



PCSA

87TH ANNUAL MEETING

SCIENTIFIC PROGRAM

FEBRUARY 13-16, 2016

**THE FAIRMONT ORCHID
KOHALA COAST, HAWAII**

**EDUCATION JOINTLY PROVIDED BY
THE AMERICAN COLLEGE OF SURGEONS AND
THE PACIFIC COAST SURGICAL ASSOCIATION.**





**PACIFIC COAST SURGICAL ASSOCIATION
87TH ANNUAL MEETING**

SCIENTIFIC PROGRAM

February 13-16, 2016
The Fairmont Orchid
Kohala Coast, Hawaii

TABLE OF CONTENTS

2016 Arrangements / Program Committee.....Page 2

Council Officers, Members, and Representatives.....Page 3

Program Information.....Page 4

Scientific Program.....Page 5

General Agenda.....Page 7

Scientific Session Agenda.....Page 9

Scientific Sessions 1-28.....Page 20

E-Poster Sessions A.....Page 51

E-Poster Sessions B.....Page 66

E-Poster Sessions C.....Page 82

Founders.....Page 98

Past Presidents.....Page 99

New Members.....Page 103

In Memoriam.....Page 109

Future Meetings.....Page 116



2016 ARRANGEMENTS COMMITTEE

President and Spouse	Karen and Clifford Deveney
Vice-President	Clifford Deveney
Local Chairperson	Rebecca Sawai and Daryl Kurozawa
Golf Tournament	Clifford Deveney
Tennis Tournament	Robert Alberty and Alan Cheung
Fun Run/Walk	Kevin Reavis
Arrival and Guest Hospitality	John and Irene Vetto Richard Mullins and Barbara Lenfesty
Children/Family Activities	Jennifer Watters

2016 PROGRAM COMMITTEE

Program Chair and Recorder	Christian de Virgilio (2021)
Members	Karen Deveney (2016) Kristine Calhoun (2019) Quan-Yang Duh (2016) L. Andrew DiFronzo (2016) James Dolan (2018) Gregory Victorino (2017)



COUNCIL OFFICERS

Karen E. Deveney, President (2015)	Portland, OR
Clifford Deveney, Vice-President (2015)	Portland, OR
John A. Ryan, Jr., Historian	Seattle, WA
Quan-Yang Duh, Secretary-Treasurer (2016)	San Francisco, CA
Sherry Wren, Secretary- Treasurer Elect (2016)	Palo Alto, CA
Christian de Virgilio, Recorder (2020)	Los Angeles, CA

CAUCUS COUNCILORS

Richard Bold, Councilor (2018)	Northern California
John Vetto, Councilor (2019)	Oregon/Hawaii
Edward Phillips, Councilor (2017)	Southern California
Robert Sawin, Councilor (2016)	Washington/British Columbia/ Alaska

COUNCIL REPRESENTATIVES

Armando Giuliano, Los Angeles, CA (10/2016)	Board of Governors, American College of Surgeons
John G. Hunter, Portland, OR (6/30/2016)	American Board of Surgery
Sherry Wren, Stanford, CA (12/31/2016)	Advisory Council for General Surgery, American College of Surgeons

SCIENTIFIC PROGRAM INFORMATION

Overall Goal and Objectives of the Program: The goal of the program is to provide an educational opportunity for the members of PCSA. Members are academic and community surgeons from four caucuses – Northern California, Southern California, Washington/British Columbia/Alaska, and Hawaii/Oregon. Membership is competitive. Attendees represent the leaders of their medical communities.

Learning Outcomes: The meeting will provide high quality up-to-date information regarding major areas in general surgery. Attendees will learn the most recent developments in the field of surgery from scientific and clinical leaders. Time will be provided following each presentation for questions and discussion. Moderators will oversee sessions and facilitate discussions.

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



AMERICAN COLLEGE
OF SURGEONS
Division of Education

AMA PRA Category 1 Credits™

The American College of Surgeons designates this live activity for a maximum of 15.25 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Disclosure: In compliance with the ACCME Accreditation Criteria, the American College of Surgeons 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.

Disclaimer: Attendees voluntarily assume all risks involved in travel to and from the Annual Meeting and in attendance of and participation in the program. PCSA and ACS Association Management Services shall not be liable for any loss, injury, or damage to person or property resulting directly or indirectly from any acts of God, acts of government or other authorities, civil disturbances, acts of terrorism, riots, thefts, or from any other similar causes.



SCIENTIFIC PROGRAM

PCSA NEW MEMBER PRIZE

Garth Utter

Northern California

Sunday, February 14, 9:00 am – 9:25 am

“DOES THERAPEUTIC ANTICOAGULATION REDUCE THE RISK OF PULMONARY EMBOLISM OR PROXIMAL DEEP VEIN THROMBOSIS AFTER DIAGNOSIS OF AN ISOLATED CALF DEEP VEIN THROMBOSIS?”

PCSA RESIDENT’S COMPETITION

The top-scoring resident papers from each caucus will be presented during the scientific sessions. Presentations will be judged on clarity, focus and scientific relevance to surgical practice. Prizes will be awarded at the President’s Dinner. This year’s resident contestants are:

Brodie Parent

Washington/British Columbia/Alaska

Sunday, February 14, 10:40 am – 12:20 pm

“METABOLOMICS: A NOVEL METHOD TO TREND RECOVERY AFTER INJURY IN CRITICALLY-ILL TRAUMA PATIENTS”

Thuy Tran

Northern California

Sunday, February 14, 10:40 am – 12:20 pm

“CLINICAL SCORE PREDICTING LONG TERM SURVIVAL AFTER REPEAT RESECTION FOR RECURRENT ADRENOCORTICAL CARCINOMA”

Jennifer Williams

Southern California

Sunday, February 14, 10:40 am – 12:20 pm

“PERIAMPULLARY CANCERS: HISTOPATHOLOGIC SUBTYPE IS A STRONGER DETERMINANT OF PATIENT SURVIVAL THAN ANATOMIC LOCATION”

Sheena Harris

Oregon/Hawaii

Sunday, February 14, 10:40 am – 12:20 pm

“EFFECT OF CENTER FOR MEDICAID AND MEDICARE SERVICES-DRIVEN CATHETER-ASSOCIATED URINARY TRACT INFECTION REDUCTION POLICIES ON GENERAL SURGERY PATIENTS”



E-POSTER SESSIONS

Sunday, February 14, 12:20 pm – 2:00 pm

E-Posters will be presented on Sunday, February 14 during the lunch hour. Each 3-minute oral presentation of the E-Poster will be followed by brief questions and discussion. Box lunch will be provided.

PRESIDENT’S FORUM AND TOWN HALL

Monday, February 15, 10:00 am – 12:00 pm

The 2016 President’s Theme is “Educating Surgeons for Today and Tomorrow.” Dr. Debra DaRosa will deliver the Presidential Keynote Address. Dr. DaRosa will discuss the relentless quest to improve how we teach and learn operative skills. Following the President’s Keynote Speaker, President Deveney will lead a PCSA Town Hall Panel Discussion that will discuss important components of surgical education that contribute to the development of a surgeon who possesses the skills to remain competent and successful through a lifetime of learning. Town Hall Panel Guests include Drs. Bruce Gewertz, John Hunter, W. Lane Verlenden, and Lawrence W. Way.

INDUSTRY SUPPORT DISPLAYS

A commercial display of scientific interest will be available during the Annual Meeting, providing an opportunity for attendees to view products and services from various corporations. Continental breakfasts and refreshment breaks will be served in the exhibit area.

PCSA would like to thank the following exhibiting companies:

Exhibitors:

Bard Davol
BK Ultrasound
Boston Scientific
Edwards Lifesciences
Genentech
Genomic Health
Gore & Associates
(The) JAMA Journal
Janssen Pharmaceuticals

LifeCell an Acelyty Company
Mallinckrodt Pharmaceutical
(The) Medicines Company
Strategic Business Holdings Inc.
Yuma Regional Medical Center

Educational Grant and Support:

KCI (Acelyty)

GENERAL AGENDA

FRIDAY, FEBRUARY 12		
Council Reception*	6:00 pm–7:00 pm	South Tower Presidential Suite
Council Dinner*	7:00 pm–9:00 pm	Brown’s Knoll
SATURDAY, FEBRUARY 13		
Finance Committee Meeting*	7:00 am–8:00 am	Plaza I
Council Meeting*	8:30 am–3:00 pm	Plaza I
Council Photo	12:00 pm–12:15 pm	TBD
Council Lunch*	12:15 pm–1:15 pm	Ballroom Courtyard
Registration	1:00 pm–6:00 pm	Grande Ballroom Foyer
Guest Hospitality	1:00 pm–5:00 pm	Nanea Lanai
Hospitality Desk	1:00 pm–5:00 pm	Grande Ballroom Foyer
Speaker Ready Room	3:00 pm–6:00 pm	Pikake
New Members Private Reception*	5:00 pm–6:00 pm	South Tower Presidential Suite
Welcome Reception	6:00 pm–7:45 pm	Plaza Ballroom
SUNDAY FEBRUARY 14		
Continental Breakfast	7:00 am–9:00 am	Salon III
Registration	7:00 am–5:00 pm	Grande Ballroom Foyer
Speaker Ready Room	7:00 am–5:00 pm	Pikake
Guest Hospitality	7:00 am–5:00 pm	Nanea Lanai
Industry Support Displays	7:00 am–4:00 pm	Salon III
Hospitality Desk	8:00 am–12:00 pm	Nanea Lanai
Introduction & President’s Address	8:00 am–9:00 am	Salon I & II
Scientific Session I	9:00 am–10:15 am	Salon I & II
Morning Break with Industry Support	10:15 am–10:40 am	Salon III
Scientific Session II	10:40 am–12:20 pm	Salon I & II
Lunch/E-Poster Sessions	12:20 pm–2:00 pm	Plaza I, Plaza II, and Plaza III
Scientific Session III	2:00 pm–3:15 pm	Salon I & II
Afternoon Break with Industry Support	3:15 pm–3:40 pm	Salon III
Scientific Session IV	3:45 pm–5:15 pm	Salon I & II
Council & Industry Reception*	5:15 pm–6:15 pm	Wailana Garden
Dinner at Leisure	5:00 pm	



MONDAY, FEBRUARY 15

Fun Run & Walk	6:00 am–7:00 am	Meet in Lobby by 5:45 am
Speaker Ready Room	7:00 am–12:00 pm	Pikake
Continental Breakfast	7:00 am–9:00 am	Salon III
Industry Support Displays	7:00 am–11:30 am	Salon III
Speaker Ready Room	7:00 am–12:00 pm	Pikake
Registration	7:30 am–12:00 pm	Grande Ballroom Foyer
Hospitality Desk	8:00 am–12:00pm	Nanea Lanei
Guest Hospitality	7:00 am–12:00 pm	Nanea Lanai
Scientific Session V	7:30 am–9:00 am	Salon I & II
Morning Break with Industry Support	9:00 am–9:20 am	Salon III
Historical Presentation	9:20 am–10:00 am	Salon I & II
President’s Forum	10:00 am– 12:00 pm	Salon I & II
Golf Tournament	12:30 pm–5:30 pm	Francis H. I’I Brown Golf Course
Scuba Diving	12:45 pm–3:00 pm	Off-site
Tennis Tournament	1:30 pm–4:00 pm	Tennis Courts
Presidents’ Reception	6:30 pm–7:15 pm	Ballroom Courtyard
Presidents’ Dinner	7:15 pm–10:00 pm	Grande Ballroom

TUESDAY, FEBRUARY 16

Continental Breakfast	7:00 am–9:00 am	Salon I & II
Registration	7:00 am–12:00 pm	Grande Ballroom Foyer
Speaker Ready Room	7:00 am–12:00 pm	Pikake
Guest Hospitality	7:00 am–10:30 am	Nanea Lanai
Scientific Session VI	7:45 am–9:20 am	Salon I & II
Morning Break	9:20 am–9:50 am	Salon III
Scientific Session VII	9:50 am–11:30 am	Salon I & II
Business Meeting	11:30 am-12:00 pm	Salon I & II
Meeting Adjourns	by 12:00 noon	

** Invitation only events*



SCIENTIFIC SESSION AGENDA

SUNDAY, FEBRUARY 14, 2016

8:00 am – 8:15 am **Introduction**
8:15 am – 8:45 am **President's Address**
8:45 am – 9:00 am **Introduction of New Members**
9:00 am – 10:15 am **Scientific Session 1 Moderator: Joseph Galante**

- 1** DOES THERAPEUTIC ANTICOAGULATION REDUCE THE RISK OF PULMONARY EMBOLISM OR PROXIMAL DEEP VENOUS THROMBOSIS AFTER DIAGNOSIS OF AN ISOLATED CALF DEEP VENOUS THROMBOSIS?

***NEW MEMBER PRIZE (Northern California Caucus)**

Presenter: Garth Utter
Discussant: Gregory Moneta
Closer: Garth Utter

- 2** BILATERAL MASTECTOMY DOES NOT IMPACT SURVIVAL OR RATE OF CONTRALATERAL BREAST CANCER IN WOMEN AGE 40 AND YOUNGER WITH UNILATERAL OPERABLE INVASIVE BREAST CANCER

Presenter: Cory Donovan
Discussant: Jennifer Garreau
Closer: Alice Chung

- 3** TIME FROM NEOADJUVANT CHEMORADIATION TO SURGERY AND ITS EFFECT ON COMPLETE PATHOLOGIC RESPONSE RATES IN ESOPHAGEAL CANCER

Presenter: Kelly Haisley
Discussant: Miguel Burch
Closer: James Dolan

- 4** A 6-GENE MICROARRAY PROFILE PREDICTS OUTCOME FOR SURGERY FOR METASTATIC MELANOMA

Presenter: Jenny Hong
Discussant: Alice Chung
Closer: Richard Essner



10:15 am – 10:40 am **Morning Break with Industry Support**

10:40 am – 12:20 pm **Scientific Session 2 Moderator: Areti Tillou**

- 5** METABOLOMICS: A NOVEL METHOD TO TREND RECOVERY AFTER INJURY IN CRITICALLY-ILL TRAUMA PATIENTS
***RESIDENT PRIZE (Washington/BC/Alaska Caucus)**

Presenter: Brodie Parent

Discussant: Rachael Callcut

Closer: Ronald Maier

- 6** CLINICAL SCORE PREDICTING LONG TERM SURVIVAL AFTER REPEAT RESECTION FOR RECURRENT ADRENOCORTICAL CARCINOMA
***RESIDENT PRIZE (Northern California Caucus)**

Presenter: Thuy Tran

Discussant: Brett Sheppard

Closer: George Poultsides

- 7** PERIAMPULLARY CANCERS: HISTOPATHOLOGIC SUBTYPE IS A STRONGER DETERMINANT OF PATIENT SURVIVAL THAN ANATOMIC LOCATION
***RESIDENT PRIZE (Southern California Caucus)**

Presenter: Jennifer Williams

Discussant: Flavio Rocha

Closer: Timothy Donahue

- 8** EFFECT OF CENTER FOR MEDICAID AND MEDICARE SERVICES-DRIVEN CATHETER-ASSOCIATED URINARY TRACT INFECTION REDUCTION POLICIES ON GENERAL SURGERY PATIENTS
***RESIDENT PRIZE (Oregon/Hawaii Caucus)**

Presenter: Sheena Harris

Discussant: Neel Joshi

Closer: Brett Sheppard

12:20 pm – 2:00 pm **Lunch E-Poster Sessions (A, B, C)**



Poster Session A:

Moderators: Sharon Lum and John Payne

- 1A** THE COST OF ROBOTIC SURGERY: JUSTIFIABLE?
Presenter: Thuy Tran
- 2A** WOUND CLASS DOES NOT ALTER RECURRENCE IN COMPLEX VENTRAL HERNIA REPAIR WITH MESH: A SINGLE-CENTER RETROSPECTIVE REVIEW
Presenter: Victoria Lyo
- 3A** ROAD TRAFFIC INJURIES IN RURAL CAMEROON: INITIAL RESULTS FROM A PROSPECTIVE HOSPITAL-BASED TRAUMA REGISTRY
Presenter: Sherry Wren
- 4A** THE CLINICAL UTILITY OF A 21-GENE RECURRENCE SCORE IN THE BREAST CANCER COMMUNITY
Presenter: Sara Wilson
- 5A** THE BURDEN OF SURGICAL DISEASE IN RURAL MOZAMBIQUE
Presenter: Peter Bendix
- 6A** FOCUSED ASSESSMENT WITH SONOGRAPHY FOR TRAUMA (FAST) MAY DECREASE COMPUTED TOMOGRAPHY (CT) SCAN UTILIZATION IN THE EVALUATION OF THE STABLE PEDIATRIC PATIENT WITH BLUNT ABDOMINAL TRAUMA (BAT)
Presenter: Christopher Newton
- 7A** THE ADRENAL INCIDENTALOMA: AN OPPORTUNITY FOR SURGEONS TO IMPROVE PATIENT CARE
Presenter: James Becker
- 8A** INFECTION IS DRIVING FACTOR IN PROGRESSION OF FOREFOOT DIABETIC ULCERS TO MAJOR LOWER EXTREMITY AMPUTATION
Presenter: Sheena Harris
- 9A** SHORT AND LONG TERM RESULTS OF UNROOFING AND MARSUPIALIZATION FOR ADOLESCENT PILONIDAL DISEASE
Presenter: Joshua Rouch
- 10A** SURGEON VARIATION IN THE USE OF NON-OPERATIVE MANAGEMENT FOR COMPLICATED APPENDICITIS
Presenter: Greg Sacks



11A CLINICAL AND RADIOLOGICAL FOLLOW UP RATHER THAN EXCISIONAL BIOPSY IS REASONABLE AFTER COMPLETE PAPILOMA EXCISION AT THE TIME OF CORE NEEDLE BIOPSY

Presenter: Angelena Crown

12A WHEN IS ANTICOAGULATION FOR TRAUMATIC VASCULAR INJURY REQUIRED?

Presenter: Kylie Blume

Poster Session B:

Moderators: James Dolan and Robert Selby

1B ABSENCE OF MACROSCOPIC DISEASE RATHER THAN EXTENT OF SURGICAL LYMPHADENECTOMY MAY BE ASSOCIATED WITH IMPROVED SURVIVAL IN PEDIATRIC PATIENTS WITH STAGE III MELANOMA

Presenter: Devin Flaherty

2B COLITIS CARE IS CHARACTERIZED BY INCREASED INFLIXIMAB USE AND HIGHER COLECTOMY RATES IN THE BIOLOGIC ERA

Presenter: Cindy Kin

3B THE MODIFIED EARLY WARNING SCORE AS A PREDICTIVE TOOL FOR UNEXPECTED SURGICAL ICU ADMISSION

Presenter: Mu Xu

4B IMPACT OF LAPAROSCOPIC ADRENALECTOMY ON OVERALL SURVIVAL IN PATIENTS WITH NON-METASTATIC ADRENOCORTICAL CARCINOMA


Presenter: Kelly Huynh

5B OUTCOMES OF RESECTED MUCINOUS CYSTIC NEOPLASMS OF THE PANCREAS WITH INVASIVE CANCER

Presenter: Alicia Edwards

6B A PILOT STUDY EVALUATING THE POTENTIAL OF SPHEROID CULTURES OF CELLS ISOLATED FROM COLORECTAL CANCER LIVER METASTASES FOR INDIVIDUALIZED PATIENT THERAPEUTICS

Presenter: Kan Toriguchi



7B EFFICACY OF CT SCAN IN PREDICTING OUTCOME AFTER SURGICAL TREATMENT IN LOCALLY ADVANCED RECTAL CANCER

Presenter: Aaron Parrish

8B NONVISUALIZED SENTINEL LYMPH NODES ON LYMPHOSCINTIGRAPHY IN MELANOMA: PREDICTIVE FACTORS AND SURGICAL OUTCOMES

Presenter: Darryl Schuitevoerder

9B NEUTROPHIL TO LYMPHOCYTE AND PLATELET TO LYMPHOCYTE RATIOS CAN PREDICT PATHOLOGIC COMPLETE RESPONSE (PCR) AFTER NEOADJUVANT THERAPY IN ESOPHAGEAL CANCER PATIENTS

Presenter: Patrick McLaren

10B NON-OPERATIVE MANAGEMENT OF NONFUNCTIONING PANCREATIC NEUROENDOCRINE TUMORS

Presenter: Michael Sgroi

11B CANCERS OF THE RECTOSIGMOID JUNCTION SHOULD BE TREATED AS RECTAL CANCERS

Presenter: Sarah Stringfield

12B CYTOREDUCTIVE SURGERY AND HEATED INTRAPERITONEAL CHEMOTHERAPY WITH MULTIVISCERAL RESECTION FOR APPENDICEAL AND COLORECTAL PERITONEAL CARCINOMATOSIS; SINGLE INSTITUTION EXPERIENCE

Presenter: Matthew Selleck

Poster Session C:

Moderators: Marc Melcher and Linda Wong

1C THE NATIONAL SURGICAL QUALITY MEASURE FOR POSTOPERATIVE VENOUS THROMBOEMBOLISM HAS A HIGH FALSE POSITIVE RATE

Presenter: Lindsay Welton

2C THE REMNANT GALLBLADDER AFTER LAPAROSCOPIC SUBTOTAL CHOLECYSTECTOMY: TO CLOSE OR LEAVE OPEN?

