significantly reduced in the ERAS cohort (13 [5.6%] vs 31 [13.1%], $p = 0.008$).

Conclusion: Implementation of an ERAS program was associated with improved postoperative outcomes. Reduction of wound complication rates with ERAS after preoperative RT and in extremity STS patients has important implications in oncologic treatment as it offsets the most notable morbidity of neoadjuvant RT.

* NESS Non-Members

^Brief Report Award Eligible

^Brief 10. The Effectiveness of an Intervention to Decrease Postoperative Opiate Prescriptions

***Lee Ranstrom, David P. Mooney**

Boston Children's Hospital, Boston, MA

Objective: Opiates were the mainstay for postoperative pain. Complications related to Codeine metabolism led many children's hospitals to Oxycodone as their routine opiate. Increased opiate availability is associated with increased addiction.

Design: Children who underwent acute laparoscopic appendectomy from 7/2012 to 2/2013 were identified opiate prescriptions and how many were filled was determined. A plan to limit opiates was developed and narcotic prescription from 12/2016 to 12/2017 was determined. A plan to eliminate opiates was developed and narcotic prescription from 01/2018 to 12/2018 was determined.

Setting: Children's hospital.

Patients: Children undergoing an acute laparoscopic appendectomy.

Interventions: Opiate-limited discharge plans.

Main Outcome Measures: Narcotics prescribed.

Results: 75 children who underwent appendectomy received opiate prescriptions (average 60.2 mg) per patient. After first intervention 208 children underwent appendectomy and received opiate prescriptions (6.8 mg per patient) and 14% of patients took prescribed opiates. After the second intervention 270 patients underwent appendectomy and 3 patients (1.1%) received opiate prescriptions (0.25 mg per patient). 45% of patients were contacted by phone and no pain issues were identified.

Opiate Use after Appendectomy			
	Pre-Intervention	First Intervention	Second Intervention
Time Period	2012–13	2016–17	2018–19
Patients (number)	75	208	270
Opiates (mg)	4514	1412	70
Opiates (mg/patient)	60.2	6.8	0.25

Conclusions: Using a step-wise process we eliminated the use of opiates for post-discharge pain in children undergoing acute laparoscopic appendectomy.

* NESS Non-Members

^Brief Report Award Eligible

- 10:10 AM – 10:40 AM** **COFFEE BREAK: VISIT
EXHIBITS & POSTERS**
Viger A-C (Lower Lobby)
- 10:45 AM – 12:15 PM** **PANEL: DEBATE SERIES**
Salle De Bal Ballroom
Moderator: **Christina V. Angeles**
- DEBATE 1: Antibiotics Versus Surgery for
Acute Appendicitis**
- Faculty:** **Antibiotics:** Thomas F. Tracy, Jr.
Surgery: David P. Mooney
- DEBATE 2: Extent of Surgery for Well Differentiated
Thyroid Cancers <4 cm in Diameter**
- Faculty:** **Lobectomy:** Gerard M. Doherty
Total Thyroidectomy: Meredith J. Sorensen
- DEBATE 3: Risks of Long-Term Opioid Use After
Post-Operative Opioid Prescriptions**
- Faculty:** **Low Risk:** Richard J. Barth
Significant Risk: Jennifer Waljee
- 12:15 PM – 1:15 PM** **NAVIGATING YOUR FINANCIAL
FUTURE: A GUIDE FOR TRAINEES
AND JUNIOR FACULTY**
Salle De Bal Ballroom
Faculty: Evan P. Welch
Sponsored by the GME Committee

SATURDAY

AFTERNOON TICKETED ACTIVITIES

(*Separate Subscription Required)

1:30 PM – 4:00 PM

McGill Immersive Interactive Simulation Tour at the Steinberg Centre for Simulation and Interactive Learning

Transportation will leave from the Montreal Marriott at promptly 1:30 PM.