Presenter: Azure Adkins



- 3C** MELD SCORE AND AST-TO-PLATELET RATIO INDEX (APRI) PREDICT LONG-TERM SURVIVAL IN PATIENTS WITH A SMALL HEPATOCELLULAR CARCINOMA FOLLOWING NON-TRANSPLANT THERAPIES
Presenter: Joy Sarkar
- 4C** ASSESSING THE DOMINO EFFECT: CONSULTANT PAYMENT IN THE UNITED STATES PARALLELS GENDER INEQUALITIES IN MEDICINE
Presenter: Anna Weiss
- 5C** PROVIDERS OR SYSTEMS? DETERMINANTS OF EXCELLENCE IN SURGICAL OUTCOMES
Presenter: Jamie Anderson
- 6C** RACIAL AND SOCIOECONOMIC DISPARITIES IN TREATMENT OF WELL DIFFERENTIATED THYROID CANCER
Presenter: Avital Harari
- 7C** MULTIDISCIPLINARY AND ITERATIVE APPROACH TO THE ADOPTION OF AN ENHANCED RECOVERY AFTER SURGERY PROGRAM SHORTENS LENGTH OF STAY AND IMPROVES POSTOPERATIVE PAIN, BOWEL AND BLADDER FUNCTION AFTER ABDOMINAL COLORECTAL SURGERY
Presenter: Madhulika Varma
- 8C** INCIDENTAL HEPATOCELLULAR CARCINOMA IN LIVER TRANSPLANT RECIPIENTS HAS A HIGH RECURRENCE RATE AND WORSE OVERALL SURVIVAL THAN PREOPERATIVELY DIAGNOSED HEPATOCELLULAR CARCINOMA
Presenter: Jennifer Burg
- 9C** SHARE 35 HAS IMPROVED OUTCOMES IN MELD \geq 40 LIVER TRANSPLANTATION
Presenter: Victor Nekrasov
- 10C** EXCELLENT SURVIVAL OUTCOMES FOLLOWING LIVER TRANSPLANTATION IN PATIENTS WITH CHRONIC LIVER DISEASE COMPLICATED BY HEPATOPULMONARY SYNDROME
Presenter: Elaine Cheng



- 11C** VALIDITY AND RELIABILITY OF FOURTH YEAR MEDICAL STUDENT TRAUMA & SURGICAL ICU PRESENTATION ASSESSMENTS: ARE WE SUCCESSFULLY PREPARING MEDICAL STUDENTS FOR SURGICAL TRAINING IN THE 21ST CENTURY?
Presenter: Justin Watson
- 12C** ACUTE RESPIRATORY DISTRESS SYNDROME IN PEDIATRIC TRAUMA PATIENTS: INCIDENCE, PREDICTORS, AND OUTCOMES
Presenter: Amory Roulette

2:00 pm – 3:15 pm

Scientific Session 3

Moderator: Farin Amersi

- 9** A CLINICAL SCORING SYSTEM TO PREDICT DYSPHAGIA FOLLOWING CARDIAC OPERATIONS
Presenter: Peyman Benharash
Discussant: Marc Melcher
Closer: Peyman Benharash
- 10** UNILATERAL CLEARANCE FOR PRIMARY HYPERPARATHYROIDISM IN SELECTED PATIENTS WITH MULTIPLE ENDOCRINE NEOPLASIA TYPE 1?
Presenter: Wouter Kluijfhout
Discussant: Philip Haigh
Closer: Quan-Yang Duh
- 11** NON-OPERATIVE MANAGEMENT OF ACUTE APPENDICITIS IN CHILDREN: FEASIBILITY, COST, AND OUTCOMES
Presenter: Kyle Mock
Discussant: Adam Goldin
Closer: Steven Lee

3:15 pm – 3:45 pm


Afternoon Break with Industry Support

3:45 pm – 5:15 pm

Scientific Session 4

Moderator: Andre Campbell

- 12** LOSS OF INDEPENDENCE: A KEY CONCEPT TO PREDICT READMISSION AND DELAYED DEATH IN OLDER SURGICAL PATIENTS
Presenter: Julia Berian
Discussant: Alessandro Fichera
Closer: Clifford Ko

- 
- 13** A CLOSER LOOK AT 30-DAY READMISSIONS TO A GENERAL SURGERY SERVICE: ARE THEY REALLY PREVENTABLE?

Presenter: Lisa McIntyre

Discussant: Andre Campbell

Closer: Ronald Maier

- 14** PATTERNS OF CARE IN VASCULAR SURGERY PATIENTS AT END OF LIFE DURING HOSPITALIZATION

Presenter: Dale Wilson

Discussant: Misty Humphries

Closer: Gregory Moneta

- 15** IMPACT OF AN ENHANCED RECOVERY AFTER SURGERY (ERAS) PROGRAM ON OUTCOMES OF PATIENTS UNDERGOING ELECTIVE COLON RESECTION

Presenter: Garth Warnock

Discussant: Clifford Ko

Closer: Garth Warnock

MONDAY, FEBRUARY 15, 2016

7:30am – 9:00 am

Scientific Session 5 Moderator: Susan Orloff

- 16** ROBOTIC-ASSISTED HEPATECTOMY: NO IMPROVEMENT OVER LAPAROSCOPIC HEPATECTOMY

Presenter: Victoria O'Connor

Discussant: Thomas Biehl

Closer: L. Andrew DiFronzo

- 17** RADIOGRAPHICALLY APPARENT NON-ALPHAFETOPROTEIN PRODUCING HEPATOCELLULAR CARCINOMA – SHOULD TRANSPLANT PRIORITIZATION REMAIN THE SAME? A COMPARATIVE SINGLE CENTER ANALYSIS OF 665 LIVER TRANSPLANT RECIPIENTS

Presenter: Vatche Agopian

Discussant: Susan Orloff

Closer: Ronald Busuttil



- 18** GREATER BRAIN DEATH DONOR BMI HAS A NEGATIVE EFFECT ON DONATION SUCCESS

Presenter: Matthew Bloom

Discussant: Ali Salim

Closer: Darren Malinoski

- 19** LIVER RESECTION FOR EARLY HEPATOCELLULAR CANCER: COMPARISON OF 3 DIFFERENT COUNTRIES

Presenter: Linda Wong

Discussant: David Imagawa

Closer: Linda Wong

9:00 am – 9:20 am

Morning Break with Industry Support

9:20 am – 10:00 am

Historical Vignette

10:00 am – 12:00 pm

President's Forum and Town Hall

Educating Surgeons for Today and Tomorrow

TUESDAY, FEBRUARY 16, 2016

7:45 am – 9:20 am

Scientific Session 6

Moderator: Philip Haigh

- 20** POSTER SESSIONS INCREASE PUBLISHABLE QUALITY PRESENTATIONS AT A REGIONAL SURGICAL SOCIETY MEETING

Presenter: Robert Sawin

Discussant: John Vetto

Closer: Robert Sawin

- 21** INFLUENCE OF ADMISSION LABORATORY VALUES AND THE TIMING OF ENDOSCOPIC RETROGRADE CHOLANGIOGRAPHY ON CLINICAL OUTCOMES IN ACUTE CHOLANGITIS

Presenter: Alexander Schwed

Discussant: Rochelle Dicker

Closer: Christian de Virgilio



- 22** THE DISAPPEARANCE OF COMMON BILE DUCT EXPLORATION FROM THE SURGICAL ARMAMENTARIUM: A NATIONAL ASSESSMENT OF TRENDS IN CHOLEDOCHOLITHIASIS MANAGEMENT FROM 1998-2011

Presenter: Michael Wandling

Discussant: Donn Spight

Closer: Clifford Ko

- 23** A SYSTEMATIC, COMPETENCY-BASED TRAINING PARADIGM FOR THE GLOBAL BURDEN OF INGUINAL HERNIA

Presenter: Justin Wagner

Discussant: Diana Farmer

Closer: David Chen

- 24** DECREASED MORTALITY IN PATIENTS WITH ISOLATED SEVERE BLUNT TRAUMATIC BRAIN INJURY RECEIVING HIGHER PLASMA TO PACKED RED BLOOD CELLS TRANSFUSION RATIOS

Presenter: Elizabeth Benjamin

Discussant: Martin Schreiber

Closer: Lydia Lam

- 25** AN INTOXICATING DILEMMA: PROSPECTIVE STUDY OF SPINE IMAGING AND CLEARANCE IN THE ALCOHOL OR DRUG INTOXICATED TRAUMA PATIENT

Presenter: Lisa Bush

Discussant: Susan Rowell

Closer: Col. Matthew Martin

9:20 am – 9:50 am

Morning Break

9:50 am – 11:30 am

Scientific Session 7

Moderator: Jonathan Hiatt

- 26** MODEL FOR END-STAGE LIVER DISEASE SCORE PREDICTS MORTALITY IN EMERGENCY GENERAL SURGERY PATIENTS

Presenter: Joaquim Havens

Discussant: Matthew Martin

Closer: Ali Salim



27 THROMBELASTOGRAPHY BASED DOSING OF ENOXAPARIN FOR THROMBOPROPHYLAXIS: A PROSPECTIVE RANDOMIZED TRIAL

Presenter: Christopher Connelly

Discussant: Peggy Knudson

Closer: Martin Schrieber

28 INDIVIDUAL CLOTTING FACTOR CONTRIBUTIONS TO MORTALITY FOLLOWING TRAUMA

Presenter: Ryan Kunitake

Discussant: Lydia Lam

Closer: Rachael Callcut

11:30 am – 12:00 pm ***Business Meeting***



Scientific Sessions

1-28



All Scientific Session and E-Poster Presentation authors and presenters are MDs unless otherwise noted.



[1]

DOES THERAPEUTIC ANTICOAGULATION REDUCE THE RISK OF PULMONARY EMBOLISM OR PROXIMAL DEEP VENOUS THROMBOSIS AFTER DIAGNOSIS OF AN ISOLATED CALF DEEP VENOUS THROMBOSIS?

**WINNER OF NEW MEMBER PRIZE (Northern California Caucus)*

Authors: G. H. Utter, T. S. Dhillon, E. S. Salcedo, M. D. Humphries, R.H. White

Institution: University of California-Davis

Presenter: Garth Utter

Discussant: Gregory Moneta

Closer: Garth Utter

Importance: Deep venous thrombosis (DVT) isolated to the calf veins (distal to the popliteal vein) are frequently detected with duplex ultrasound and may result in proximal thrombosis or pulmonary embolism (PE).

Objective: To determine whether therapeutic anticoagulation decreases the risk of PE or proximal DVT after diagnosis of an isolated calf DVT

Design: Retrospective cohort study

Setting: Single academic medical center

Participants: We included all patients with ultrasonographic detection of an isolated calf DVT during 2010-2013; we excluded subjects already on therapeutic anticoagulation and those with chronic calf DVTs, contraindication to anticoagulation, or prior venous thromboembolism within six months.

Main Outcome Measures: PE (≥ 3 days after diagnosis of calf DVT) or proximal DVT within six months

Results: From 14,056 lower extremity venous duplex studies, 697 subjects had an isolated calf DVT. 314 subjects were excluded. The remaining 383 analyzed subjects had a mean age of 60 ± 16 years and 165 (43%) were women. The DVT involved an axial vein (posterior tibial, peroneal) in 246 (64%) and a muscular branch (soleus, gastrocnemius) in 216 (56%). Physicians intended to administer therapeutic anticoagulation to 238 subjects (62%), and achieved this in 196. Proximal DVT occurred in 10 subjects and PE in 13. Intended therapeutic anticoagulation was associated with a relative risk of PE or proximal DVT at six months of 0.34 (95% C.I. 0.15-0.81).

Conclusions: Rates of PE or proximal DVT are low following isolated calf DVTs, but therapeutic anticoagulation is associated with a reduction of these outcomes.



[2]

BILATERAL MASTECTOMY DOES NOT IMPACT SURVIVAL OR RATE OF CONTRALATERAL BREAST CANCER IN WOMEN AGE 40 AND YOUNGER WITH UNILATERAL OPERABLE INVASIVE BREAST CANCER

Authors: C. Donovan, J. Bao, A. Gangi, F. Amersi, X. Zhang, A. Giuliano, A. Chung

Institution: Cedars-Sinai Medical Center

Presenter: Cory Donovan

Discussant: Jennifer Garreau

Closer: Alice Chung

Importance: Young women with breast cancer (BC) have increased risk of ipsilateral recurrence and contralateral breast cancer (CBC), leading to rising rates of bilateral mastectomy (BM). There is controversy whether BM benefits younger women.

Objective: To determine whether young women treated with BM have lower BC events than those treated with unilateral mastectomy (UM) or breast conserving surgery (BCS).

Design: Review of a prospectively maintained database from January 2000 through December 2013. Patient and tumor characteristics, survival, and rate of CBC were compared among the 3 groups.

Setting: Single institution, tertiary medical center.

Participants: 467 women age ≤ 40 treated for unilateral Stage 1-3 BC: 194 had BCS; 82 UM; 191 BM.

Main Outcome Measures: Disease-free survival (DFS), overall survival (OS), CBC

Results: Mean age was 36 (range 20-40). The 3 groups did not differ in age, histology, receptor status, or Her2 status. Patients in the BCS group had smaller, fewer node-positive and lower grade tumors compared to the other groups ($p=0.02$, $p<0.01$, and $p=0.01$, respectively). More patients in the BM group received chemotherapy and hormonal therapy than in BCS and UM groups (Table 1). With mean follow-up of 90 months, DFS and OS in the BM group did not differ significantly from the BCS ($p=0.07$ and 0.22 , respectively) or UM ($p=0.75$ and 0.09 , respectively) groups. CBC incidence was only 1% (4/474).

Conclusions: BCS and UM resulted in similar DFS and OS as BM in patients age 40 and younger with BC, with overall CBC incidence of only 1%.



[3]

TIME FROM NEOADJUVANT CHEMORADIATION TO SURGERY AND ITS EFFECT ON COMPLETE PATHOLOGIC RESPONSE RATES IN ESOPHAGEAL CANCER

Authors: K. Haisley, A. Laird, C. Thomas, G. Vaccaro, J. Holland, N. Nabavizadeh, P. Schipper, J. G. Hunter, J.P. Dolan

Institution: Oregon Health and Science University

Presenter: Kelly Haisley

Discussant: Miguel Burch

Closer: James Dolan

Importance: Pathologic complete response (pCR) after neoadjuvant chemoradiotherapy (CRT) is associated with increased survival in esophageal cancer (EC). In rectal cancer, pCR rates can be increased by longer time intervals between CRT completion and surgery.

Objective: Determine the relationship between time intervals from completion of CRT to surgery and rates of pCR in EC.

Design: Retrospective database review

Setting: Single NCI designated cancer center

Main Outcome Measures: Rate of pCR by logistic regression based on a categorized time interval (0-6, 6-8, 8-10, 10-12, 12-16, >16 weeks) from completion of CRT to surgical resection adjusted for clinical stage, demographics and CRT regimen.

Results: 234 patients met the inclusion criteria. 81% were male with a median age of 64 years. 87% had adenocarcinoma with an overall pCR rate of 28.2%. Patients in the 12-16 week group had significantly increased odds of pCR compared to other groups (41% pCR, OR 6.18; 95% CI 1.40-27.21, $p=0.011$). No significant differences in survival were seen between time groups in either complete responders or those with residual tumor (mean survival 72.6 months, $p=0.66$).

Conclusions: This study suggests that a time interval of 12-16 weeks between CRT completion and surgical resection is associated with significantly increased odds of pCR. No adverse association with survival was detected as a result of delaying resection, including in patients with residual tumor who were subjected to longer wait times.



[4]

A 6-GENE MICROARRAY PROFILE PREDICTS OUTCOME FOR SURGERY FOR METASTATIC MELANOMA

Authors: J. Hong¹, K. Gong², D. Kaufman¹, N. Deng¹, R. Essner^{1,2}

Institutions: Cedars-Sinai Medical Center¹, University of California-Los Angeles²

Presenter: Jenny Hong

Discussant: Alice Chung

Closer: Richard Essner

Importance: The traditional approach to metastatic melanoma has been chemo or immunotherapy while surgical resection has been reserved for only a few patients with limited disease.

Objective: To evaluate the utility of a molecular gene microarray from resected melanoma tissue

Design: We prospectively collected tissue specimens from consented surgical patients with either primary or metastatic melanoma. Extracted RNA was used to generate cDNA for microarray analyses.

Setting: Tertiary cancer center

Participants: Patients undergoing surgical resection for potential curative intent. Patients were followed for subsequent recurrence or melanoma-specific death.

Main Outcome Measures: Clinicopathologic features of the patients and differential gene expression from the microarrays were correlated with outcome.

Results: 90 patients underwent surgical resection: 40 with primary tumors, 15 with lymph node and 35 with distant metastases. Most patients were men (60%); median age of 57 years. Primary tumors were most commonly on the extremities, the metastases were most commonly subcutaneous (28.6%), small bowel (14.3%), or lung (14.3%). From the 17,000 genes evaluated, we identified six: PPP2R2C, S100A7A, CNFN, ONECUT, PMAL1, and TENC that had significantly ($p=0.035$) different expression in metastatic vs. primary melanoma. When the six gene profile were used together five year survival of patients with resected metastases was 83+/-8% vs 8+/-7% ($p<0.0001$) for patients lacking the profile. Age, gender, or metastatic sites were not predictive of survival.

Conclusions: We identified a molecular gene profile from patients with metastatic melanoma that strongly predicts outcome. This 6-gene profile may be a useful tool for determining therapy for metastatic disease.



[5]

METABOLOMICS: A NOVEL METHOD TO TREND RECOVERY AFTER INJURY IN CRITICALLY-ILL TRAUMA PATIENTS

***RESIDENT PAPER FINALIST (Washington/British Columbia/Alaska Caucus)**

Authors: B. Parent, M. Seaton, D. Raftery, H. Gu, D. Djukovic, R. Maier, G. O'Keefe

Institution: University of Washington

Presenter: Brodie Parent

Discussant: Rachael Callcut

Closer: Ronald Maier

Importance: Metabolomics is the study of metabolites within an organism and provides a summary of physiologic state. Use of metabolomics in the clinical setting may aid in forming diagnoses and monitoring treatment.

Objective: We hypothesized that metabolomics a) can distinguish healthy volunteers from trauma patients and b) can quantify changes in catabolic metabolites over time after injury.

Design: Prospective cohort study with enrollment for 8 months in 2014-2015. Serum samples were obtained on days 1, 3 and 7, and analyzed using mass spectrometry. Principal component analyses and multiple linear regression were used to select biomarkers of interest.

Setting: An urban, level-one trauma center

Participants: A convenience sample of: a) ten severely injured blunt trauma patients within twelve hours of injury, with systolic blood pressure <90mmHg, or base deficit >6; b) five non-hospitalized volunteers (median age 33; ISS 42).

Main Outcome Measures: Primary a priori hypotheses were tested via a metabolome-wide comparison between trauma subjects and volunteers. Specific biomarkers of interest were oxidative catabolites.

Results: Total samples=35. Compared to healthy volunteers, trauma subjects showed oxidative stress (elevated pyridoxic acid, decreased niacinamide; p-values <0.05) and an impaired Krebs cycle (elevated pyruvate, decreased alpha-ketoglutarate; p-values <0.05). As time from injury increased, trauma subjects showed increasing muscle catabolism (elevated serine, leucine, isoleucine; p-values <0.05), and an incomplete reversal of oxidative stress.