\$50 per person

Tour fee includes transportation to and from the center and use of the center. *Lunch will not be provided.*

Rotate through stations where task trainers will be available for participants to try their skills at:

- Gastro-intestinal Trainer
- Coronary Anastomosis
- Chest tube
- Ultrasound

Participants will also have the opportunity to test themselves on an Acute Surgical Clinical Scenario module.

1:30 PM – 4:00 PM

McGill's Maude Abbott Medical Museum Tour

Transportation will leave from the Montreal Marriott at promptly 1:30 PM.

\$40 per person

Tour fee includes transportation to and from the museum, a guided tour and access to museum exhibits. *Lunch will not be provided.*

Museum Director, Dr. Rick Fraser, will give a brief overview of the history of the museum and participants will have 90 minutes for a private viewing of the current collections and exhibits.

To read about the history of the Maude Abbott Medical Museum, go to: <https://www.mcgill.ca/medicalmuseum/introduction>.

6:15 PM – 7:00 PM

**WOMEN IN SURGERY
PRE-RECEPTION**
Mainsonneuve A (36th Floor)

6:15 PM – 7:00 PM

NEW MEMBERS PRE-RECEPTION
**Invitation Only*
Mainsonneuve D (36th Floor)

7:00 PM – 10:00 PM

**PRESIDENT’S RECEPTION &
DINNER**
Reception: *Le Caf Conc (Lower Lobby)*
Dinner: *Salle De Bal Ballroom*
Guest Speaker:
Helen Antoniou, Author of
“Back to Beer . . . and Hockey”

7:00 PM – 10:00 PM

KIDS BANQUET
Terrasse (Plaza Level)

SATURDAY

SUNDAY, SEPTEMBER 15, 2019

9:00 AM – 11:00 AM	REGISTRATION <i>Ballroom Foyer (Lower Lobby)</i>
9:00 AM – 10:30 AM	SPEAKER READY AREA <i>Ballroom Foyer (Lower Lobby)</i>
7:00 AM – 10:00 AM	EXHIBIT HALL HOURS <i>Viger A-C (Lower Lobby)</i>
7:00 AM – 8:00 AM	CONTINENTAL BREAKFAST <i>Viger A-C (Lower Lobby)</i>
7:30 AM – 8:15 AM	ANNUAL BUSINESS MEETING (Members Only) <i>Salle De Bal Ballroom</i>

Scientific Session V

8:15 AM – 9:20 AM

Salle De Bal Ballroom (Lower Lobby)

Co-Moderators: Timothy C. Counihan
Catherine A. Schneider

Podium papers (8-minute presentation/5-minute discussion).

Brief papers (3-minute presentation/2-minute discussion).

23. The Design and Impact of a Novel Surgery-Specific Second Victim Peer Support Program

Majed El Hechi¹, *Jordan Bohnen¹, *Maggie Westfal¹,
*Kelsey Han¹, *Christy Cauley², *Cameron Wright¹,
*John Schulz¹, *Keith Lillemoe¹, Haytham Kaafarani¹

¹Massachusetts General Hospital, Boston, MA;

²Cleveland Clinic, Cleveland, OH

Objective: Surgeons are prone to feelings of sadness, guilt and anxiety when involved in major intraoperative adverse events (iAEs). We aimed to create a second victim peer support program for surgeons and surgical trainees.

Design: Interventional study.

Setting: Department of Surgery in a tertiary care academic hospital.

Participants: Surgical attendings and trainees as *Peer Supporters* or *Affected Peers*.

Interventions: A second victim peer-support program.

Main Outcome Measure(s): 1.) Program design description. 2.) One-year impact (number of interventions attempted and realized, feedback received from participants using an anonymous survey).

Results: The program was established using 5 steps: 1.) creation of a conceptual framework, 2.) choice of peer supporters, 3.) training of peer supporters, 4.) multi-faceted identification of major iAEs, and 5.) design of a systematic intervention plan [Figure]. In one year, the program had 47 interventions distributed evenly between attendings and trainees; 19% of affected peers opted out of receiving support. Most participants expressed their satisfaction with the program's confidentiality, the safe/trusting environment it provided, and timeliness of intervention (89%, 73%, and 83%, respectively); 81% suggested that the program had a positive impact on the department's "safety and support" culture and would recommend the program to a colleague. Several areas for improvement were identified, such as the need for improved identification of events needing intervention and the need for increased awareness of the program.

SUNDAY

* NESS Non-Members



Conclusions: We report the design and impact of the first surgery-specific peer support program in the US. Our one-year experience suggests that the program is highly utilized and well-received, albeit with opportunities for improvement.

24. Oral Water Soluble Contrast Challenge Does Not Affect Outcome in Adhesive Small Bowel Obstruction

***Gustavo Bauza¹, *Elizabeth Yates¹, Frederick H. Millham²**

¹Brigham and Women's Hospital, Boston, MA; ²South Shore Hospital, Weymouth, MA

Objective: We reviewed outcomes in adhesive small bowel obstruction (aSBO) before and after implementing an evidence-based oral water soluble contrast challenge protocol (GG).

Design: Retrospective, before and after, cohort study.

Setting: Single community hospital

Intervention: 100 cc of GG PO on admission.

Patients: We reviewed all patients over 18 y/o admitted with aSBO over a 6 year period (n = 1224). Patients admitted to non-surgical service (536), with a diagnosis other than aSBO (27), requiring surgery on admission day (108) and patients who expired, transferred, were discharged to hospice or left the hospital against advice (25) were excluded. 529 cases were analyzed, 89 of which were on GG.

Main Outcome Measures: Main outcomes measured were median hospital length of stay (LOS) and days from admission to surgery. Secondary outcomes included success of non-operative management (NOM), bowel resection rate, and delay in surgery.

Results: There were no demographic differences between GG and non-GG.

Across both pathways, 159 (25%) patients required surgery. Median LOS for GG was 3 days (IQR 2–4.5) vs non-GG groups 4 days (IQR 2–6), $p = 0.09$. GG were no less likely than non-GG to have LOS > 4 days ($p = ns$). 79 GG (89%) and 398 non-GG (90%) patients had successful NOM ($p = ns$). Of NOM failures, median days to surgery were 3.5 (IQR 2–7) for GG and 4 (IQR 3–5) for non-GG ($p = ns$). GG were no less likely to have delay in surgery exceeding 3 days. At surgery, 2 GG (20%) and 16 non-GG (38%) required small bowel resection ($p = ns$).

Conclusions: Implementation of GG was not associated with shorter LOS, shorter time to surgery, greater likelihood of NOM success or lower resection rate.

* NESS Non-Members

25. 57% Decline in Rhode Island Invasive Breast Cancer Mortality Between 1987 and 2017: Mammography Predominates in Preventing Mortality

Blake Cady, John Fulton

*Rhode Island Cancer Registry, Department of Public Health,
Providence, RI*

Background: Controversy exists regarding proportional contributions of mammographic screening versus systemic therapy to declining disease-specific mortality of female invasive breast cancer in the U.S. Understanding these relative contributions may help address allocation of medical resources.

Methods: A 31-year (1987–2017) review of Rhode Island Cancer Registry data of female invasive breast cancer was carried out in a state with a high rate of mammographic screening.

Results: Over 31 years in RI, statistically significant improvements occurred in initial clinical presentation of invasive breast cancer: mean and median maximum cancer diameter decreased by 21% and 30% respectively. Despite 1997 introduction of more accurate sentinel lymph node biopsy, the proportion of patients with axillary lymph node metastases decreased by 27%; extent of nodal metastases also decreased; patients with over 3 node metastases decreased 67%.

By 2017, 53% of all patients with node metastases had only one. Poorly differentiated cancers decreased 50%. Disease-specific mortality decreased 57%.

Conclusions: Improvements in initial presentation of invasive breast cancers are consistent with most cases having progressive growth, from cellular origin to palpable mass, the currently accepted biological model. Breast cancers identified earlier in clinical presentation through screening mammography are characterized by smaller size, fewer axillary lymph node metastases, better grade differentiation, and decreased mortality. Extrapolation from improved clinical parameters at diagnosis indicate that majority of mortality decline of invasive breast cancer in RI can be attributed to earlier detection.