Conclusions: Metabolomics can function as a rapid, serial, comprehensive and personalized tool to characterize metabolism in trauma subjects as they recover from injury. This technique may provide new therapeutic targets in trauma patients.



[6]

CLINICAL SCORE PREDICTING LONG TERM SURVIVAL AFTER REPEAT RESECTION FOR RECURRENT ADRENOCORTICAL CARCINOMA

***RESIDENT PAPER FINALIST (Northern California Caucus)**

Authors: T.B. Tran¹, J.A. Norton¹, L.M. Postlewait², S.K. Maithe², J.D. Prescott³, T.S. Wang⁴, J. Glenn⁴, I. Hatzaras⁵, R. Shenoy⁵, J.E. Phay⁶, K. Keplinger⁶, R.C. Fields⁷, L.X. Jin⁷, S.M. Weber⁸, A. Salem⁸, J.K. Sicklick⁹, S. Gad⁹, A.C. Yopp¹⁰, J.C. Mansour¹⁰, Q. Duh¹¹, N. Seiser¹¹, C.C. Solorzano¹², C.M. Kiernan¹², K.I. Votanopoulos¹³, E.A. Levine¹³, T.M. Pawlik³, G.A. Poultsides¹

Institutions: ¹Stanford University, ²Emory University, ³Johns Hopkins University, ⁴Medical College of Wisconsin, ⁵New York University, ⁶Ohio State University, ⁷Washington University, ⁸University of Wisconsin, ⁹University of California - San Diego, ¹⁰University Of Texas Southwestern, ¹¹University of California - San Francisco, ¹²Vanderbilt University Medical Center, ¹³Wake Forest University

Presenter: Thuy Tran

Discussant: Brett Sheppard

Closer: George Poultsides

Importance: Adrenocortical carcinoma (ACC) is an aggressive malignancy typically resistant to chemotherapy and radiation. Surgery, even in the setting of locally recurrent and/or metastatic disease, remains the only potentially curative option.

Objective: To propose a prognostic score that facilitates selection of patients for repeat resection of recurrent ACC.

Design: Multi-institutional retrospective review.

Setting: Thirteen academic medical centers.

Participants: Fifty-six patients who underwent repeat curative-intent resection for recurrent ACC (representing 21% of 265 patients who underwent resection for primary ACC) from 1997 to 2014.

Main Outcome Measures: Overall survival (OS) after repeat resection.

Results: Median age was 52 years and 59% of patients were females. Sites of resected recurrence included locoregional only (53%), lung only (14%), liver only (10%), other distant sites (14%), and combined locoregional and distant recurrence (9%). Thirty-day morbidity and mortality rates were 32% and 5%, respectively.



Cox regression analysis revealed that the presence of multifocal recurrence, disease free interval (DFI) < 12 months, and distant metastasis (other than pulmonary) were independent predictors of poor survival (Table). A clinical score consisting of 1 point each for the above three variables demonstrated good discrimination in predicting OS after repeat resection (5-year: 72% for 0 points, 32% for 1 point, 0 % for 2 or 3 points, Figure, $p=0.0006$, AUC = 0.73).

Conclusions: Long-term survival after repeat resection for recurrent adrenocortical carcinoma is feasible, especially in the presence of no more than one of the following factors: multifocal disease, DFI < 12 months, distant metastasis other than pulmonary.



[7]

PERIAMPULLARY CANCERS: HISTOPATHOLOGIC SUBTYPE IS A STRONGER DETERMINANT OF PATIENT SURVIVAL THAN ANATOMIC LOCATION

**RESIDENT PAPER FINALIST (Southern California Caucus)*

Authors: J. L. Williams¹, C. Chan², P. A. Toste², C. R. Vasquez², E. Swanson², J. Koo², O. J. Hines², H. A. Reber², D. W. Dawson², T. R. Donahue²

Institution: ¹Harbor-UCLA Medical Center ²David Geffen School of Medicine

Presenter: Jennifer Williams

Discussant: Flavio Rocha

Closer: Timothy Donahue

Importance: Patients with periampullary adenocarcinomas (PAAs) have highly variable survival. These cancers can be subdivided into pancreaticobiliary (PB)- or intestinal (IN)-types based on histopathologic criteria which may represent distinct diseases.

Objective: To identify factors predictive of survival in patients with PAAs and compare survival between those with IN- or PB-type cancers originating from the ampulla (A), common bile duct (CBD), or duodenum (D) to those with pancreatic ductal adenocarcinoma (PDAC).

Design: Retrospective review of a prospectively maintained database. Three pathologists separately evaluated histopathologic type.

Setting: University-based tertiary referral center

Participants: All patients who underwent pancreaticoduodenectomy for adenocarcinoma from 1995–2014

Main Outcome Measures: Overall survival (OS)

Results: We identified 510 patients: 13 D, 110 A, 43 CBD, and 344 PDACs. Median OS was 61.1, 51.3, 36.3, and 31.1 months for patients with cancers of the D, A, CBD, or pancreas, respectively ($P=0.035$). Most D (61.5%) and A cancers (51.8%) were IN-type, and most CBD tumors were PB-type (86.0%). Those with IN-type D, A, or CBD adenocarcinomas had longer median OS survival than PB-type (71.7 vs 33.3 months, $P=0.017$) or PDAC (31.1 months, $P=0.003$). There was no difference between non-PDAC PB-type cancers and PDAC ($P=0.658$). On multivariate analysis, grade (hazard ratio (HR) 1.94, $P<0.001$), histopathologic phenotype (HR 1.75, $P=0.008$), and nodal status (HR 1.37, $P=0.020$) were significant predictors of survival.

Conclusions: Histologic phenotype is a better predictor of survival in patients with PACs than tumor location. Those with PB-type D, A, or CBD adenocarcinomas have similar survival to those with PDAC.



[8]

EFFECT OF CENTER FOR MEDICAID AND MEDICARE SERVICES-DRIVEN CATHETER-ASSOCIATED URINARY TRACT INFECTION REDUCTION POLICIES ON GENERAL SURGERY PATIENTS

**RESIDENT PAPER FINALIST (Oregon/Hawaii Caucus)*

Authors: S. K. Harris, E. L. Mitchell, F. Attia, J. G. Hunter, B. C. Sheppard

Institution: Oregon Health and Science University

Presenter: Sheena Harris

Discussant: Neel Joshi

Closer: Brett Sheppard

Importance: Catheter-associated urinary tract infection (CAUTI) rates in general surgery patients have not improved despite Center for Medicaid and Medicare Services (CMS) recommendations

Objective: Evaluate effect of institutionally adopted CMS guidelines for CAUTI prevention.

Design: Retrospective review

Setting: Single institution

Participants: General Surgery patients, 2006-2015

Main Outcome Measure(s): Patient demographics, indwelling catheter days, straight catheterization, CAUTI incidence, catheter-associated mortality

Results: CAUTI was significantly associated with inpatient status, female gender, increasing age, diabetes, functional status, and ASA class ($P < 0.001$). CAUTI rates were higher after open versus laparoscopic ($P < 0.001$) and longer length of procedures (253 ± 9.85 v 175 ± 1.52 min, $P < 0.001$). Catheter removal before POD 2 did not significantly decrease CAUTI incidence ($3.59\% \pm 1.09$ v $3.15\% \pm 3.15$, $P = 0.756$) or total catheter days (12 ± 8.85 v 6 ± 0.96 , $P = 0.099$), and resulted in increased number of straight catheterizations per patients who developed CAUTI (0.04 ± 0.04 v 0.32 ± 0.12 , $P = 0.029$). Routine bladder scanning did not change catheter days (8 ± 4.45 v 4 ± 1.30 , $P = 0.490$), number of straight catheterizations/patient (0.15 v 0.33 , $P = 0.320$), or CAUTI rate ($2.58\% \pm 0.4$ v $2.97\% \pm 0.79$, $P = 0.650$). CAUTI rate did not correlate with number of catheter days ($r = -0.324$, $P = 0.152$). There was no significant increase in mortality in patients with CAUTI < 30 days of procedure ($P = 0.483$) or > 30 days ($P = 0.570$).

Conclusions: CMS-driven recommendations for catheter removal within 2 days post-operatively increased number of straight catheterizations for patients developing CAUTI, but did not reduce number of catheter days or CAUTI rates.



[9]

A CLINICAL SCORING SYSTEM TO PREDICT DYSPHAGIA FOLLOWING CARDIAC OPERATIONS

Authors: P. Benharash, S. Nguyen, A. Zhu, A. Ashfaq, R. Ou, A. Mendelsohn

Institution: David Geffen School of Medicine

Presenter: Peyman Benharash

Discussant: Marc Melcher

Closer: Peyman Benharash

Importance: Postoperative dysphagia is an under-recognized complication occurring in up to 8-15% of patients following general endotracheal anesthesia. Early identification may help initiate early treatment and reduce complications.

Objective: To develop a predictive score for identifying patients at high risk of developing dysphagia after cardiac operations.

Design: Retrospective review.

Setting: Academic tertiary-care medical center.

Participants: Patients undergoing cardiac surgery between January 2014 and June 2015.

Main Outcome Measures: Predictive value of clinical risk score for oropharyngeal dysphasia as confirmed by fiberoptic evaluation of swallowing (FEES).

Results: Of the 406 patients (34 % female) who met inclusion criteria, 50 developed postoperative dysphagia (12.6%). A composite Dysphagia After Cardiac Surgery Score (DACS) was created using regression-derived significant variables with one point for: age >75, gastroesophageal reflux disease, ejection fraction <45%, more than one intubation attempt, operation time > 6 hours, endotracheal intubation time >24 hours. As the DACS score increased from 0-6 (Figure 1), the predicted probability of developing postoperative dysphagia increased from 3.1% to 100% (OR 2.85, 95% confidence interval [2.07, 3.93], P <0.001). The DACS score predicted postoperative dysphagia with significant discriminatory power (c-statistic: 0.75).

Conclusions: The proposed DACS provides a simple yet powerful clinically-relevant system that can be used to identify patients at high-risk for developing dysphagia. Implementation of DACS may allow for early detection of dysphagia and targeted swallow evaluations in high-risk patients and deserves further evaluation in all surgical patients.



[10]

UNILATERAL CLEARANCE FOR PRIMARY HYPERPARATHYROIDISM IN SELECTED PATIENTS WITH MULTIPLE ENDOCRINE NEOPLASIA TYPE 1

Authors: W. P. Kluijfhout^{1,2}, T. Beninato¹, F. T. Drake¹, J. E. Gosnell¹,
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Institutions: ¹University of California - San Francisco, ²University Medical Center Utrecht

Presenter: Wouter Kluijfhout

Discussant: Philip Haigh

Closer: Quan-Yang Duh

Importance: Primary hyperparathyroidism (1HPT) is the most common manifestation of multiple endocrine neoplasia type 1 (MEN1). Guidelines advocate subtotal parathyroidectomy (STP) or total parathyroidectomy with autotransplantation due to high prevalence of multiglandular disease. Both are associated with lower risk of recurrence, but a significant risk of permanent hypoparathyroidism compared with less aggressive resection.

Objective: More accurate imaging and IOPTH may allow a less aggressive initial parathyroidectomy (unilateral clearance, removing both parathyroids with cervical thymectomy, not exploring the contralateral neck) in selected MEN1 patients with 1HPT.

Design: Retrospective cohort study

Setting: Tertiary referral center

Participants: Patients with MEN1 and 1HPT who underwent STP or unilateral clearance as their initial surgery from 1995-2015 were included. Unilateral clearance was offered to patients who had concordant sestamibi scan and ultrasound showing a single enlarged parathyroid gland.

Main Outcomes and Measures: Persistent/recurrent disease, permanent hypoparathyroidism.

Results: Eight patients had unilateral clearance and 16 had SPT. STP patients were younger (37 vs 52). One patient in each group had persistent disease. One (13%) unilateral clearance and 5 (31%) STP patients had recurrent 1HPT after a mean follow up of 47 and 68 months ($p=0.62$). No unilateral clearance patients and two of 16 SPT patients had permanent hypoparathyroidism ($p=0.54$).

Conclusions: Some MEN1 patients with 1HPT, who have concordant localizing studies, may be selected for unilateral clearance as an alternative to STP. For appropriately selected MEN1 patients, unilateral clearance can achieve similar results as SPT and has no risk of permanent hypoparathyroidism and may facilitate possible future reoperations.



[11]

NON-OPERATIVE MANAGEMENT OF ACUTE APPENDICITIS IN CHILDREN: FEASIBILITY, COST, AND OUTCOMES

Authors: K. Mock¹, H. Yan¹, J. Wu², S. Shekherdimian², D. Kim¹,
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Institution: ¹Harbor-UCLA Medical Center ²University of California - Los Angeles

Presenter: Kyle Mock

Discussant: Adam Goldin

Closer: Steven Lee

Importance: Non-operative management (NOM) of acute appendicitis has emerged as a treatment alternative to surgery. Data on NOM for pediatric acute appendicitis are limited.

Objective: Determine the feasibility and cost-effectiveness of NOM to treat pediatric acute appendicitis

Design: (1) Retrospective review; (2) Prospective, non-randomized patient-preference study; (3) Prospective survey evaluating willingness to participate in future randomized controlled trial (RCT)

Setting: Multi-center academic and county hospitals in large, urban area

Participants: Patients under age 18 with acute appendicitis

Main Outcome Measures: Success rate and outcomes of NOM; estimated cost of treatment strategy; willingness to participate in RCT

Results: In the retrospective review, 24/33 (73%) patients responded initially to NOM (Table 1). Only one patient developed recurrent appendicitis, and another underwent interval appendectomy. Appendicolith increased the risk of failure. In the prospective study, the 13 patients who preferred NOM and the 10 who preferred appendectomy had similar demographics and clinical presentation (Table 2). The initial success rate of NOM was 85%, and 1(9%) developed recurrent appendicitis. Length of hospitalization, days to normal activity, and morbidity were similar between groups. Cost analysis revealed that a NOM strategy was less expensive. In the prospective survey, 55% (16/29) of parents would be willing to participate in a future RCT.

Conclusions: NOM is feasible and effective in pediatric acute appendicitis. The presence of an appendicolith had a higher failure rate, but does not exclude NOM. NOM is less costly than appendectomy. A RCT appears to be feasible based on expected patient



[12]

LOSS OF INDEPENDENCE: A KEY CONCEPT TO PREDICT READMISSION AND DELAYED DEATH IN OLDER SURGICAL PATIENTS

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Institutions: ¹American College of Surgeons, ²University of Chicago, ³University of California - Los Angeles, ⁴Henry Ford Health System, ⁵Yale University, ⁶University of Colorado - Denver

Presenter: Julia Berian

Discussant: Alessandro Fichera

Closer: Clifford Ko

Importance: Older adults are at increased risk for postoperative adverse events. Loss of independence (LOI) (i.e. decline in function or mobility, non-home discharge or increased homecare needs on discharge) is an important concept, recently explored through the ACS-NSQIP Geriatric Surgery Pilot Project.

Objective: To evaluate the effect of LOI on readmission and post-discharge death in older surgical patients.

Design: Retrospective cohort study, January-December 2014.

Setting: Twenty-two NSQIP hospitals participating in the pilot.

Participants: From 12,496 patients, those totally dependent, with unknown preoperative functional status or living situation, and those undergoing orthopedic procedures were excluded (N=5411) for final cohort, N=7085. The exposure, LOI, is a composite defined by decline in mobility, functional status or change in living situation (non-home discharge or increased care needs on discharge).

Main Outcome Measures: Readmission and post-discharge death.

Results: For this cohort with average age 74±7 years, LOI increased with age (38%, 39%, 56%, 76% for ages <65, 66-75, 76-85 and >85 years). Readmission occurred in 8.5%. In a risk-adjusted model, LOI was the second most important predictor (OR 1.9, 95% CI 1.6-2.4) for readmission behind surgical complication (OR 7.6, 95% CI 5.8-10.0). Post-discharge death occurred in 1.1%. In predicting post-discharge death, LOI was the most important predictor (OR 6.5, 95% CI 2.9-14.4). Surgical complication was not a significant predictor for post-discharge death.

Conclusions: LOI can be feasibly collected across multiple hospitals in a national registry. LOI is an important predictor of postoperative readmissions and post-discharge death. Clinical initiatives to minimize LOI will be important for improving surgical care and outcomes in older adults.



[13]

A CLOSER LOOK AT 30-DAY READMISSIONS TO A GENERAL SURGERY SERVICE: ARE THEY REALLY PREVENTABLE?

Authors: L. K. McIntyre, E. Robinson, R. V. Maier

Institution: University of Washington/Harborview Medical Center

Presenter: Lisa McIntyre

Discussant: Andre Campbell

Closer: Ronald Maier

Importance: Previous studies investigating patients at risk for hospital readmissions focus on medical services and have found chronic conditions as significant contributors. Little is known, however, of the characteristics of patients readmitted to surgical services.

Objective: Surgical patients readmitted within 30 days following discharge were analyzed to better identify opportunities for intervention in a cohort that may differ significantly from the medical population.

Design: Chart review of patients readmitted to any service within 30 days of discharge from the general surgery service to characterize index and readmission data.

Setting: Level I Trauma Center and safety net hospital.

Participants: Patients readmitted to the hospital within 30 days of discharge from the surgery service during July 1, 2014-June 30, 2015.

Main Outcome Measures: Reasons for readmission identified.

Results: Two hundred and eighteen patients among 2261 discharged from a general surgery service were readmitted within 30 days (9.6%). Common reasons for readmission included 19 patients (8.7%) with new soft tissue infections from injection drug use and 17 (7.8%) with disposition support issues. Only one (.5%) had deterioration of a non-psychiatric chronic condition. Seventeen patients (7.8% of readmissions) were identified as having possibly preventable complications of care leading to readmission, representing <1% of all discharges.

Conclusions: Deterioration of chronic medical conditions or results of poor delivery of care were uncommon causes for readmissions from the surgical service. Efforts at reducing readmission rates in this population should focus on addressing substance abuse, psychiatric and socioeconomic issues as such challenges were identified as common associated conditions.



[14]

PATTERNS OF CARE IN VASCULAR SURGERY PATIENTS AT END OF LIFE DURING HOSPITALIZATION

Authors: D. Wilson, H. Peck, S. Harris, E. Jung, E. Mitchell, A. Azarbal,
T. Liem, G. Landry, G. Moneta

Institution: Oregon Health and Science University

Presenter: Dale Wilson

Discussant: Misty Humphries

Closer: Gregory Moneta

Importance: There is limited literature reporting circumstances surrounding end of life care in vascular surgery patients.

Objective: Identify factors driving end of life decisions.

Design: Retrospective chart review

Setting: Vascular surgery department at a tertiary care university hospital

Participants: Vascular surgery patients that died during their hospitalization from 2005 to 2014

Main Outcome Measures: Patient, family, and hospitalization variables potentially important to influencing end of life decisions.

Results: 109 patients were included. 79 patients were emergent vs. 30 elective admissions. 79 patients were placed on comfort care, of these, 31 patients had care withheld or withdrawn despite available treatment options. 6 of 31 (19.3%) patients had an advance directive. In total, 14 of 109 (12.8%) patients had an advanced directive. 27 of 79 (24.8%) patients placed on comfort care had a palliative care consult. Comparing the 31 patients placed on comfort care despite available treatment options to an admit diagnosis matched cohort, we found, number of days admitted to the ICU ($p=0.003$), number of days requiring a ventilator ($p<0.001$), new renal failure requiring dialysis ($p<0.001$), and new respiratory failure requiring tracheostomy ($p<0.001$) correlated with transition to comfort care.

Conclusion: The study shows potential underutilization of palliative care consults at end of life. A large percentage of patients are transitioned to comfort measures despite available treatment yet few present with advanced directives. In high risk patients, discussions regarding extended ICU admissions, prolonged ventilator management, possible dialysis and tracheostomy should be communicated with patients and families at time of admission.



[15]

IMPACT OF AN ENHANCED RECOVERY AFTER SURGERY (ERAS) PROGRAM ON OUTCOMES OF PATIENTS UNDERGOING ELECTIVE COLON RESECTION

Authors: G. L. Warnock, K. Mayson, G. Bodie, T. Hong, N. Pantan, A. Bisailon

Institution: Vancouver General Hospital

Presenter: Garth Warnock

Discussant: Clifford Ko

Closer: Garth Warnock

Importance: The evidence-based perioperative care pathway ERAS offers opportunity to reduce complications in patients undergoing elective colorectal surgery.