#26. Overdue for #MeToo – The Prevalence of Sexual Harassment in Surgery in the United States

Jacqueline J. Wu¹, *Aditi Kapil¹, Susan Kartiko¹,
*Jeffry Nahmias², *Elan Jeremitsky³

¹Baystate Medical Center, Springfield, MA; ²University of California at Irvine, Orange, CA; ³Forbes Regional Hospital, Monroeville, PA

Objective: To determine the prevalence of sexual harassment (SH) among surgeons in the United States (US)

Design: All chairmen in the Society of Surgical Chairs were contacted requesting participation in a sexual harassment survey. Those agreeable were sent links to the anonymous, validated survey which was then forwarded to all their residents and faculty. Univariate analysis was performed focusing on prevalence of SH, differences between residents, faculty, gender, race, hospital type, geographical region.

Setting: Twenty-five surgical departments across the United States (US).

Patients: N/A.

Interventions: N/A.

Main Outcome Measures: 1.) Prevalence of sexual harassment in the US among surgical residents and faculty. 2.) Differences in prevalence of SH between genders, race, ethnicity, hospital type and region of the US.

Results: Twenty-five institutions participated. A total of 2808 individuals (1425 residents, 1383 faculty) received the survey. Response rate was 17.5%. Fifty-four percent of respondents *witnessed* SH; 38% *experienced* SH. Females witnessed (70%) and experienced (65%) SH more than males (34%, 10% respectively) ($p < 0.001$). Residents witnessed and experienced SH significantly more than faculty. African-American respondents *witnessed* SH most often (54%); Asians *experienced* SH most often (42%). Offenders were authority figures in 56% of cases. Eighty-three percent of incidents were not reported. The Mountain region had highest prevalence of SH; New England had the lowest.

Conclusions: Sexual harassment is a widespread problem in surgery. Our data is similar to data from prior decades. Further education around recognizing, preventing and reporting SH is needed at all levels. We urge professional societies and governing bodies to take a stand and establish policies addressing SH and protecting victims.

* NESS Non-Members

New Member Award Eligible

Brief 11. Opioid Prescription and Use Patterns Following Two Common Acute Care Surgery Procedures: Is Less More?

***Mayo H. Fujii**¹, Ajai K. Malhotra¹, *Ethan Jones¹,
*Thomas P. Ahern², *Loic Fabricant¹, *Christos Colovos¹

¹*University of Vermont Medical Center, Burlington, VT;*

²*University of Vermont Larner College of Medicine,
Burlington, VT*

Objective: To describe opioid prescribing and use following two common acute care surgery (ACS) procedures—laparoscopic appendectomy (LA) and laparoscopic cholecystectomy (LC).

Design: Patient telephone survey data obtained 1–2 weeks post-discharge. Electronic record data obtained 30 days post-discharge.

Setting: 562-bed tertiary-care academic medical center.

Patients: Consecutive sample of patients who underwent LA or LC between September 2017–February 2019 (n = 75).

Interventions: 10-minute telephone survey including questions on the amount of opioid prescribed and used after surgery. Opioid prescription details were obtained from retrospective chart review with patient permission.