Objective: Examine impact of implementing ERAS on postoperative complications, hospital length of stay and, readmission after colon resection.

Design: Case-control study

Setting: Tertiary academic center

Participants: Cohorts of 99 patients pre- (07/2011 to 06/2013) and, 270 patients post- (11/2013 to 02/2015) implementation of ERAS had similar age 65.0 ± 15.3 vs 66.9 ± 13.9 , gender female 48.5 vs 45.7%, ASA status 1 [7.1 vs 4.8], 2 [52.5 vs 59.6], 3 [38.4 vs 33.0], 4 [2.0 vs 2.6], comorbidity counts 0.73 ± 0.84 vs 0.61 ± 0.77 , low pelvic anastomosis 27.3 vs 34.8%. Laparoscopy increased post-ERAS 53.5 vs 71.7% ($p=0.002$).

Main Outcome Measures: Postoperative occurrences were defined and tracked according to our hospital's American College of Surgeon's NSQIP database. Results for cohorts (mean \pm SD) were compared for continuous variables by independent samples t-tests or median test and categorical variables by contingency tables, using Chi-square statistics or Fisher's Exact tests.

Results: Pre versus post- ERAS occurrences (morbidity) overall declined from 32.3 to 21.9% ($p=0.039$). Pre-versus post % outcomes: all surgical-site infections 18.2 vs 13.7 ($p=0.285$), pneumonia 5.1 vs 3.7 ($p=0.559$), unplanned intubation 5.1 vs 2.6 ($p=0.317$), ventilator support > 48h 4.0 vs 1.9 ($p=0.258$), sepsis 3.0 vs 1.8 ($p=0.447$), urinary infection 5.1 vs 0.7 ($p=0.017$), return to surgery 6.1 vs 2.6 ($p=0.195$), pulmonary embolism 1.0 vs 0.4 ($p=0.465$). Hospital stay (d) $10.76+13.16$ vs $8.79+23.5$, (overall median=6, $p=0.006$). 30-day readmission 7.1 vs 11.3% ($p=0.217$).

Conclusions: ERAS Implementation in our hospital decreased overall morbidity and hospital stay for elective colon resection patients.



[16]

ROBOTIC-ASSISTED HEPATECTOMY: NO IMPROVEMENT OVER LAPAROSCOPIC HEPATECTOMY

Authors: V. V. O'Connor, G. L. Chen, B. Vuong, L. A. DiFronzo

Institution: Kaiser Permanente - Los Angeles

Presenter: Victoria O'Connor

Discussant: Thomas Biehl

Closer: Andrew DiFronzo

Importance: Robotic surgery is an investigational platform for hepatic resection, with few studies comparing robotic to laparoscopic hepatectomy.

Objective: To compare perioperative outcomes of patients who underwent robotic (RH) or laparoscopic hepatectomy (LH).

Design: Review of IRB-approved, prospective database of patients who underwent non-anatomical subsegmental RH or LH between 2009 and 2015.

Setting: A tertiary referral center with expertise in hepatobiliary surgery.

Participants: Adult patients with primary and metastatic liver tumors. Main Outcomes and Measures: Intra-operative and 30-day perioperative outcomes.

Results: Of the 63 patients who underwent hepatectomy, twenty-one patients (33%) were in the RH and forty-two (67%) in the LH group. The mean patient age, ASA score, proportion of patients with cirrhosis, hepatocellular carcinoma and posterior location of the liver lesion were similar in both groups. The surgical outcomes were similar with respect to mean operative time, estimated blood loss, transfusion rate, conversion to open surgery, 30-day complication rate, Clavien-Dindo grade 3/4 complications, and length of hospital stay. No difference in average tumor size, specimen volume, or achievement of R0 margin was found. Notably, in order to successfully complete the procedure, 30% of robotic resections required late conversion to a hybrid procedure using laparoscopic instruments. Conclusions and Relevance: Robotic hepatectomy shows equivalent results to laparoscopic hepatectomy but commonly requires conversion to laparoscopy for completion.



[17]

RADIOGRAPHICALLY APPARENT NON-ALPHAFETOPROTEIN PRODUCING HEPATOCELLULAR CARCINOMA – SHOULD TRANSPLANT PRIORITIZATION REMAIN THE SAME? A COMPARATIVE SINGLE CENTER ANALYSIS OF 665 LIVER TRANSPLANT RECIPIENTS

Authors: V. G. Agopian, M. P. Harlander-Locke, D. Markovic, A. Zarrinpar, F. M. Kaldas, E. Y. Cheng, H. Yersiz, D. G. Farmer, J. R. Hiatt, R. W. Busuttil

Institution: University of California - Los Angeles

Presenter: Vatche Agopian

Discussant: Susan Orloff

Closer: Ronald Busuttil

Importance: Serum alphafetoprotein (AFP) is a biomarker in hepatocellular carcinoma (HCC) associated with more aggressive tumor phenotype and inferior outcomes after liver transplantation (LT). Data on outcomes in patients with HCC that do not produce AFP are limited.

Objective: To compare characteristics and outcomes among LT recipients with radiographically apparent HCC lesions with (AFP-PT) and without (nonAFP-PT) AFP production, and identify factors influencing recurrence in nonAFP-PT.

Design: Retrospective analysis.

Setting: University transplant center.

Participants: 665 adults, 1989-2013; 457(69%) with AFP-PT, 208(31%) with nonAFP-PT(preLT maxAFP<10ng/mL).

Main Outcome Measures: Recurrence-free survival, recurrence rates.

Results: Compared to AFP-PT, patients with nonAFP-PT had similar radiographic tumor characteristics (number, tumor diameter, % within Milan criteria) but were more likely to have lower pathologic T stage, nuclear grade, and differentiation; and less likely to have vascular invasion (20% vs 32%; $P=0.001$). Patients with nonAFP-PT had significantly superior recurrence-free survival at 1, 3, and 5 years and lower 5-year recurrence rate (Figure). When stratified by radiologic Milan criteria, recurrence was lowest in nonAFP-PT patients within Milan and highest for AFP-PT outside Milan criteria (4.8% vs 40.6%; $P<0.001$). Significant predictors of recurrence in nonAFP-PT include radiologic and pathologic factors.

Conclusions: Nearly one-third of patients with radiographically apparent HCC have nonAFP-PT with superior outcomes compared to AFP-PT. Posttransplant HCC recurrence with nonAFP-PT is predicted by important radiologic and pathologic factors, and is negligible for patients within Milan criteria. Stratifying patients by AFP status in addition to radiological criteria may improve candidate selection and prioritization.



[18]

GREATER BRAIN DEATH DONOR BMI HAS A NEGATIVE EFFECT ON DONATION SUCCESS

Authors: M. B. Bloom¹, J. Steggerda¹, D. R. Margulies¹, D. Malinoski²

Institutions: ¹Cedars-Sinai Medical Center, ²Oregon Health and Science University

Presenter: Matthew Bloom

Discussant: Ali Salim

Closer: Darren Malinoski

Importance: Donor weight is not part of selection criteria, but the impact of donor BMI upon graft transplantation rates and their ultimate function in the recipient is unknown.

Objective: To determine the impact of brain death donor BMI on donation success.

Design: Donors were categorized into 5 BMI (kg/m²) groups, and graft outcomes in their recipients were compared.

Setting: Prospective observational study.

Participants: All adult brain death donors from UNOS region 5 from March 2012 to August 2015, and UNOS region 6 from January 2014 to August 2015.

Main Outcome Measures: Rates of successful donation and graft function.

Results: 3809 donors met inclusion criteria, and mean follow-up time after transplant was 405 days. Outcomes for liver, split liver, kidney, pancreas, combined kidney-pancreas, intestine, heart, and lung were examined. Successful donation was defined as graft transplanted and functioning at last follow-up; for thoracic organs, it was defined as transplanted and recipient alive at last follow-up. Number of recovered and transplanted organs per donor varied with BMI ($p < 0.001$). On univariate analysis, increasing donor BMI worsened successful donation rates for all organs except kidney, in which it increased delayed graft function (DGF) rates. On multivariate analysis, after adjusting for known predictors, increasing donor BMI worsened donation success for liver, split liver, pancreas, kidney&pancreas, and lung, and impacted DGF for kidneys. (TABLE)

Conclusions: Greater donor BMI was associated with worsening ability to achieve successful transplant and delayed graft function. It may be considered in future criteria regarding donor selection.



[19]

LIVER RESECTION FOR EARLY HEPATOCELLULAR CANCER: COMPARISON OF 3 DIFFERENT COUNTRIES

Author: L. L. Wong¹, B. Y. Hernandez¹, J. Ji^{1,5}, Y. Kawano³, Z. Tang⁴

Institutions: ¹University of Hawaii, ³Nippon Medical School ⁴Zhongshan Hospital/
Fudan University, ⁵Life Sciences Institute

Presenter: Linda Wong

Discussant: David Imagawa

Closer: Linda Wong

Importance: Hepatocellular cancer (HCC) is a heterogeneous disease and treatment depends on tumor stage and liver function.

Objective: Single centers and administrative databases have characterized liver resections for HCC but this study combines databases from centers in different countries.

Design: Retrospective study of liver resections done for AJCC stage I/II HCC

Setting: Three tertiary referral centers for liver cancer

Participants: HCC patients who underwent liver resection (1986-2013) in Japan (n=504) and United States (n=201) and China (n= 187 cases). 1 to

Main Outcome Measures: Three databases were combined and analyzed for demographics, viral status, tumor size, AFP and survival.

Results: We identified 587 liver resections performed for stage I/II HCC. China patients were younger, more likely to be male, hepatitis B and cirrhotic. Japan patients were more likely to have hepatitis C, smaller mean tumor size and normal AFP. Hawaii cohort had the largest mean tumor size. Median survival: Hawaii (40.5 months) vs China (53months) vs Japan (34.1 months). Overall 5-year survival differed (log rank $p < 0.0001$) between centers. Age ≥ 70 was the only predictor of death in the 3 cohorts (OR 2.07, 95% CI 1.46-2.93). In those who were stage 1, HCV (OR 1.9, 95% CI 1.21-3.00) and advanced age (age 60-69: OR 1.60, 95% CI 1.04-2.46; age ≥ 70 : 2.61, 95% CI 1.60-4.26) were predictors of death.

Conclusions: The outcome from liver resections for early stage HCC although different in various countries, is mostly dependent on patient characteristics especially age and the presence of hepatitis C in elderly patients.



[20]

POSTER SESSIONS INCREASE PUBLISHABLE QUALITY PRESENTATIONS AT A REGIONAL SURGICAL SOCIETY MEETING

Authors: R. S. Sawin¹, J. R. Hiatt², F. A. Weaver³

Institutions: ¹University of Washington, ²David Geffen School of Medicine, ³University of Southern California

Presenter: Robert Sawin

Discussant: John Vetto

Closer: Robert Sawin

Importance: Regional surgical societies with multi-specialty memberships frequently receive more high quality submissions for the plenary sessions than can be presented within the meeting's format.

Objective: To determine whether adding poster sessions with a brief oral presentation for each poster increases the number of high quality abstract submissions.

Design: Retrospective review

Setting: Regional surgical society

Participants: Poster submissions presented at the annual meeting of the Pacific Coast Surgical Association (PCSA) from 2010 to 2014 were included for analysis.

Main Outcome Measures: In February 2015, 12 months after the 2014 meeting, a Pubmed search was performed for each author or key words of the posters' titles to determine whether the poster material was eventually published.

Results: The number of presented posters ranged from 34 to 56 per year. Of 213 presented posters, 107 (50.2%) were eventually published in peer-reviewed journals, and ranged from 35% of the 2014 submissions to 73% of the 2010 submissions, with a trend toward higher rates as time elapsed after the meeting (35%, 45%, 50%, 49%, and 73% from 1 year to 5 years, respectively). Of the 107 published papers, 38 (36%) appeared in the same journal that published the plenary papers from the annual meetings.

Conclusions: The PCSA poster submissions were of high quality, and a majority were eventually published in peer-reviewed journals. Many of the published poster presentations were of a comparable quality to the plenary papers as determined by their publication in the same journal.



[21]

INFLUENCE OF ADMISSION LABORATORY VALUES AND THE TIMING OF ENDOSCOPIC RETROGRADE CHOLANGIOGRAPHY ON CLINICAL OUTCOMES IN ACUTE CHOLANGITIS

Authors: A. C. Schwed¹, M. M. Boggs³, X. D. Pham¹, D. M. Watanabe³, M. C. Bermudez⁵, A. H. Kaji¹, D. Y. Kim^{1,3}, D. S. Plurad^{1,3}, D. J. Saltzman⁶, C. De Virgilio^{1,3}

Institutions: ¹Harbor-UCLA Medical Center, ³University of California - Los Angeles, ⁵Meharry Medical College ⁶Olive View Medical Center

Presenter: Alexander Schwed

Discussant: Rochelle Dicker

Closer: Christian de Virgilio

Importance: Acute cholangitis (AC) has historically required urgent endoscopic decompression, particularly severe AC, though the timing of decompression is controversial. We previously identified two admission risk factors for adverse outcomes: total bilirubin >10 and white blood cell count >20. Objectives: To validate the previously identified prognostic factors; to evaluate the effect of timing of ERCP on clinical outcomes; and to compare recent experience with an historical sample.

Design: A retrospective analysis (2008-2015) of patients (validation cohort) with AC at two academic medical centers to validate predictors of adverse outcome. Timing of ERCP and outcome were stratified by AC severity using Tokyo guidelines. Outcomes for the validation cohort were compared to the derivation cohort (1995-2005).

Main Outcome Measures: A composite outcome of death or organ failure.

Results: Multivariate logistic regression analysis of the validation cohort confirmed WBC >20 and total bilirubin >10 as independent risk factors for poor outcomes in AC. In the validation cohort, timing of ERCP was not significantly different between those with and without an adverse outcome, even when stratified by severity of AC (Table 2). Patients in the validation cohort had a shorter LOS and lower rate of ICU admission, despite a higher rate of severe cholangitis (Table 1). There were no significant differences in adverse outcomes between the groups.

Conclusions: WBC >20 and Total bilirubin >10 were validated as prognostic factors in AC. Consideration should be given to include these criteria in the Tokyo Guidelines severity assessment.



[22]

THE DISAPPEARANCE OF COMMON BILE DUCT EXPLORATION FROM THE SURGICAL ARMAMENTARIUM: A NATIONAL ASSESSMENT OF TRENDS IN CHOLEDOCHOLITHIASIS MANAGEMENT FROM 1998-2011

Authors: M. W. Wandling^{1,4}, E. S. Hungness¹, J. J. Stulberg¹, E. S. Pavey¹, B. Schwab¹,
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Institutions: ¹Northwestern University ⁴American College of Surgeons, ⁵University
of California - Los Angeles, ⁶VA Greater Los Angeles Healthcare System, ⁷University
of Toronto, ⁸Sunnybrook Health Sciences Centre

Presenter: Michael Wandling

Discussant: Donn Spight

Closer: Clifford Ko

Importance: Approximately 750,000 patients undergo laparoscopic cholecystectomies (LC) in the United States each year and an estimated 5-20% have choledocholithiasis, yet the optimal management strategy remains unclear.

Objective: To compare length of stay (LOS) between ERCP+LC and LC+Laparoscopic Common Bile Duct Exploration (LCBDE) for patients with choledocholithiasis.

Design: Retrospective analysis of the Nationwide Inpatient Sample from 1998-2011.

Setting: Representative sample of United States hospitals.

Participants: Admissions for choledocholithiasis. Patients with cholangitis or pancreatitis were excluded.

Main Outcome Measures: Secular trends in choledocholithiasis management along with crude and risk-adjusted LOS.

Results: 100,958 admissions met inclusion criteria. Use of NIS discharge weights yielded an average national estimate of 34,255 annual choledocholithiasis admissions. Management trend data are provided in Table 1. Declining open and laparoscopic CBDE rates resulted in a 71.5% reduction in CBDEs from 1998-2011 (Figure 1). ERCP+LC rates increased over the study period (33.9% to 42.2%, $p<0.001$) and LC+LCBDE rates decreased (2.5% to 1.1%, $p<0.001$). Unadjusted overall and post-procedure LOS were shorter for LC+LCBDE than ERCP+LC (4.0 vs 4.6 days, $p<0.001$ and 3.0 vs 3.5 days, $p=0.001$, respectively).



Risk-adjusted overall and post-procedure LOS remained shorter for LC+LCBDE than ERCP+LC by 0.6 days ($p<0.001$) and 0.4 days ($p<0.001$), respectively.

Conclusions: Rates of CBDE have been steadily declining. LC+LCBDE has a shorter LOS than ERCP+LC, making it valuable for expediting choledocholithiasis management. However, if current trends continue CBDE may disappear from the surgical armamentarium. To prevent this, efforts should be made to incorporate LCBDE into surgical



[23]

A SYSTEMATIC, COMPETENCY-BASED TRAINING PARADIGM FOR THE GLOBAL BURDEN OF INGUINAL HERNIA

Authors: J. P. Wagner¹, A. D. Schroeder², J. C. Espinoza⁴, J. R. Hiatt¹, J. D. Mellinger⁷, R. A. Cusick⁸, G. Campanelli⁹, S. Roll³, W. Reinpold¹⁰, C. J. Filipi², D. C. Chen¹

Institutions: ¹University of California - Los Angeles ²Creighton University, ³University of Sao Paulo, ⁴University of Southern California, ⁷Southern Illinois University, ⁸University of Nebraska, ⁹University of Insubria, ¹⁰Wilhelmsburg Gross Sand Hospital

Presenter: Justin Wagner

Discussant: Diana Farmer

Closer: David Chen

Importance: The global burden of surgical diseases requires sustainable, capacity-building educational models.

Objective: To implement an international training paradigm for hernia surgery in underserved countries.

Design: Prospective observational study. Surgeons completed training programs in hernia repair, underwent interval proficiency assessments, and were appointed regional trainers. Web-based forms were created to document surgical outcomes. Competency-based evaluations of technical proficiency were performed using the Operative Performance Rating Scale (OPRS).

Setting: November 2013 to February 2015 at 10 hospitals in Brazil, Dominican Republic, Ecuador, Haiti, and Paraguay

Participants: 7 surgeon trainers, 42 local surgeons, and 217 patients (196 adult, 21 pediatric).

Main Outcome Measures: OPRS ratings of 3.0 (scale of 5) indicated proficiency. Secondary outcomes included postoperative complications, initial vs final ratings by country, interval ratings 6 months after training, and ratings among surgeons trained by the regional trainers (second-order trainees).

Results: All 42 surgeons successfully completed the programs, and all 217 patients received successful operations. OPRS ratings improved from 3.78 before training to 4.69 following training ($p < 0.001$). The overall complication rate was 0.46%. There was no significant variation by country in initial or final ratings. After 6 months, the average OPRS rating among participating surgeons was 4.34. Of 42 surgeons, 8 became regional trainers. The average OPRS rating among 14 second-order trainees was 4.43.

Conclusions: Competency-based training helps address the global burden of surgical disease. OPRS establishes an international standard of technical assessment. Further studies of long-term surgeon proficiency, community-specific quality initiatives, and expansion to other operations are warranted.



[24]

DECREASED MORTALITY IN PATIENTS WITH ISOLATED SEVERE BLUNT TRAUMATIC BRAIN INJURY RECEIVING HIGHER PLASMA TO PACKED RED BLOOD CELLS TRANSFUSION RATIOS

Authors: E. Benjamin, T. Haltmeier, L. Nosanov, J. P. Gruen, I. A. Shulman, L. Lam, K. Inaba, D. Demetriades

Institution: University of Southern California

Presenter: Elizabeth Benjamin

Discussant: Martin Schreiber

Closer: Lydia Lam

Importance: Higher transfusion ratios of plasma to packed red blood cells (PRBC) and platelets (PLT) to PRBC have been shown to be associated with decreased mortality in major trauma patients with and without associated severe traumatic brain injury (TBI). However, little is known about the effect of transfusion ratios on mortality in patients with isolated severe TBI.

Objective: To investigate the effect of transfusion ratios on mortality in patients with isolated severe TBI.

Design: Retrospective observational study.