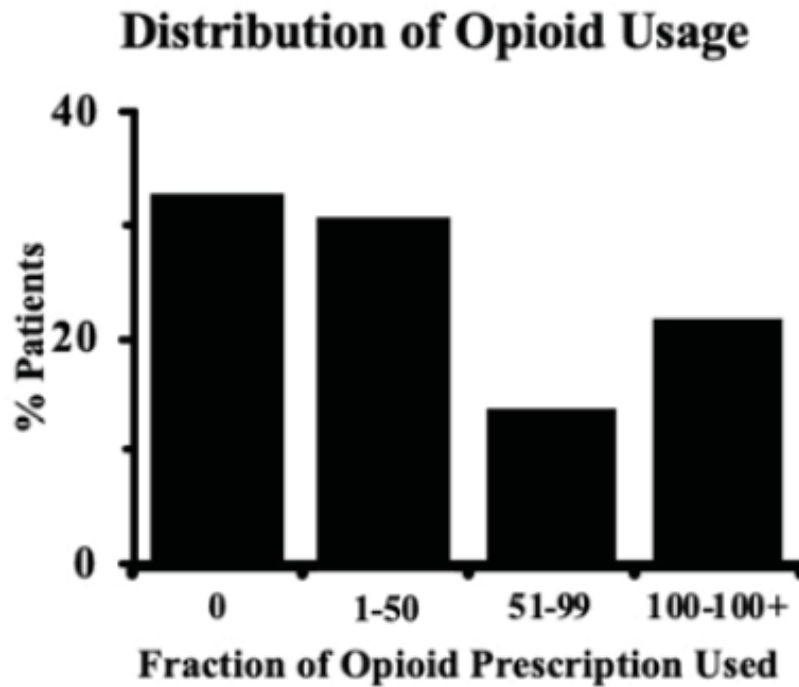
Main Outcome Measures: Opioid prescribed and used in morphine milligram equivalents (MME), proportion of opioid used.

Results: 12% (5/43) LA and 19% (6/32) LC patients did not receive a prescription at discharge. See Table for medians and interquartile ranges (IQR) of MME prescribed and proportion used. Among patients prescribed opioids, 37% (14/38) LA and 27% (7/26) of LC patients used 0% of their prescription. Despite overall low usage, a bimodal distribution was observed, with 16% of LA and 22% of LC patients using 100–100%+ of their prescribed opioids (see Figure).

**MME Prescribed and Proportion Used After
Laparoscopic Appendectomy and Cholecystectomy**

	LA (n = 43)	LC (n = 32)
MME prescribed (IQR)	68 (40–80)	64 (39–80)
MME % used (IQR)	20 (0–100)	42 (0–100)

* NESS Non-Members



Conclusions: About 70% of patients use none to <50% of their opioid prescription after discharge from LA and LC. However about 20% of patients use more than their counterparts. Further research is needed to characterize patient and procedure factors contributing to this higher opioid use.

Brief 12. Long-Term Outcomes of an Intensive, Pre-Operative Tobacco Cessation Program for Lung Resection

Joseph D. Phillips, *Kayla A. Fay, *Alexandra Fannin,
*Timothy M. Millington, *Rian M. Hasson, *David J. Finley
Dartmouth-Hitchcock Medical Center, Lebanon, NH

Objective: Evaluate the peri-operative and long-term rates of smoking cessation in patients undergoing an intensive, pre-operative smoking cessation program prior to lung resection.

Design: Retrospective cohort study of a prospectively collected database.

Setting: Rural, academic quaternary referral center.

Patients: Consecutive patients with confirmed or suspected lung cancer undergoing resection between January 1, 2015 and June 30, 2017. Eighty-two of the 340 patients were current smokers.

Intervention: Tobacco cessation counseling (TTC) by a certified tobacco treatment specialist (TTS) was offered, in addition to physician counseling. A 1-hour face-to-face meeting with motivational interviewing and treatment options discussion occurred. Pharmacotherapy (nicotine replacement, bupropion, varenicline, or none) was offered. Additional counseling was provided as needed. Carbon monoxide levels were measured via breath testing to confirm cessation.

Main Outcome Measures: The primary outcome was tobacco cessation prior to surgical resection. Secondary outcomes included rates of continued tobacco cessation up to 2 years following surgery.

Results: Nineteen patients opted out of TTC and 13 (68%) were able to quit by surgery. Rates of cessation were 37% at 6 months, 33% at 1 year, and 33% at 2 years in these 13 patients. Sixty-three patients had TTC and 47 (75%) were able to quit by surgery. Rates of tobacco cessation in the counseling group were 56% at 6 months, 45% at 1 year and 38% at 2 years. Return to smoking did not seem to be influenced by pathology or distance from the institution.

Conclusions: Tobacco cessation counseling can lead to a high rate of success in quitting, particularly in the setting of upcoming lung resection. Further study is needed to exam how to ensure long-term tobacco cessation.

* NESS Non-Members

9:20 AM – 10:05 AM	35TH ANNUAL SAMUEL JASON MIXTER LECTURE <i>Salle De Bal Ballroom</i> Good Judgment Comes from Experience: Building a Learning Healthcare System Monica M. Bertagnolli <i>Brigham & Women's Hospital, Boston, MA</i>
10:05 AM – 11:00 AM	PRESIDENTIAL ADDRESS <i>Salle De Bal Ballroom</i>
10:05 AM	INTRODUCTION OF THE PRESIDENT David E. Clark
10:10 AM	PROFILES OF SURGICAL ENTREPRENEURS Richard J. Barth, Jr.
11:00 AM	ADJOURN

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12:30PM – 2:00PM	Scientific Session I	Salle De Bal Ballroom (Lower Lobby)
2:00PM – 2:30PM	Coffee Break <i>Visit Posters & Exhibits</i>	Viger A-C (Lower Lobby)
2:30PM – 3:00PM	Guest Speaker <i>Being an Academic Surgeon in the Canadian Healthcare System: The Good, the Bad, and the Ugly</i> Gerald M. Fried	Salle De Bal Ballroom (Lower Lobby)
3:00PM – 5:00PM	Scientific Session II	Salle De Bal Ballroom (Lower Lobby)
5:00PM – 5:45PM	State Caucus Meetings	See Page 90 & On-Site Signage
6:00PM – 7:00PM	Welcome Reception	Le Caf Conc (Lower Lobby)

SATURDAY, SEPTEMBER 14

7:00AM – 8:00AM	Continental Breakfast	Viger A-C (Lower Lobby)
7:00AM – 7:45AM	Posters of Distinction Best Poster Award Session	Salle De Bal Ballroom (Lower Lobby)
7:45AM – 8:40AM	Scientific Session III	Salle De Bal Ballroom (Lower Lobby)
8:40AM – 8:55AM	Introduction of New Members	Salle De Bal Ballroom (Lower Lobby)
8:55AM – 10:10AM	Scientific Session IV	Salle De Bal Ballroom (Lower Lobby)
10:10AM – 10:40AM	Coffee Break <i>Visit Posters & Exhibits</i>	Viger A-C (Lower Lobby)
10:45AM – 12:15PM	Panel: Debate Series <i>See page 103 for details on the three debates.</i>	Salle De Bal Ballroom (Lower Lobby)
12:15PM – 1:15PM	Navigating Your Financial Future: A Guide for Trainees and Junior Faculty	
1:30PM	*Afternoon Activities <i>Details included on page 104</i>	
6:15PM – 7:00PM	Women in Surgery Pre-Reception	Mainsonneuve A (36 th floor)
6:15PM – 7:00PM	New Members Pre-Reception <i>*Invitation Only</i>	Mainsonneuve D (36 th floor)
7:00PM	President's Reception & Dinner	Le Caf Conc & Salle De Bal Ballroom (Lower Lobby)
7:00PM	Kids Banquet (Ages 5–12)	Terrasse (Plaza Level)

SUNDAY, SEPTEMBER 15

7:00AM – 8:00AM	Continental Breakfast	Viger A-C (Lower Lobby)
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8:15AM – 9:20AM	Scientific Session V	Salle De Bal Ballroom (Lower Lobby)
9:20AM – 10:05AM	35 th Annual Samuel Jason Mixter Lecture <i>Good Judgment Comes from Experience: Building a Learning Healthcare System</i> Monica M. Bertagnolli	Salle De Bal Ballroom (Lower Lobby)
10:05AM – 10:10AM	Introduction of President David E. Clark	Salle De Bal Ballroom (Lower Lobby)
10:10AM – 11:00AM	Presidential Address <i>Profiles of Surgical Entrepreneurs</i> Richard J. Barth, Jr.	Salle De Bal Ballroom (Lower Lobby)