Setting: The effect of blood products (PRBC, plasma, PLT) transfused in the first 24 hours and the effect of higher transfusion ratios on in-hospital mortality was analyzed using univariate and multivariate regression analysis.

Participants: Patients with isolated severe blunt TBI (AIS head ≥ 3 , AIS extracranial < 3) admitted to an urban level I trauma center 2002-2011.

Main Outcome Measures: In-hospital mortality.

Results: A total of 335 patients were included. Median age was 32.0 years (IQR 48.3), 71.9% were male sex, 73.4% had an ISS ≥ 16 , and 17% required massive transfusion (≥ 6 PRBC). Increasing units of PRBC, plasma and PLT transfused were associated with significantly higher in-hospital mortality (adjusted OR 1.160 [CI 1.035-1.300], 1.203 [1.031-1.404], and 1.315 [1.013-1.706]). Plasma: PRBC transfusion ratios ≥ 1 were identified as an independent predictor for decreased in-hospital mortality (adjusted OR 0.408 [CI 0.202-0.821]). PLT:PRBC transfusion ratios ≥ 1 did not affect mortality (adjusted OR 0.448 [CI 0.091-2.214]).

Conclusion: This study revealed plasma: PRBC transfusion ratios ≥ 1 as an independent predictor for decreased in-hospital mortality in patients with isolated severe blunt TBI.



[25]

AN INTOXICATING DILEMMA: PROSPECTIVE STUDY OF SPINE IMAGING AND CLEARANCE IN THE ALCOHOL OR DRUG INTOXICATED TRAUMA PATIENT

Authors: L. Bush, R. Brookshire, B. Roche, A. Johnson, F. Cole, R. Karmy-Jones, W. Long, M. Martin

Institution: Legacy Emanuel Medical Center

Presenter: Lisa Bush

Discussant: Susan Rowell

Closer: Matthew Martin

Importance: Current trauma guidelines dictate that the cervical spine (Csp) should not be cleared in the intoxicated patient, resulting in prolonged immobilization even after normal imaging studies. Modern CT imaging may obviate this and allow for immediate clearance.

Objective: To determine CT accuracy and reliability for Csp clearance in the intoxicated patient.

Design: Prospective observational study

Setting: Level 1 Trauma Center

Participants: All adult blunt trauma patients with a Cspine CT scan

Main Outcome Measures: Incidence of Csp injury, missed Csp injuries, diagnostic performance of Csp CT, and time to spine clearance

Results: There were 1696 patients, 66% male, mean ISS=10. Vehicular (44%) and falls (40%) were the most common mechanisms. Intoxication (TOX) was identified in 41% (N=702). Most (70%) were admitted with Csp immobilization, and 64% of these were solely due to intoxication. There were 67 positive CT scans (10%), with one false positive. Among 635 negative CT scans, 3 (0.5%) had central cord syndrome on exam, and 1 (0.2%) had a minor stable ligament injury. There were no missed fractures or unstable ligamentous injuries (NPV=100%). The 303 patients kept in spine precautions for TOX only had no missed Csp injuries, but had significantly prolonged immobilization times (Figure).

Conclusions: Alcohol or drug intoxication is common and results in significant delays to Csp clearance. CT scan had an overall NPV of 99.4%, and 100% for ruling out an unstable injury requiring immobilization. CT-based spine clearance for intoxicated patients appears safe and avoids unnecessary prolonged immobilization and resource utilization.



[26]

MODEL FOR END-STAGE LIVER DISEASE SCORE PREDICTS MORTALITY IN EMERGENCY GENERAL SURGERY PATIENTS

Authors: J. M. Havens, A. Columbus, O. Olufajo, R. Askari,
A. Salim, K. B. Christopher

Institution: Brigham and Women's Hospital

Presenter: Joaquim Havens

Discussant: Col. Matthew Martin

Closer: Ali Salim

Importance: Emergency General Surgery (EGS) patients suffer a disproportionate burden of death and complications. Chronic liver disease (CLD) increases the risk of complications following elective surgery. For EGS patients with CLD, long term outcomes are unknown and risk stratification models do not reflect severity of CLD.

Objective: To determine whether the Model for End-Stage Liver Disease (MELD) score is associated with increased risk of 90 day mortality following Intensive Care Unit (ICU) admission in EGS patients.

Design: We performed a retrospective cohort study. We included patients with CLD that underwent an EGS procedure based on ICD-9 procedure codes. CLD was identified using ICD-9 codes 571.x, 70.54, or 70.32. Multivariable logistic regression was performed.

Setting: Two academic medical centers.

Participants: Patients admitted to a medical or surgical ICU within 48 hours of surgery from 1997-2011.

Main Outcome Measures: The primary outcome was all cause 90 day mortality.

Results: A total of 13,552 EGS patients received critical care. Of these 707 (5.2%) had CLD and data to determine MELD Score at ICU admission. The median MELD score was 14 (Interquartile range 10,20). Overall 90 day mortality was 30.1%. The adjusted odds ratio of 90-day mortality for each 10 point increase in MELD was 1.63 (95% Confidence Interval 1.34-1.98).

Conclusions: This is the first study to correlate MELD score with EGS outcomes. For every 10 point increase in MELD score there is a 63% increased odds of death in EGS patients. MELD score should be utilized in pre-operative risk prediction models and when counseling EGS patients on the risks and benefits of operative intervention.



[27]

THROMBELASTOGRAPHY BASED DOSING OF ENOXAPARIN FOR THROMBOPROPHYLAXIS: A PROSPECTIVE RANDOMIZED TRIAL

Authors: C. R. Connelly¹, P. Y. Van¹, K. D. Hart¹, K. A. Fair¹, S. G. Louis¹, A. Erickson¹, E. C. Simeon¹, E. M. Bulger³, S. Arbabi³, L. J. Moore², J. B. Holcomb², M. A. Schreiber¹

Institutions: ¹Oregon Health and Science University, ²University of Texas, ³University of Washington

Presenter: Christopher Connelly

Discussant: Peggy Knudson

Closer: Martin Schreiber

Importance: Prophylactic enoxaparin is used to prevent thromboembolic complications (VTE) in surgical and trauma patients. However, VTE remains an important source of morbidity and mortality, potentially exacerbated by antithrombin III (AT-III) deficiency. Anti-Factor Xa (aFXa) levels have been used to determine adequacy of enoxaparin dosing, although accuracy, cost, and availability remain problematic. Recent data suggest thrombelastography (TEG) can predict VTE risk and guide prophylaxis.

Objective: Evaluate effectiveness of TEG-adjusted compared to standard prophylactic enoxaparin dosing.

Design: Multicenter, prospective, randomized controlled trial, from 2012–2015, comparing standard (30mg twice-daily) to TEG-adjusted enoxaparin dosing (using difference in R time between heparinase and standard TEG).

Setting: Three Level 1 US trauma centers.

Participants: 185 general surgery and trauma patients screened for VTE.

Main Outcome Measures: VTE incidence, aFXa levels, AT-III deficiency.

Results: Age, BMI, APACHE score, ISS and reason for admission (69% trauma, 31% general surgery) were similar in both groups. TEG-adjusted patients received a higher median enoxaparin dose than controls (35mg v 30mg BID, $p < 0.001$). TEG-adjusted aFXa levels were higher by Day 6 (0.21U/mL v 0.40U/mL, $p < 0.001$). Median time to enoxaparin initiation was 1 day and median proportion of missed doses was similar (0% v 7%, $p = 0.23$). VTE rates (6% v 7%, $p = 1$) and bleeding complications (14% v 6%, $p = 0.08$) were similar. AT-III deficiency was prevalent (18–20%) in both groups.

Conclusions: The incidence of VTE was low in both groups despite the prevalence of AT-III deficiency. These results may be due to a low proportion of missed doses and early time-to-enoxaparin initiation.



[28]

INDIVIDUAL CLOTTING FACTOR CONTRIBUTIONS TO MORTALITY FOLLOWING TRAUMA

Authors: R. Kunitake, B. M. Howard, L. Z. Kornblith, S. Christie, A. Conroy, M. J. Cohen, R. A. Callcut

Institution: University of California – San Francisco

Presenter: Ryan Kunitake

Discussant: Lydia Lam

Closer: Rachael Callcut

Importance: Acute traumatic coagulopathy (ATC) is an endogenous clotting abnormality arising after injury felt to be associated with higher rates of mortality. ATC is believed to be mediated by protein C and global deficiencies of clotting factors (CFs), but the specific individual contribution of CFs to poor outcome is less well defined.

Objective: Investigate the relationship of individual clotting factors on mortality.

Design: Prospective cohort study

Setting: Level one trauma center

Participants: Adult highest level trauma activation patients

Main Outcome Measures: Coagulation factor (CF) levels at emergency department presentation including factors II, V, VIII, IX, X and protein C levels were measured. Multiple logistic regression was utilized to determine the independent predictors of 28 day mortality controlling for mechanism of injury, traumatic brain injury (TBI), gender, and age. Model fit was determined using receiver operator curves at the $p < 0.05$ level.


Results: Complete coagulation factor data was available on 902/1429 (63%) of patients. 81% were male, 56% suffered blunt injury, 39% had TBI, and median ISS 16. Overall mortality was 19%. In univariate analysis, factors II, V, VIII, IX, X and Protein C all predicted mortality at 28 days ($p < 0.05$, Table). Factors V, VIII, IX, and Protein C remained statistically significant predictors of 28-day mortality in multiple logistic regression (AUC 0.87, CI 95% 0.85-0.90, $p < 0.0001$, Table).

Conclusions: This study suggests the relationship of APC and factors V and VIII may be responsible for dictating ATC-associated trauma mortality.



E-Poster Sessions

A



Poster Session A: Sharon Lum and John Payne

- 1A** THE COST OF ROBOTIC SURGERY: JUSTIFIABLE?
Presenter: Thuy Tran
- 2A** WOUND CLASS DOES NOT ALTER RECURRENCE IN COMPLEX VENTRAL HERNIA REPAIR WITH MESH: A SINGLE-CENTER RETROSPECTIVE REVIEW
Presenter: Victoria Lyo
- 3A** ROAD TRAFFIC INJURIES IN RURAL CAMEROON: INITIAL RESULTS FROM A PROSPECTIVE HOSPITAL-BASED TRAUMA REGISTRY
Presenter: Sherry Wren
- 4A** THE CLINICAL UTILITY OF A 21-GENE RECURRENCE SCORE IN THE BREAST CANCER COMMUNITY
Presenter: Sarah Wilson
- 5A** THE BURDEN OF SURGICAL DISEASE IN RURAL MOZAMBIQUE
Presenter: Peter Bendix
- 6A** FOCUSED ASSESSMENT WITH SONOGRAPHY FOR TRAUMA (FAST) MAY DECREASE COMPUTED TOMOGRAPHY (CT) SCAN UTILIZATION IN THE EVALUATION OF THE STABLE PEDIATRIC PATIENT WITH BLUNT ABDOMINAL TRAUMA (BAT)
Presenter: Christopher Newton
- 7A** THE ADRENAL INCIDENTALOMA: AN OPPORTUNITY FOR SURGEONS TO IMPROVE PATIENT CARE
Presenter: James Becker
- 8A** INFECTION IS DRIVING FACTOR IN PROGRESSION OF FOREFOOT DIABETIC ULCERS TO MAJOR LOWER EXTREMITY AMPUTATION
Presenter: Sheena Harris
- 9A** SHORT AND LONG TERM RESULTS OF UNROOFING AND MARSUPIALIZATION FOR ADOLESCENT PILONIDAL DISEASE
Presenter: Joshua Rouch
- 10A** SURGEON VARIATION IN THE USE OF NON-OPERATIVE MANAGEMENT FOR COMPLICATED APPENDICITIS
Presenter: Greg Sacks



11A CLINICAL AND RADIOLOGICAL FOLLOW UP RATHER THAN EXCISIONAL BIOPSY IS REASONABLE AFTER COMPLETE PAPILOMA EXCISION AT THE TIME OF CORE NEEDLE BIOPSY

Presenter: Angelena Crown

12A WHEN IS ANTICOAGULATION FOR TRAUMATIC VASCULAR INJURY REQUIRED?

Presenter: Kylie Blume



[1A]

THE COST OF ROBOTIC SURGERY: JUSTIFIABLE?

Authors: T. B. Tran, J. Chandler, M. M. Dua, D. J. Worhunsky, J. N. Leal,
G. A. Poultides, J. A. Norton, B. C. Visser

Institution: Stanford University

Presenter: Thuy Tran

Importance: Robotic systems are the latest technologic upgrade to minimally invasive surgery. Although the robot has been enthusiastically adopted by hospitals to perform complex procedures with better outcomes, critics skeptical of the robot's cost saving potential call into question its effectiveness and expense.

Objective: Define cost differences between laparoscopic (LDP) and robotic (RDP) distal pancreatectomy.

Design: Retrospective

Setting: Tertiary academic hospital.

Participants: Patients who underwent RDP or LDP (2009-2015).

Main Outcome Measures: Postoperative outcomes and hospital charges

Results: There were 103 cases (28 RDP, 75 LDP) performed (cost and outcomes in Table 1). Conversion to open rates for RDP and LDP were 3.6% vs. 6.7%, respectively. Overall morbidity was significantly lower in RDP than LDP (41% vs. 14%; $p=0.010$). This was partly driven by a 50% lower pancreatic fistula rate (10.7% vs. 21.3%; $p=0.266$). No RDP cases were complicated by severe pancreatic fistulas. Median total charge of RDP was higher (137k vs. 117k, $p=0.024$) due to increased charges inclusive of operating room (OR) equipment and time (86k vs. 57k; $p<0.001$), and anesthesia charges (11k vs. 8k; $p=0.008$). RDP was associated with a shorter mean hospital stay (2.4 vs. 4.0 days; $p<0.001$), which resulted in lower room and board charges (16k vs. 29k; $p=0.001$).

Conclusions: The overall charges associated with RDP are more than its laparoscopic counterpart, driven by robotic-specific equipment, longer OR time, and anesthesia charges. However, RDP demonstrated clear patient benefits in shorter hospital stay and reduced morbidity, which justify the higher cost.



[2A]

WOUND CLASS DOES NOT ALTER RECURRENCE IN COMPLEX VENTRAL HERNIA REPAIR WITH MESH: A SINGLE-CENTER RETROSPECTIVE REVIEW

Authors: V. Lyo, M. Tufaga, U. Shin, F. Primus, S. Fong, H. W. Harris

Institution: University of California - San Francisco

Presenter: Victoria Lyo

Importance: The management of complex ventral hernias with wound contamination remains controversial with inconsistent practices.

Objective: We studied how wound contamination contributes to recurrence and complications after complex ventral hernia repair.

Design: Retrospective review

Setting: Single center, tertiary care hospital

Main Outcome Measures: Surgical site occurrences and hernia recurrence

Results: We identified 161 cases (mean follow-up 22 months). As expected, the rate of surgical site occurrences was significantly lower in clean versus contaminated cases (27% vs. 47%, $p=0.03$). Wound contamination was not significantly associated with recurrence in complex ventral hernia repair, although there was a strong trend (33% vs. 18%, $p=0.07$). Interestingly, recurrence rates were similar for each mesh type used, regardless of wound contamination: clean versus contaminated cases using synthetic (18% vs. 7%, $p=1$) or biologic mesh (29% vs. 73%, $p=0.15$). Furthermore, the use of synthetic mesh was associated with lower overall recurrence than biologic (17% vs. 56%, $p=0.0009$). Regardless of wound class or mesh type, a bridged repair was associated with higher recurrence (30% vs. 14%, $p=0.02$). Biologic mesh was associated with higher recurrence rates compared to synthetic mesh when the fascia was closed (44% vs 9.9%, $p=0.018$) or bridged (67% vs 25%, $p=0.017$).

Conclusions: Our results confirm that wound contamination is associated with increased surgical site occurrences and hernia recurrence. Importantly, these results suggest that the use of synthetic mesh in a one-stage repair of contaminated cases can be performed without an unacceptable rate of complications. A prospective trial to generate definitive treatment recommendations is underway.



[3A]

ROAD TRAFFIC INJURIES IN RURAL CAMEROON: INITIAL RESULTS FROM A PROSPECTIVE HOSPITAL-BASED TRAUMA REGISTRY

Authors: M. M. Esquivel¹, C. Long¹, T. Uribe-Leitz¹, T. G. Weiser¹, M. Kasumba³, S. M. Wren¹

Institutions: ¹Stanford University, ³Pan African Academy of Christian Surgeons

Presenter: Sherry Wren

Importance: Developing countries such as Cameroon are disproportionately burdened by injuries and deaths due to road traffic collisions (RTCs). Country specific information is necessary to improve injury prevention and treatment.

Objective: To describe the epidemiology and outcomes of RTCs in Cameroon.

Design: Prospective hospital-based trauma registry.

Setting: A tertiary and referral hospital in North-West Cameroon.

Participants: All patients admitted with a traumatic injury from May, 2013 to July, 2015.

Main Outcome Measures: Patient demographics, presentation, mode of arrival, mechanism, injuries, treatment, outcome on arrival and at two weeks.

Results: The registry captured 1423 patients in total, 75.8% were male, with RTCs accounting for 68.3% (n=959) of all traumas. Motorcycle-related crashes (MCCs) accounted for 71.9% and car-related crashes (CCs) for 24.9%. MCCs had 11.0% helmet use and CCs had 4.4% seatbelt use. Passengers were more commonly involved in RTCs (39.1%), followed by drivers (36%) and pedestrians (24%). Commercial/public vehicles were more commonly involved (57.8%), compared to private vehicles (31.4%, p= 0.0042). The most common injuries were lower extremity fractures (53.5%), head injury (12.1%) and upper extremity fractures (9.1%). All 6 CC deaths had no seatbelt use; similarly, all 8 MCC deaths had no helmet use. 11/14 (78.6%) RTC deaths had lower education (no education or solely primary education).

Conclusions: This trauma registry highlights key policy opportunities and shows a possible association between higher deaths and lower education. A nationwide focus on preventive measures, such as seatbelt and helmet use, as well as public/commercial vehicle safety should be assessed for national impact.



[4A]

THE CLINICAL UTILITY OF A 21-GENE RECURRENCE SCORE IN THE BREAST CANCER COMMUNITY

Authors: S. Diamond, S. P. Wilson, R. G. Latimer, D. R. Greenwald, L. Jacobson, J. Grotts, S. Howland, R. Cosio, K. Grafton

Institution: Santa Barbara Cottage Hospital

Presenter: Sara Wilson

Importance: Oncotype-Dx is a validated 21-gene recurrence score assay (RS) that guides adjuvant treatment for breast malignancy. National guidelines include RS testing but limited data exists regarding community performance

Objective: To determine if RS independently changed chemotherapy usage at an American College of Surgeons Accredited (NAPBC) site.

Design: Three-year retrospective-review of a prospectively-maintained cancer registry

Setting: Single-site NAPBC

Participants: Stage 1-2 cancers.

Main Outcome Measures: Chemotherapy usage based on RS.

Results: In three-years 664 new cancer diagnoses were identified of these 156 (23%) were ER-positive, HER2-negative with RS available; 91 Stage 1 (58%), 65 Stage 2 (42%). Forty-four node-positive patients were included. Univariate analysis compared 89 patients with low-RS (<18), 60 medium-RS(18-30), and 7 high-RS(>30). Higher-RS was associated with poorly-differentiated Bloom-Richardson histology ($p<0.001$) while 63-other patient, tumor, and genetic variables did not correlate with RS. Chemotherapy was recommended to 55 patients: 14/89 (15%) low-RS, 35/60 (58%) medium-RS and 6/7 (85%) high-RS. In a multivariate regression (Table), high-RS and larger tumors positively influenced chemotherapy usage (OR 1.7; OR 1.5) ($p<0.001$). RS directed chemotherapy treatment in 42 patients; while it indicated no benefit over hormone therapy in 81 individuals. Thirty-three patient's adjuvant treatment was guided by other factors: stage (18), comorbidity (9), and histology (6). An ordinal regression revealed that RS changed chemotherapy use with statistical independence.

Conclusions: In this largest reported series from a NAPBC community-site, Oncotype-Dx strongly influenced chemotherapy usage independent of traditional clinical recurrence risk factors. Deviations from RS were made on an individual basis affected namely by clinical staging.



[5A]

THE BURDEN OF SURGICAL DISEASE IN RURAL MOZAMBIQUE

Authors: P. Bendix¹, J. Rose¹, S. James², C. Fonzamo³, E. Noormahomed³, S. Bickler⁴

Institutions: ¹Brigham and Women's Hospital, ²Dartmouth Medical School, ³MIHER - MAPUTO, Mozambique ⁴University of California - San Diego

Presenter: Peter Bendix

Importance: Few surveys have measured surgical disease prevalence in a low income country. None have performed secondary case-by-case surgeon verification with years lost to disability (YLD) classification.

Objective: Determine the non-fatal burden of surgical disease in rural Mozambique.

Design: Population-proportional, stratified survey with photography of patient identified problems. Review of condition photos, verification, and categorization by two surgeons.

Setting: 2011-2013. Three rural districts in Mozambique: Chockwe, Nhamatanda, and Ribaeue.

Participants: 6099 participants from 540367 eligible for the survey.

Main Outcome Measures: Prevalence of conditions requiring diagnosis, treatment or referral as defined by the WHO manual "Surgical Care at the District Hospital. Non-fatal years lost to disability (YLD) due to these conditions.

Results: Survey response rate was 86%. We obtained 4455 photos of patient-identified problems from 4439 respondents. Two-surgeon photo review found 960 respondents (15.7%) with one or more surgical conditions. Surgical disease classification was applied to each photo. The best-fit 2010 Global Burden of Disease disability weights (DW) were used for each disease. YLD per condition was then calculated using $YLD = Prevalence * DW / 100,000$. Our population had 1943 years lost to disability per 100000 persons.

Conclusions: We found a high prevalence of surgical disease and a high YLD due to surgical disease in rural Mozambique. Using 2011 WHO estimates for sub-Saharan Africa, 1943YLD/100K places all-cause surgical disease between the #2 and #3 broad condition areas (infectious disease: 2175, nutritional deficiencies: 1371). This suggests that surgical disease is an area of high importance for health development in low income countries.



[6A]

FOCUSED ASSESSMENT WITH SONOGRAPHY FOR TRAUMA (FAST) MAY DECREASE COMPUTED TOMOGRAPHY (CT) SCAN UTILIZATION IN THE EVALUATION OF THE STABLE PEDIATRIC PATIENT WITH BLUNT ABDOMINAL TRAUMA (BAT)

Authors: J. J. Graf¹, W. Stehr¹, A. Kornblith^{1,2}, C. Newton¹

Institutions: ¹Children's Hospital and Research Center,
²University of California - San Francisco

Presenter: Jahanara Graf

Importance: Recent trends in pediatric trauma advocate decreased CT scanning. The utility of the FAST is well described for hemodynamically unstable adult patients but less accepted in pediatric patients. We want to determine if FAST used in hemodynamically stable pediatric patients can decrease CT utilization.

Objective: To show if there is an association between a negative FAST and the absence of significant intra-abdominal injury (IAI).

Design: Retrospective cohort of stable pediatric patients with BAT, who received a FAST.

Setting: Level one academic pediatric trauma center.

Participants: Hemodynamically stable blunt pediatric trauma patients without major head trauma (GCS > 9) who received a FAST from November 2013 through July 2015.

Main Outcome Measures: Absence or presence of clinically significant IAI requiring operative intervention, procedure by interventional radiology or admission to the intensive care unit.

Results: Of 281 patients, 226 had negative FAST exams while 55 were positive. Only two patients (0.88%) with a negative FAST had clinically significant injury – one required a laparotomy and the other an angiogram. The remaining 224 had no clinically significant injury, indicating a strong association between negative FAST and absence of significant IAI (OR 75, CI 17 to 332). Twenty-two patients (40%) with a positive FAST had clinically significant IAI.

Conclusions: There is a strong positive association between a negative FAST and absence of clinically significant IAI. This correlation suggests that FAST has potential to reliably decrease CT utilization for stable pediatric patients with BAT, which could be further studied with a larger prospective investigation.



[7A]

THE ADRENAL INCIDENTALOMA: AN OPPORTUNITY FOR SURGEONS TO IMPROVE PATIENT CARE

Authors: J. C. Becker, J. Woloszyn, R. J. Bold, M. Campbell

Institution: University of California - Davis

Presenter: James Becker

Importance: Incidentally discovered adrenal tumors, or adrenal incidentalomas (AIs), are common findings on computed tomography (CT) scans, but the frequency with which patients undergo appropriate hormonal evaluation, re-imaging, and specialist referral is not well studied.

Objective: Evaluate how often patients with AIs undergo an appropriate workup and specialist referral. Assess primary care physicians' (PCPs) understanding of AI management, and determine their current management practices.

Design: Retrospective review of patients with AIs; Survey of PCPs.

Setting: University medical center.

Participants: 4,683 patients with abdominal CT scans ordered by PCPs from 1/2011-1/2014; PCPs in the university health system.

Main Outcome Measures: Hormonal evaluation, re-imaging, and specialist referral; PCP familiarity with guidelines for AIs.

Results: When surveyed, 82% of PCPs admitted unfamiliarity with current management guidelines for AIs, and 67% reported managing these patients without specialist referral. Of the 4,683 CT scans reviewed, 87(1.9%) patients had AIs, 16 (18.3%) underwent appropriate hormonal evaluation, and 35 (40.2%) had appropriate re-imaging. Twelve (13.8%) patients with AIs were referred to specialists. Specialist referral [OR=29.1 (6.4-133.3), $p<.0001$] and inclusion of the AI in the CT report "impression"[OR=4.9 (1.4-17.4), $p=.019$] were associated with an increased likelihood of an appropriate hormonal evaluation. Additionally, 4 (25%) appropriately evaluated patients had evidence of subclinical Cushing syndrome, though none were referred for adrenalectomy.

Conclusions: Few patients with AIs undergo an appropriate evaluation, likely leading to underdiagnosis of surgically correctable disease. Surgeons should be familiar with the evaluation of AIs and take an active role in the management of these patients.



[8A]

INFECTION IS DRIVING FACTOR IN PROGRESSION OF FOREFOOT DIABETIC ULCERS TO MAJOR LOWER EXTREMITY AMPUTATION

Authors: S. K. Harris, N. Vatankhah, D. Wilson, G. Landry, E. Mitchell, G. Moneta, A. Azarbal

Institution: Oregon Health and Science University

Presenter: Sheena Harris

Importance: Plantar forefoot diabetic foot ulcers (DFU) are common and demonstrate potential for healing if provided with early specialist care. Contemporary classification of DFU uses categories based on wound extent, ischemia, and infection (WIFI).

Objective: Identify when DFUs receive specialist care at our institution and which WIFI factor is most associated with progression to minor or major lower extremity amputation (MLEA).

Design: Retrospective review

Setting: Single institution

Participants: Patients with isolated plantar forefoot DFUs seen by vascular surgeons 2007-2014

Main Outcome Measures: Minor or major amputation, ulcer healing, time to specialist (vascular or podiatry) consult, WIFI classification, peripheral arterial disease, patient demographics

Results: 77 limbs from 64 patients were included. 11% progressed to major amputation, 64% to minor amputations, and 21% were documented as closed or healed. Average time to ulcer healing was 1.2 years (SD 1.15). Average time to specialist consult was 30 days (SD 99.4). DFUs progressing to minor amputation had more severe wounds compared to those who healed (1.16 ± 0.06 v 0.94 ± 0.06 , $P=0.015$). Infection severity as measured by WIFI classification was significantly associated with MLEA (2.00 ± 0.38 v 1.02 ± 0.14 , $P=0.041$). There was no difference in ABIs, gender, HA1c, or dialysis dependence between patients progressing to minor amputation or MLEA compared to those who heal.

Conclusions: Most patients with DFU require minor or major lower extremity amputations. Progression of plantar forefoot DFU to MLEA is most strongly associated with degree of wound infection. We recommend early consultation to prevent infection of DFUs and progression to MLEA.



[9A]

SHORT AND LONG TERM RESULTS OF UNROOFING AND MARSUPIALIZATION FOR ADOLESCENT PILONIDAL DISEASE

Authors: J. D. Rouch¹, J. A. Keeley², A. Scott¹, R. M. Sydorak³,
D. A. DeUgarte¹, S. L. Lee^{1, 2}

Institutions: ¹University of California - Los Angeles, ²Harbor UCLA Medical Center,
³Kaiser Permanente

Presenter: Joshua Rouch

Importance: Treatment of pilonidal disease is associated with significant post-operative morbidity, long healing times, and/or high recurrence rates.

Objective: Report our current experience with unroofing and marsupialization (UM) versus wide local excision (WLE) as surgical therapy for pilonidal disease and provide long term follow-up data for previously reported UM patients.

Design: Retrospective cohort

Setting: Multi-center including university, county and community hospitals in a large, urban area

Participants: Forty-six adolescent patients undergoing UM and WLE for pilonidal disease between December 2009-August 2015 and 17 patients who had previously undergone UM between 2002-2007

Main Outcome Measures: Time to final healing, recurrence of disease, need for re-operation

Results: Of the 46 patients in the current series, 30 had UM and 16 underwent WLE. Data summarized in the table. The two groups were similar in age, gender, and obesity rate. Patients undergoing UM had a higher rate of preoperative abscess. UM was associated with shorter time to complete healing and lower peri/post-operative morbidity, recurrence rate, and re-operation rate compared to WLE. Long-term follow-up data in 17 patients who had previously undergone UM demonstrated one (5.9%) patient with recurrent pilonidal disease. This recurrence occurred 1.5 years after complete wound healing and was successfully treated non-operatively. Patients with previous UM demonstrated a median of 6.3 years (IQR, 3.1-10.1 years) free of recurrence.

Conclusions: Unroofing and marsupialization is a simple and effective surgical therapy for pilonidal disease. This technique is associated with minimal morbidity, negligible reoperation rate, and low rates of both short and long term recurrence.



[10A]

SURGEON VARIATION IN THE USE OF NON-OPERATIVE MANAGEMENT FOR COMPLICATED APPENDICITIS

Authors: G. D. Sacks^{1,2}, A. J. Dawes^{1,2}, S. L. Ettner¹, R. H. Brook^{1,5}, C. R. Fox¹, M. Maggard-Gibbons^{1,2}, C. Y. Ko^{1,2}, M. M. Russell^{1,2}

Institutions: ¹University of California - Los Angeles, ²West Los Angeles Veterans Affairs Medical Center, ⁵RAND Corporation

Presenter: Greg Sacks

Importance: Although appendicitis is one of the most common pathologies treated by general surgeons, the optimal treatment strategy remains controversial.

Objective: To examine surgeon decision-making in management of complicated appendicitis.

Design: Surgeons were presented with a clinical vignette describing a 19 year old female with 3 days of right lower quadrant pain, WBC of 16,400/mL, and CT scan showing a large, 6cm phlegmon adjacent to the cecum with extensive stranding extending to the retroperitoneum (appendix not visualized), and moderate free fluid in the pelvis but no abscess. Surgeons were asked if they would recommend an operation.

Setting: Online study with email recruitment.

Participants: American College of Surgeons fellow and resident membership.

Main Outcome Measures: Decision to recommend non-operative management.

Results: Of the 1,880 surgeons, 48.5% recommended an operation and 51.5% non-operative management. After adjusting for surgeon characteristics, independent predictors of non-operative management included fewer number of years in practice (3.9% more likely to operate for every 10 years in practice, $p=0.02$), female gender (58.3% vs. 49.5%, $p=0.01$), and working in an academic center compared to private practice (55.2% vs. 46.7%, $p=0.02$). Surgeons who completed an acute care surgery fellowship were more likely than those who completed no fellowship training to pursue non-operative management (62.1% vs. 48.6%, $p=0.001$).

Conclusions: When given an identical hypothetical vignette of complicated appendicitis, over 1,800 surgeons remain divided on their preferred treatment strategy. Decision-making was associated with surgeon demographics, experience, and practice setting. Practice guidelines may be useful to guide decision-making for patients with complicated appendicitis.



[11A]

CLINICAL AND RADIOLOGICAL FOLLOW UP RATHER THAN EXCISIONAL BIOPSY IS REASONABLE AFTER COMPLETE PAPILOMA EXCISION AT THE TIME OF CORE NEEDLE BIOPSY

Authors: A. Crown, L. Scovel, S. Deal, D. Kramer, D. Wechter, J. Grumley¹, T. Biehl

Institution: Virginia Mason Medical Center

Presenter: Angelena Crown

Importance: Multiple studies have suggested that surgical excision is warranted for all intraductal papillomas (IDP) found on core needle biopsy (CNB) regardless of presence of atypia.

Objective: Determine the rate of pathologic upgrade to atypia or malignancy at the time of excisional biopsy in patients diagnosed with IDP without atypia on CNB.

Design: Single institution retrospective chart review.

Setting: Urban tertiary referral center.

Participants: 994 high risk CNB pathology reports between 2007 and 2014 were reviewed. 125 patients with IDP without atypia were identified and 17 had complete excision at the time of CNB.

Main Outcome Measures: Rate of upgrade to atypia or malignancy following excisional biopsy.

Results: 88 of 125 patients with IDP without atypia underwent excisional biopsy. 4 patients (4.5%) had malignancy and 11 patients (12.5%) had atypia on final surgical pathology. Advanced patient age, size of lesion, as well as presence of calcifications or sclerosis on CNB were not associated with upgrade to malignancy or atypia. Of the 17 patients whose IDPs were completely excised by CNB, 12 went on to excisional biopsy and none was upgraded to atypia or malignancy. The remaining 5 had follow up imaging that demonstrated resolution of the initial suspicious radiographic findings. The 17 patients were followed clinically and radiologically for a total of 36 patient years and had no further suspicious findings.

Conclusions: IDP carries a low risk for malignancy. Patients with IDP completely excised at the time of CNB may consider clinical and radiological follow up without surgical excision.



[12A]

WHEN IS ANTICOAGULATION FOR TRAUMATIC VASCULAR INJURY REQUIRED?

Authors: M. Humphries¹, K. M. Blume¹, M. Ceja Rodriguez¹,
J. J. DuBose³, J. M. Galante¹

Institutions: ¹University of California - Davis, ³David Grant Medical Center

Presenter: Kylie Blume

Importance: Limited data exist regarding the effects of systemic anticoagulation on outcomes after repair of traumatic vascular injuries. Guidelines for heparin use in trauma surgery have not been established.

Objective: Determine the effects of anticoagulation during traumatic vascular repair and correlate with short-term outcomes and complications.

Design: Retrospective review of vascular repairs prospectively entered in an institutional trauma registry. Presentation, mechanism of injury, technique of surgical repair, intraoperative and post-operative anticoagulation, as well as outcomes and complications were examined.

Setting: Level 1 Trauma Center

Participants: Adult patients with open surgical repair for traumatic vascular injuries, from January 2006 to March 2015.

Main Outcome Measures: Effects of anticoagulation on repair patency, reoperation, limb loss, and surgical complications were determined.

Results: 130 patients were treated for traumatic vascular injuries. Most were to extremities (upper= 68; lower = 52). Penetrating trauma (n = 79) was the primary mechanism. Systemic intraoperative anticoagulation was administered in 59 patients. Patients with multi-level trauma (n=10) were less likely to receive intraoperative heparin (p= 0.29) Intraoperative heparin use did not affect complication risk. (42% with vs. 45% without, p= 0.95) Post-operative anticoagulation was used in 24 patients. These patients were more likely to have complex injuries (14% vs. 46%, p=0.001) and to require re-operation (7.5% vs. 25%, p=0.03).

Conclusions: Despite the hypercoagulability of trauma, arterial repair may be safely accomplished without systemic anticoagulation in trauma patients. Intraoperative anticoagulation may only be needed for complex arterial injuries. Post-operative anticoagulation was associated with an increased risk of complications.



E-Poster Sessions

B



Poster Session B: James Dolan and Robert Selby

- 1B** ABSENCE OF MACROSCOPIC DISEASE RATHER THAN EXTENT OF SURGICAL LYMPHADENECTOMY MAY BE ASSOCIATED WITH IMPROVED SURVIVAL IN PEDIATRIC PATIENTS WITH STAGE III MELANOMA
Presenter: Devin Flaherty
- 2B** COLITIS CARE IS CHARACTERIZED BY INCREASED INFlixIMAB USE AND HIGHER COLECTOMY RATES IN THE BIOLOGIC ERA
Presenter: Cindy Kin
- 3B** THE MODIFIED EARLY WARNING SCORE AS A PREDICTIVE TOOL FOR UNEXPECTED SURGICAL ICU ADMISSION
Presenter: Mu Xu
- 4B** IMPACT OF LAPAROSCOPIC ADRENALECTOMY ON OVERALL SURVIVAL IN PATIENTS WITH NON-METASTATIC ADRENOCORTICAL CARCINOMA
Presenter: Kelly Huynh
- 5B** OUTCOMES OF RESECTED MUCINOUS CYSTIC NEOPLASMS OF THE PANCREAS WITH INVASIVE CANCER
Presenter: Alicia Edwards
- 6B** A PILOT STUDY EVALUATING THE POTENTIAL OF SPHEROID CULTURES OF CELLS ISOLATED FROM COLORECTAL CANCER LIVER METASTASES FOR INDIVIDUALIZED PATIENT THERAPEUTICS
Presenter: Kan Toriguchi
- 7B** EFFICACY OF CT SCAN IN PREDICTING OUTCOME AFTER SURGICAL TREATMENT IN LOCALLY ADVANCED RECTAL CANCER
Presenter: Aaron Parrish
- 8B** NONVISUALIZED SENTINEL LYMPH NODES ON LYMPHOSCINTIGRAPHY IN MELANOMA: PREDICTIVE FACTORS AND SURGICAL OUTCOMES
Presenter: Darryl Schuitevoerder



9B NEUTROPHIL TO LYMPHOCYTE AND PLATELET TO LYMPHOCYTE RATIOS CAN PREDICT PATHOLOGIC COMPLETE RESPONSE (PCR) AFTER NEOADJUVANT THERAPY IN ESOPHAGEAL CANCER PATIENTS

Presenter: Patrick McLaren

10B NON-OPERATIVE MANAGEMENT OF NONFUNCTIONING PANCREATIC NEUROENDOCRINE TUMORS

Presenter: Michael Sgroi

11B CANCERS OF THE RECTOSIGMOID JUNCTION SHOULD BE TREATED AS RECTAL CANCERS

Presenter: Sarah Stringfield

12B CYTOREDUCTIVE SURGERY AND HEATED INTRAPERITONEAL CHEMOTHERAPY WITH MULTIVISCERAL RESECTION FOR APPENDICEAL AND COLORECTAL PERITONEAL CARCINOMATOSIS; SINGLE INSTITUTION EXPERIENCE

Presenter: Matthew Selleck



[1B]

ABSENCE OF MACROSCOPIC DISEASE RATHER THAN EXTENT OF SURGICAL LYMPHADENECTOMY MAY BE ASSOCIATED WITH IMPROVED SURVIVAL IN PEDIATRIC PATIENTS WITH STAGE III MELANOMA

Authors: D. C. Flaherty¹, S. L. Stern¹, E. A. Beierle⁵, J. J. Doski⁶, A. B. Goldin², K. W. Gow², M. Langer³, J. G. Nuchtern⁴, M. V. Raval⁷, S. A. Vasudevan⁴, M. B. Faries¹, M. Goldfarb¹

Institutions: ¹John Wayne Cancer Institute, ²University Of Washington
³Maine Children's Cancer Program, ⁴Baylor College Of Medicine And Texas Children's Hospital, ⁵University Of Alabama,
⁶University Of Texas Health Science Center, ⁷Emory University

Presenter: Devin Flaherty

Importance: Melanoma is one of the top 5 cancers in adolescent and young adults (AYAs: ages 15-39). Completion lymphadenectomy for stage III disease remains the standard of care across all age groups.

Objective: Identify factors associated with overall survival (OS) and investigate the role of lymphadenectomy in patients with stage III melanoma Design/

Setting: Retrospective review of the National Cancer Data Base (1998-2012)

Participants: Pediatric (<15 years), AYA, and adult (≥40 years) patients with stage III melanoma

Main Outcome Measures: OS

Results: An inverse relationship exists between age, incidence of stage III disease (pediatrics:18.1%, AYAs:7.2%, adults:5%, $p<.0001$), and 5-, and 10-year OS: (pediatrics:91.0%±2.2, 85.4%±3.5; AYAs:73.2%±0.7, 63%±0.9; adults:51.7%±0.4, 37.6%±0.4; $p<.0001$). Pediatric patients had thicker primary tumors (2.75±2.56mm) compared to AYAs (2.09±2.21mm, $p=.0008$) and adults (2.52±2.57mm, $p<.0001$). Macroscopic lymphadenopathy was less common in pediatrics ($p<.0001$) and portended worse intragroup OS (vs. microscopic: pediatrics, $p=0.01$; AYAs/Adults, $p<.0001$). Controlling for comorbidities, disease site, and pathology, increasing age remained an independent risk factor for death (AYAs HR:3.60, CI:1.71-7.58; adults HR:6.60, CI:3.14-13.8; REF=pediatrics).



Nodular histology (HR:1.49,CI:1.24-1.41), Breslow thickness (HR:1.08,CI:1.05-1.10), and not receiving immunotherapy (HR:1.17,CI:1.03-1.33) were associated with worse OS in AYAs; lymphadenectomy only improved OS if >20 nodes were removed (HR:0.74,CI:0.60-0.92). These factors, including extent of lymphadenectomy, did not impact pediatric OS, but microscopic lymphadenopathy trended toward significance (HR:0.21,CI:0.04-1.17).

Conclusions: Younger patients present with higher stage disease, yet an inverse relationship exists between age and OS. Further, whereas extended lymphadenectomy improves OS in older patients, limited nodal evaluation for staging may be adequate for some younger stage III patients.



[2B]

ULCERATIVE COLITIS CARE IS CHARACTERIZED BY INCREASED INFlixIMAB USE AND HIGHER COLECTOMY RATES IN THE BIOLOGIC ERA

Authors: C. Kin, K. Rhoads, L. Baker, K. Bundorf

Institution: Stanford University

Presenter: Cindy Kin

Importance: Infliximab has been shown in clinical trials to induce remission and decrease colectomy rates in patients with ulcerative colitis (UC). Its effect on a population level is undetermined.

Objective: To assess the effect of infliximab use on surgical intervention for UC.

Design: Retrospective review of UC patients. Univariate models of infliximab treatment and surgery in the two years after diagnosis were performed using chi-square for categorical and t-test for continuous variables. Multivariate models used independent variables of age group, gender, Charlson comorbidity index, time period in relation to infliximab approval, and insurance plan type.

Setting: Data source is a large private insurance claims database (2002-2012), containing active employees, early retirees, and dependents on employer-sponsored health plans.

Participants: Newly diagnosed UC patients aged 18-64, defined as ≥ 2 outpatient UC encounters within one year, no prior UC encounters, and ≥ 1 lower endoscopy within six months.

Main Outcome Measures: Treatment with infliximab and surgery for UC.

Results: The proportion treated with infliximab within two years increased from 2% in 2003 to 8% in 2011. Proportion needing surgery also increased, particularly in total abdominal colectomy rates. Patients diagnosed in the post-infliximab period were more likely to be treated with infliximab, and to undergo total colectomy within the first year of diagnosis.

Conclusions: The use of infliximab for UC has increased since its approval while the risk of surgery has also increased. Surgical patients are more likely in the post-infliximab era to undergo total abdominal colectomy with end ileostomy rather than proctocolectomy.



[3B]

THE MODIFIED EARLY WARNING SCORE AS A PREDICTIVE TOOL FOR UNEXPECTED SURGICAL ICU ADMISSION

Authors: M. Xu, I. MacQueen, A. P. Stark, W. Sheppard, O. J. Hines

Institution: University of California - Los Angeles

Presenter: Mu Xu

Importance: A rapid response team was recently instituted in our hospital in order to rescue surgical patients before an arrest. We sought to investigate the utility of the Modified Early Warning Score (MEWS) to identify patients at high risk of clinical deterioration.

Objective: With the goal to improve patient outcomes and decrease mortality rates, we tested whether MEWS can be used to predict ICU admission and death.

Design: Retrospective Review

Setting: University-based hospital

Participants: Surgical patients with an unexpected ICU admission between 1/12/2013 and 3/9/2014.

Main Outcome Measures: Maximal MEWS was calculated 24 hours prior to ICU admission. Logistic regression was performed to correlate MEWS and clinical outcome.

Results: The mean maximal MEWS was 4.5 ± 2.4 for surgical patients urgently admitted to ICU. Cardiac surgery patients demonstrated the highest MEWS (6.2 ± 2.1), compared to general surgery, liver transplant, and neurosurgery patients (4.0 ± 1.6 , $p=0.02$). Patients with cardiac arrest tended to have a higher MEWS than those with pulmonary arrest (5.1 ± 2.7 vs. 3.6 ± 0.9). There was a trend toward a higher MEWS among those that died compared patients who survived until hospital discharge (5.1 ± 2.8 vs. 3.7 ± 1.7 ; $p=0.26$).

Conclusions: A MEWS of 4 as early as 24 hours before transfer can be utilized by a rapid response team to identify patients requiring ICU care. Cardiac surgery patients with an elevated MEWS may require additional team resources to prevent mortality. A high MEWS can prompt intervention before an arrest in surgical patients, and this may lead to improved patient outcomes and hospital mortality rates.



[4B]

IMPACT OF LAPAROSCOPIC ADRENALECTOMY ON OVERALL SURVIVAL IN PATIENTS WITH NON-METASTATIC ADRENOCORTICAL CARCINOMA

Authors: K. Huynh, D. Lee, B. Lau, D. Flaherty, M. Goldfarb

Institution: John Wayne Cancer Institute

Presenter: Kelly Huynh

Importance: Appropriate use of laparoscopic adrenalectomy (LA) for adrenocortical carcinoma (ACC) remains controversial since complete resection with negative margins is the best chance for potential cure.

Objective: To compare the oncologic outcomes and overall survival (OS) of LA and open adrenalectomy (OA) for ACC.

Design: Retrospective analysis of the National Cancer Data Base (NCDB) between 2010-2014.

Setting: Committee on Cancer accredited facilities.

Participants: 432 ENSAT stage I-III ACC patients that had LA (n=140) or OA (n=292).

Main Outcome Measures: OS.

Results: Patients who underwent OA had more advanced stage disease ($p < 0.0001$), larger (≥ 5 cm) tumors ($p = 0.0003$), and were younger (age ≤ 55 , $p = 0.002$). Although nodal assessment was rare in LA (n=2) compared to OA (n=90) ($p < 0.0001$), margin status was not affected except in patients with T3 disease ($p = 0.001$). Neither surgical procedure nor any socio-demographic factor(s) impacted 3- or 5-year OS for the entire cohort. Only positive margins ($p = 0.001$), positive nodes ($p = 0.019$), and tumor extension ($p = 0.005$) increased mortality. When stratified by disease stage, LA decreased OS for patients with stage II disease (LA: 64.4%, OA: 79.2%, $p = 0.04$), and remained an independent risk factor for death on multivariate analysis (HR 2.04, 95%CI 1.05-3.96) along with positive margins (HR: 2.99, 95%CI 1.05-8.52). Only positive margins decreased OS in the entire cohort (HR: 2.21, 95%CI 1.34-3.64).

Conclusions: Use of LA may decrease OS and may increase the rate of positive margins in select patients with ACC. Since margin status remains the strongest predictor of mortality, caution should be used in selecting LA for ACC.



[5B]

OUTCOMES OF RESECTED MUCINOUS CYSTIC NEOPLASMS OF THE PANCREAS WITH INVASIVE CANCER

Authors: A. Edwards, K. Bertens, S. Kaplan, R. Dorer, R. Kozarek, V. Picozzi,
A. Alseid³, T. Biehl, W. Helton, F. G. Rocha

Institution: Virginia Mason Medical Center

Presenter: Alicia Edwards

Importance: Patients with high-risk mucinous pancreatic cystic neoplasms (IPMN and MCN) are typically offered resection, however little is known about their natural history and survival once an invasive cancer has developed.

Objective: To determine the clinicopathologic features treatment and outcomes of patients with invasive cancer arising in IPMN and MCN.

Design: Retrospective review of electronic medical records and pathology specimens in a single institution.

Setting: Urban tertiary care hospital

Participants: Patients who underwent pancreatectomy for IPMN and MCN-associated carcinoma between 1995-2015

Main Outcome Measures: Prognostic factors for survival

Results: We identified 132 patients with malignancy suspected in 75 (57%) prior to operation. Invasive cancers were found in 89 patients requiring pancreaticoduodenectomy, 34 requiring distal pancreatectomy and 9 requiring total pancreatectomy. Eleven patients required a vascular resection including one arterial reconstruction. Thirty day and 90 day mortality was 1.5% and 4.6%, respectively. Median overall survival was 44 months (27.9-69.7 95% CI) with a 43% 5-year overall survival. There was no difference in survival between location of the cancer, cyst type or operation. Independent predictors of survival beyond 1 year included age ≥ 70 HR 2.71 (1.55-4.73), $p < 0.001$; positive lymph nodes HR 3.73 (1.93-7.21), $p < 0.001$; jaundice HR 0.51 (0.27-0.96), $p < 0.038$; and pancreatitis HR 0.50 (0.25-1), $p < 0.051$ on multivariate Cox regression analysis.

Conclusions: Older age and positive lymph nodes are adverse prognostic factors while jaundice and pancreatitis are favorable factors in resected IPMN and MCN-associated invasive cancers of the pancreas. Early surgical intervention in symptomatic patients is warranted to achieve long-term survival.



[6B]

A PILOT STUDY EVALUATING THE POTENTIAL OF SPHEROID CULTURES OF CELLS ISOLATED FROM COLORECTAL CANCER LIVER METASTASES FOR INDIVIDUALIZED PATIENT THERAPEUTICS

Authors: K. Toriguchi¹, M. Lin¹, D. Donner¹, M. Inoue², C. Corvera¹, E. Nakakura¹, B. C. Hann¹, J. Malato¹, F. Salangsang¹, R. S. Warren¹

Institutions: ¹University of California - San Francisco ²Osaka Medical Center for Cancer and Cardiovascular Diseases

Presenter: Kan Toriguchi

Importance: Numerous groups have developed human tumor-bearing mice by subcutaneous implantation of freshly resected tumors. Such patient-derived xenografts (PDX) have value in testing drugs targeting actionable mutations in individual patient's tumors; however, PDX are cumbersome, expensive to maintain, and it can take months to develop a patient's tumor sufficiently to test drugs individually or in combinations.

Objective: We have adopted and are evaluating an alternative approach for patient therapeutics by generating 3-dimensional tumor spheroids directly from patient tumors or from PDXs.

Design: Sheets of cells were isolated from colorectal cancer liver metastases (CRC) or PDX by enzymatic digestion of freshly resected tumors. After overnight culture in stem cell medium, the sheets reorganized into spheres that were maintained in low adherence tissue culture plates.

Results: Spheroid cultures of metastatic CRC are composed of human cancer cells, but are devoid of human stroma. Spheres were passaged through multiple generations and frozen, thawed, and again continuously passaged. CRC spheres retain the characteristics of the tumor from which they were isolated and develop PDX indistinguishable from those produced by inoculation of mice with minced freshly resected human tumors. Spheroids treated with chemotherapy, targeted small molecule drugs, and drug combinations responded with alterations of growth or viability within days.

Conclusions: Tumor-derived spheroids are a robust model system that appears to recapitulate essential features of tumor morphology and perhaps the responses of individualized patient's malignancies to drugs and drug combinations. Spheres may be a suitable platform for large throughput drug screens and for cancer drug discovery.



[7B]

EFFICACY OF CT SCAN IN PREDICTING OUTCOME AFTER SURGICAL TREATMENT IN LOCALLY ADVANCED RECTAL CANCER

Authors: A. B. Parrish, B. W. MacLaughlin, N. C. Figueroa, G. R. Bryant,
P. Choi, R. R. Kumar

Institution: Harbor-UCLA Medical Center

Presenter: Aaron Parrish

Importance: While multiple imaging modalities have been suggested to predict poor outcome in rectal cancer, CT is most available and widely used

Objective: To evaluate the efficacy of the CT scan in the preoperative planning of rectal cancer and find predictors that will provide the surgeon with a better assessment of curative resection for Locally Advanced Rectal Cancer (LARC)

Design: A retrospective review and review of CT imaging

Setting: A county teaching hospital

Participants: All patients operated on for curative intent with stage II or III rectal cancer between 2008 and 2014

Main Outcome Measures: Curative resection and disease free at one year is considered a successful outcome, while unresectability and recurrence are considered a poor outcome

Results: Sixty-eight patients were identified within the study period that fit our inclusion criteria with at least 1-year follow-up. Forty-two patients had a successful outcome and 26 patients had a poor outcome. Demographics and cancer characteristics were similar in both groups. Extramural extension of the mass ($P=0.04$) and extension into the levator muscles ($P=0.002$) were significant predictors of poor outcome. Involvement of the mesorectal fascia ($P=0.1$) and proximal colon dilatation ($P=0.1$) trended towards predicting poor outcome. Enhancement, length, and thickening of involved rectum, as well as presence lymph nodes $> 8\text{mm}$ were not significant.

Conclusions: CT shows that presences of extramural extension and levator involvement of mass are ominous signs. We feel CT scan is relevant in predicting outcome in rectal cancer and can help guide surgical management.



[8B]

NONVISUALIZED SENTINEL LYMPH NODES ON LYMPHOSCINTIGRAPHY IN MELANOMA: PREDICTIVE FACTORS AND SURGICAL OUTCOMES

Authors: D. Schuitevoerder¹, L. Grinlington², J. Stevens¹,
R. Nance³, J. Fortino¹, J. Vetto¹

Institutions: ¹Oregon Health and Science University, ⁴Deakin University

Presenter: Darryl Schuitevoerder

Importance: Pre-operative lymphoscintigraphy is standard for identification of sentinel lymph nodes (SLNs) in melanoma. The impact of negative scintigraphy (nonvisualization of the SLN) on surgical outcomes is inadequately reported in the literature.

Objective: To determine the incidence, predictive factors, and surgical outcomes of nonvisualization in clinically node negative melanoma patients.

Design: Retrospective review of a prospective, IRB approved, melanoma sentinel node database from January 2005 to August 2015.

Setting: University-based melanoma program.

Participants: Eight hundred and ninety-nine clinically node negative melanoma patients who underwent SLN biopsy.

Main Outcome Measures: Incidence of nonvisualization, clinical and tumor factors, operative findings.

Results: Twenty-seven of the 899 patients (3%) had negative scintigraphy. Nonvisualization was more common in older patients (71 vs 59 years, $p < 0.0002$), and more frequently associated with head and neck primaries as well as prior operations in or near the adjacent nodal beds (41% and 37%, respectively). Nonvisualization was not associated with gender, BMI, or T stage. Despite a negative scintigram, the SLN was still found at operation in 10 of the 27 patients (37%) by using the hand held gamma probe.

Conclusions: Pre-operative lymphoscintigraphy in clinically node negative melanoma patients is associated with a low nonvisualization rate. Predictors for nonvisualization include age, head and neck location, and prior operations at adjacent sites. Nonvisualization should not preclude surgical exploration, as the SLN can still be found at operation in over one third of patients.



[9B]

NEUTROPHIL TO LYMPHOCYTE AND PLATELET TO LYMPHOCYTE RATIOS CAN PREDICT PATHOLOGIC COMPLETE RESPONSE (PCR) AFTER NEOADJUVANT THERAPY IN ESOPHAGEAL CANCER PATIENTS

Authors: P. J. McLaren, N. W. Bronson, K. D. Hart, K. M. Gatter, G. M. Vaccaro, C. R. Thomas, J. G. Hunter, J. P. Dolan

Institution: Oregon Health and Science University

Presenter: Patrick McLaren

Importance: Approximately 25% of esophageal cancer (EC) patients have a pathologic complete response (pCR) to neoadjuvant chemoradiotherapy (CRT). However, we cannot predict pCR prior to esophagectomy. Based on previous studies in other cancers, we hypothesized that serum neutrophil-lymphocyte (NLR) and platelet-lymphocyte ratios (PLR) may predict pCR in EC.

Objective: To determine if NLR and PLR are predictive of pCR and survival in EC.

Design: Retrospective review of a prospective registry. NLR was defined as pre-CRT serum absolute neutrophil count divided by absolute lymphocyte count; PLR was similarly defined. Multivariable logistic regression was applied to analyze the effect of NLR and PLR on pCR. A Cox proportional-hazards model was used to analyze the effect of NLR and PLR on survival.

Setting: NCI-designated cancer center

Participants: EC patients who underwent CRT and esophagectomy, 2006-2014.

Main Outcome Measures: Pathologic complete response and mortality.

Results: 60 pts had NLR and PLR data available for analysis. There were no differences between groups with respect to age, race, gender, chemotherapy regimen, or cancer stage. Elevated NLR and PLR were both negatively predictive of pCR (OR: 0.62, 95%CI: 0.37-0.89, $p=0.037$ and OR: 0.91, 95%CI: 0.82-0.98, $p=0.028$ respectively). NLR was not a significant predictor of mortality (HR: 1.05, 95%CI: 0.94-1.16, $p=0.40$), however PLR was predictive of mortality (HR: 1.05, 95%CI: 1.01-1.08, $p=0.005$).

Conclusions: Elevated NLR and PLR were significant negative predictors of pCR. Only PLR was predictive of mortality. PLR and NLR may offer a simple serum test to assess likelihood of pCR after CRT in esophageal cancer.



[10B]

NON-OPERATIVE MANAGEMENT OF NONFUNCTIONING PANCREATIC NEUROENDOCRINE TUMORS

Authors: M. D. Sgroi, M. Hanna, A. Demirjian, D. K. Imagawa

Institution: University of California - Irvine

Presenter: Michael Sgroi

Importance: Due to recent publications emphasizing the malignant potential of non-functioning pancreatic neuroendocrine tumors (nPNET), current NCCN guidelines recommend surgical resection of these tumors.

Objective: To compare the outcomes of patients observed with non-surgical management to those who underwent resection for tumors < 2cm.

Design: A retrospective analysis from 2004 to 20015

Setting: A high-volume, multidisciplinary hepato-pancreato-biliary center.

Participants: All patients with a diagnosis of nPNET that had tumors < 2cm.

Main Outcome Measures: Overall survival from time of diagnosis. Secondary outcomes included complications from those that had surgical resection.

Results: 111 patients were diagnosed with a nPNET. 27 were found to have metastatic disease or an inoperable tumor at diagnosis, leaving a total of 84 patients. 61/84 (72.6%) patients had tumors < 2cm. 33/61 (54%) were surgically removed, while 28/61 (45.9%) had observation with close follow-up. Only 1/61 (1.6%) patient with tumor < 2cm was found to have malignancy. The 28 non-operative patients were preoperatively staged Ib or lower by endoscopic ultrasound (EUS) and CT/MRI. In the non-operative group, there were no deaths with a mean follow-up of 51.5 months. Within the surgical group, there was one mortality, and perioperative morbidity was found to be 22.2% (14/63).

Conclusions: Close observation should be considered for Stage Ib or lower nPNET. This is illustrated in the rare risk of malignancy (1.6%) compared to the significant (22.2%) perioperative morbidity. Increased malignant potential was recognized for those tumors that were greater than 2cm in size, multi focal or had invasive characteristics



[11B]

CANCERS OF THE RECTOSIGMOID JUNCTION SHOULD BE TREATED AS RECTAL CANCERS

Authors: S. Stringfield, L. De Araujo Horcel, G. Hu, L. Parry, S. Eisenstein, S. Ramamoorthy

Institution: University of California - San Diego

Presenter: Sarah Stringfield

Importance: Rectal cancers and colon cancers are considered distinct entities and treatment guidelines differ. There is no clear consensus on how cancers of the rectosigmoid junction should be treated.

Objective: To determine whether rectosigmoid cancer should be treated as rectal or colon cancer.

Design: Retrospective review of a prospectively maintained cancer database, looking at rectal, rectosigmoid, and sigmoid cancer.

Setting: Single academic medical center.

Participants: Adults diagnosed with colorectal cancer from 2003-2014.

Main Outcomes and Measures: Treatment received, and overall survival at 5 years.

Results: Patients were divided into groups based on tumor distance from anal verge, as identified by endoscopy. Total patients analyzed within each group were 106 (rectum, 0-9cm), 182 (rectosigmoid, 10-15cm) and 171 (sigmoid, 16-60cm). Locally advanced rectosigmoid cancers were treated similarly to the rectal group, with 52% receiving radiation compared to 62% of rectal tumors ($p=0.116$). When stage 0 and 4 disease was excluded, there was no difference in stage between the 3 groups ($p=0.513$) or survival (76% v 70.2% v 72.4%, $p=0.433$). The rectal and rectosigmoid patients who received radiation had more advanced stage than those who were not radiated ($p=0.001$). However, the 5-year survival of patients who were radiated was equal to those who were not radiated in both rectal (73.7% v 76.4%, $p=0.835$) and rectosigmoid (74.6% v 68.4%, $p=0.541$) groups.

Conclusions: Radiation effectively downstages both rectal and rectosigmoid junction tumors, providing 5-year survival equivalent to early stage disease. Locally advanced rectosigmoid cancers should be treated as rectal cancers to ensure optimal patient survival.



[12B]

CYTOREDUCTIVE SURGERY AND HEATED INTRAPERITONEAL CHEMOTHERAPY WITH MULTIVISCERAL RESECTION FOR APPENDICEAL AND COLORECTAL PERITONEAL CARCINOMATOSIS; SINGLE INSTITUTION EXPERIENCE

Authors: M. J. Selleck¹, S. S. Pairawan¹, K. Kazanjian²,
C. Garberoglio¹, M. E. Reeves¹, M. Senthil¹

Institutions: ¹Loma Linda University,
²University of California - Los Angeles

Presenter: Matthew Selleck

Importance: Cytoreductive surgery and hyperthermic intraperitoneal chemotherapy (CRS/HIPEC) has been reported to improve survival in patients with appendiceal and colorectal peritoneal carcinomatosis (PC). Despite this, it has not been widely adopted clinically due to concerns about morbidity and mortality.

Objective: To evaluate outcomes after CRS/HIPEC in patients with appendiceal and colorectal PC undergoing multi-visceral resection.

Design: Retrospective analysis of a prospectively maintained database.

Setting: Peritoneal surface malignancy (PSM) program between 2011 and 2015.

Participants: Patients with appendiceal or colorectal PC who underwent exploration with the intent of cytoreduction

Main Outcome Measures: Patient demographics, peritoneal cancer index (PCI), completeness of cytoreduction (CC) and perioperative outcomes were reviewed.

Results: Twenty-nine CRS/HIPEC were performed in 28 patients. One patient had a redo-CRS/HIPEC. Mean age was 55 years (20-73), 58% were female, and mean ASA class was 3. Mean PCI was 13.8 (range 2-35). Complete cytoreduction (CC-0/1) was achieved in all 29 cases. Multi-visceral resection was performed in 24 patients with a mean of 3 organs resected per patient (range 2-7). In this group, there were 33 intestinal anastomoses performed with no leaks. Grade III/IV complications were reported in 12.5% patients (3/24) and there were no 90-day mortalities. Median length of stay was 9 days. At mean follow-up of 15.5 months (range 2.4-32 months), 87.5% of patients (21/24) are alive.

Conclusions: CRS/HIPEC requiring multi-visceral resection for appendiceal and colorectal PC can be performed with low morbidity. Evaluation for CRS/HIPEC by a PSM surgeon should be considered for these patients.



E-Poster Sessions

C



Poster Session C: Moderators: Marc Melcher and Linda Wong

- 1C** THE NATIONAL SURGICAL QUALITY MEASURE FOR POSTOPERATIVE VENOUS THROMBOEMBOLISM HAS A HIGH FALSE POSITIVE RATE
Presenter: Lindsay Welton
- 2C** THE REMNANT GALLBLADDER AFTER LAPAROSCOPIC SUBTOTAL CHOLECYSTECTOMY: TO CLOSE OR LEAVE OPEN?
Presenter: Azure Adkins
- 3C** MELD SCORE AND AST-TO-PLATELET RATIO INDEX (APRI) PREDICT LONG-TERM SURVIVAL IN PATIENTS WITH A SMALL HEPATOCELLULAR CARCINOMA FOLLOWING NON-TRANSPLANT THERAPIES
Presenter: Joy Sarkar
- 4C** ASSESSING THE DOMINO EFFECT: CONSULTANT PAYMENT IN THE UNITED STATES PARALLELS GENDER INEQUALITIES IN MEDICINE
Presenter: Anna Weiss
- 5C** PROVIDERS OR SYSTEMS? DETERMINANTS OF EXCELLENCE IN SURGICAL OUTCOMES
Presenter: Jamie Anderson
- 6C** RACIAL AND SOCIOECONOMIC DISPARITIES IN TREATMENT OF WELL DIFFERENTIATED THYROID CANCER
Presenter: Avital Harari
- 7C** MULTIDISCIPLINARY AND ITERATIVE APPROACH TO THE ADOPTION OF AN ENHANCED RECOVERY AFTER SURGERY PROGRAM SHORTENS LENGTH OF STAY AND IMPROVES POSTOPERATIVE PAIN, BOWEL AND BLADDER FUNCTION AFTER ABDOMINAL COLORECTAL SURGERY
Presenter: Madhulika Varma
- 8C** INCIDENTAL HEPATOCELLULAR CARCINOMA IN LIVER TRANSPLANT RECIPIENTS HAS A HIGH RECURRENCE RATE AND WORSE OVERALL SURVIVAL THAN PREOPERATIVELY DIAGNOSED HEPATOCELLULAR CARCINOMA
Presenter: Jennifer Burg



- 9C** SHARE 35 HAS IMPROVED OUTCOMES IN MELD \geq 40 LIVER TRANSPLANTATION
Presenter: Victor Nekrasov
- 10C** EXCELLENT SURVIVAL OUTCOMES FOLLOWING LIVER TRANSPLANTATION IN PATIENTS WITH CHRONIC LIVER DISEASE COMPLICATED BY HEPATOPULMONARY SYNDROME
Presenter: Elaine Cheng
- 11C** VALIDITY AND RELIABILITY OF FOURTH YEAR MEDICAL STUDENT TRAUMA & SURGICAL ICU PRESENTATION ASSESSMENTS: ARE WE SUCCESSFULLY PREPARING MEDICAL STUDENTS FOR SURGICAL TRAINING IN THE 21ST CENTURY?
Presenter: Justin Watson
- 12C** ACUTE RESPIRATORY DISTRESS SYNDROME IN PEDIATRIC TRAUMA PATIENTS: INCIDENCE, PREDICTORS, AND OUTCOMES
Presenter: Amory Roulette



[1C]

THE NATIONAL SURGICAL QUALITY MEASURE FOR POSTOPERATIVE VENOUS THROMBOEMBOLISM HAS A HIGH FALSE POSITIVE RATE

Authors: L. L. Welton¹, A. Lightner², R. Cima², J. Pemberton², C. Kin¹, M. L. Welton¹

Institutions: ¹Stanford University, ²Mayo Clinic

Presenter: Lindsay Welton

Importance: The Agency for Healthcare Research and Quality developed a set of patient safety indicators (PSI) representing complications that are potentially preventable by system changes. PSI are used to evaluate physician and hospital quality, and some inform reimbursement decisions. The clinical relevance and accuracy of PSI-12 – postoperative deep venous thrombosis (DVT) or pulmonary embolism (PE) – needs to be established before using it as a quality or reimbursement metric.

Objective: To determine the clinical accuracy of the current abstracting system for PSI-12.

Design: Retrospective chart review of PSI-12 events documented by abstractors for the National Surgical Quality Improvement Project (NSQIP).

Setting: Two academic medical centers – Center A (2005-2015) and Center B (2011-2014).

Participants: Patients undergoing colorectal surgery.

Main Outcome Measures: DVT, PE, mesenteric or portal venous thrombus.

Results: NSQIP abstractors identified 46 instances of PSI-12 (25 and 21 in centers A and B). Of these, 17% were PEs and 30% were lower extremity DVTs. Over a third involved the portal venous system and 17% were upper extremity thrombus.

Conclusions: Less than half of NSQIP-identified PSI-12 events represent true DVT or PE that are clinically relevant and potentially preventable. It is unclear whether thrombi in the upper extremities or portal venous system are preventable or clinically significant. We recommend re-writing NSQIP abstractor guidelines to eliminate these errors and make PSI-12 a better measure of patient safety.



[2C]

THE REMNANT GALLBLADDER AFTER LAPAROSCOPIC SUB-TOTAL CHOLECYSTECTOMY: TO CLOSE OR LEAVE OPEN?

Authors: A. Adkins, P. Haigh

Institution: Kaiser Permanente Los Angeles Medical Center

Presenter: Azure Adkins

Importance: Literature is sparse on whether to leave the gallbladder remnant open or closed after laparoscopic subtotal cholecystectomy

Objective: Compare outcomes after laparoscopic subtotal cholecystectomy with an open or closed remnant

Design: Retrospective study

Setting: Inpatient and outpatient

Participants: Patients who had laparoscopic subtotal cholecystectomy (cystic duct unligated) for benign biliary disease Exposure: Open or closed gallbladder remnant

Main Outcome Measures: Readmission rate and complications including: bile leak requiring ERCP/stenting, biloma/abscess requiring drainage, choledocholithiasis needing ERCP, and reoperation for completion cholecystectomy

Results: There were 40 patients identified out of 116,732 laparoscopic cholecystectomies who underwent subtotal cholecystectomy. Mean age was 60. The majority (63%) were men. In 27(67.5%) patients the remnant was left open, and in 13(32.5%) it was closed. There were 14(51.9%) patients readmitted with an open versus 2(15.4%) from a closed remnant ($p=0.03$). Comparing the open and closed remnants there were 11(41%) patients with at least one complication versus 3(23%) respectively ($p=0.153$); there were 6(22%) bile leaks requiring ERCP/stenting versus 2(15%) ($p=0.48$), 2(7.4%) ERCPs for choledocholithiasis versus 0($p=0.45$), 6(22%) bilomas/abscesses requiring drainage versus 1(7.7%) ($p=0.25$), and reoperation for completion cholecystectomy was 1(3.7%) versus 1(7.7%) ($p=0.55$).

Conclusions: Laparoscopic subtotal cholecystectomy is rarely done. When it is performed, an open remnant is associated with more readmissions. Complications are frequent but similar between open and closed remnants. Bile leak needing ERCP/stenting is not a certainty with an open remnant. Completion cholecystectomy is seldom required, but may need to be done in patients with either an open or closed remnant.



[3C]

MELD SCORE AND AST-TO-PLATELET RATIO INDEX (APRI) PREDICT LONG-TERM SURVIVAL IN PATIENTS WITH A SMALL HEPATOCELLULAR CARCINOMA FOLLOWING NON-TRANSPLANT THERAPIES

Authors: J. Sarkar², L. L. Wong¹

Institutions: ¹University of Hawaii, ²Triple Army Medical Center

Presenter: Joy Sakar

Importance: Liver transplantation (LT) is the most effective treatment for long-term survival from hepatocellular carcinoma (HCC), however, insufficient donors limit this therapy. Identifying patients with small HCC that can be managed with non-transplant therapies may facilitate liver allocation to those most in need.

Objective: Determine characteristics predicting long-term survival after non-transplant therapies for small HCC.

Design: Retrospective analysis of 1050 patients with HCC (1993-2014)

Setting: Tertiary referral center for liver disease

Participants: Patients with a single HCC ≤ 3.0 cm, who underwent hepatic resection (HR, n=16), radiofrequency ablation (RFA, n=55), or LT (n=23) with 5-years follow-up.

Main Outcome Measures: Odds-ratios for 3-year and 5-year overall survival (OS) after HR/RFA were calculated for: MELD score, platelet count, creatinine, albumin, APRI, INR, and bilirubin. Survival was compared between LT and HR/RFA groups.

Results: LT patients had a 3-year OS of 82.6% and 5-year OS of 73.9%. Those undergoing HR/RFA had a 3-year OS of 40.8% and 5-year OS of 33.8%. The strongest predictors of survival with HR/RFA were MELD score < 10 (OR 0.10, 95% CI 0.03-0.31) and APRI ≤ 0.5 (OR 0.16, 95% CI 0.05-0.47). Patients with both MELD < 10 and APRI ≤ 0.5 had a 3-year OS of 77.3% and a 5-year OS of 72.7% following HR/RFA.

Conclusion: Patients with MELD < 10 and APRI ≤ 0.5 who undergo HR/RFA have survival approaching that of LT. Perhaps patients who meet these criteria can safely undergo non-transplant therapy and donor livers can be allocated to patients with a greater need.



[4C]

ASSESSING THE DOMINO EFFECT: CONSULTANT PAYMENT IN THE UNITED STATES PARALLELS GENDER INEQUALITIES IN MEDICINE

Authors: A. Weiss¹, R. Parina², V. Tapia¹, K. Lee¹, D. Sood¹,
S. L. Blair¹, S. Ramamoorthy¹

Institutions: ¹University of California - San Diego ²University of Arizona

Presenter: Anna Weiss

Importance: There is abundant literature examining disparities in leadership, advancement, and pay for women in medicine. There is little research regarding disparities in consultants for industry.

Objective: To evaluate the trends of consultant payments in the United States.

Design: The Open Payments file from 2013 was matched to the National Provider Index number by first and last name to determine gender of the physician. The numbers of transactions, dollar amount on average, and nature of these transactions, were compared between men and women.

Setting: The Sunshine Act required all consultancy payments to be made public via the Open Payments program of the Center for Medicare and Medicaid Services, this information was released for 2013.

Participants: All consultants and companies taking part in medical consultancy

Main Outcome Measures: Number of transactions and dollar amount of consultant payments

Results: There were a total of 2,463,079 transactions. Of these, 526,356 to women and 1,936,723 to men. The average amount per provider across all specialties was \$550 for women and \$1,772 for men. Examining surgeons separately, 8% of transactions were to women. Average amount paid per provider was \$1,540 for women and \$3,514 for men. (All P values < .0001).



[5C]

PROVIDERS OR SYSTEMS? DETERMINANTS OF EXCELLENCE IN SURGICAL OUTCOMES

Authors: E. G. Brown, J. E. Anderson, D. Burgess, R. J. Bold

Institution: University of California - Davis

Presenter: Jamie Anderson

Importance: The “halo effect” in healthcare delivery suggests that improvements in care delivery for one disease may improve outcomes in closely related diseases.

Objective: To determine if excellence in outcomes from specific surgical procedures is associated with excellence in other common procedures within healthcare systems.

Design: Retrospective review of administrative database.

Setting: Academic medical centers (AMC) in the University Healthsystem Consortium (N=229).

Participants: 85,621 patients undergoing elective pancreaticoduodenectomy, colectomy, AAA repair, or esophagectomy from 10/2010-6/2014.

Main Outcome Measures: A quality index score (QIS) for each procedure was developed by totaling rank score (worst to best performance across all health systems) of five clinical variables associated with optimal outcomes: postoperative complication rate, length of stay, 30-day readmission rate, mortality rate, and hospital volume. A composite QIS for each procedure was created by totaling the five individual scores to identify top and bottom performing AMCs.

Results: 41% of AMCs achieved high quality in at least one procedure, though most likely for only one of four procedures (33%) and never in all four. Conversely, 50% of AMCs were low quality in at least one procedure, though only 0.4% were low quality in all four procedures. 15% of AMCs were high quality in one procedure and low quality in another.

Conclusions: Excellence in one procedure does not transfer to optimal outcomes in other procedures within the same health system. Specific divisions and individual surgeons seem to be more responsible for optimal outcomes than processes of care delivery within health systems.



[6C]

RACIAL AND SOCIOECONOMIC DISPARITIES IN TREATMENT OF WELL DIFFERENTIATED THYROID CANCER

Authors: J. Wu, A. Harari

Institution: University of California - Los Angeles

Presenter: Avital Harari

Importance: Minorities and patients with low socioeconomic status (SES) with well-differentiated thyroid cancer (WDTC) experience worse outcomes. Racial and socioeconomic treatment disparities may partially account for these worse outcomes. Total thyroidectomy has been shown to give improved survival for patients with WDTC > 1 cm and is part of the ATA 2009 treatment guidelines.

Objective: This study examined whether race or SES variables affected treatments received for WDTC. Design/

Setting: Retrospective cohort study utilizing the California Cancer Registry and California Office of Statewide Health Planning and Development database, 1999-2008.

Participants: 14,891 patients (> 18 yo) with WDTC \geq 1 cm (1999-2008) [54.4% Non-Hispanic White, 3.3% Non-Hispanic Black, 26.2% Hispanic, and 16.1% Asian/Pacific Islander].

Main Outcome Measures: Effect of race and SES variables on rate of thyroid lobectomy vs total thyroidectomy and use of RAI therapy for WDTC.

Results: Multivariable regression analysis, adjusted for SES, insurance, age, treatment facility and distance to hospital, revealed race had no significant effect on surgical therapy for all patients with WDTC. In a subgroup analysis, Black patients with metastatic WDTC were significantly more likely to undergo thyroid lobectomy compared to Whites (OR 3.22 [CI 1.01-10.26]). Lower SES and uninsured patients were also more likely to undergo lobectomy. Finally, Asian/Pacific Islander patients were less likely to receive RAI therapy compared to Whites (OR 0.88, [CI 0.79-0.98]).

Conclusions: Racial and socioeconomic factors have a modest effect on treatment disparities for thyroid cancer and may partially account for some of the worse outcomes seen in these groups.



[7C]

MULTIDISCIPLINARY AND ITERATIVE APPROACH TO THE ADOPTION OF AN ENHANCED RECOVERY AFTER SURGERY PROGRAM SHORTENS LENGTH OF STAY AND IMPROVES POSTOPERATIVE PAIN, BOWEL AND BLADDER FUNCTION AFTER ABDOMINAL COLORECTAL SURGERY

Authors: A. Sarin, E. S. Litonius, R. Naidu, S. Yost, M. Varma, L. Chen

Institution: University of California - San Francisco

Presenter: Ankit Sarin

Importance: As resources become increasingly limited, programs that demonstrate delivery of effective healthcare with increasing efficacy need to be highlighted and these models emulated for broader adoption.

Objective: Despite international data indicating that Enhanced Recovery After Surgery (ERAS) programs, which combine evidence-based perioperative strategies, expedite recovery after surgery, few centers have successfully adopted this approach within the U.S. We discuss our approach and its initial results.

Design: Retrospective review of a prospective database.

Setting: Patients undergoing colorectal abdominal surgery at a single tertiary teaching center hospital.

Participants: 279 patients who participated in the ERAS Program were compared to 245 previous patients who underwent surgery prior to implementation of the formal program.

Main Outcome Measures: Primary end points were length of stay and readmission rates. Secondary end points included postoperative pain scores, opioid consumption, postoperative nausea and vomiting, length of urinary catheterization, and time to first solid meal.

Results: ERAS decreased both median total hospital length of stay (6.4 to 4.4 days) and postprocedure length of stay (6.0 to 4.1 days). 30-day all-cause readmission rates decreased from 21 % to 9.4%. Pain scores improved on postoperative day 0 (3.2 to 2.1) and day 1 (3.2 to 2.6) despite decreased opioid. Median time to first solid meal decreased from 4.7 days to 2.7 days and duration of urinary catheterization decreased from 74 hours to 46 hours.

Conclusions: These results confirm the efficacy of a multidisciplinary, iterative, team-based approach in reducing hospital stay and accelerating recovery without increasing readmission rates.



[8C]

INCIDENTAL HEPATOCELLULAR CARCINOMA IN LIVER TRANSPLANT RECIPIENTS HAS A HIGH RECURRENCE RATE AND WORSE OVERALL SURVIVAL THAN PREOPERATIVELY DIAGNOSED HEPATOCELLULAR CARCINOMA

Authors: J. M. Burg^{1,2}, A. Busch², M. Sells¹, C. K. Enestvedt^{1,2}, E. C. Maynard^{1,2}, S. L. Orloff^{1,2}

Institutions: ¹Oregon Health and Science University
²Portland Veterans Affairs Medical Center

Presenter: Jennifer Burg

Importance: Liver transplant (LT) recipients with incidental hepatocellular carcinoma (iHCC) represent an at risk, understudied, population in transplantation.

Objective: To define the incidence, risk factors, and outcomes of patients with iHCC versus those with known HCC (kHCC)

Design: Retrospective review of a prospective database of LT recipients

Setting: Shared Academic Medical Center and VA liver transplant program

Participants: LT recipients from 2002-2012

Main Outcome Measures: Incidence, explant histology, risk factors, patient demographics, recurrence rates, and overall survival for iHCC vs kHCC

Results: Of 546 LT recipients, 146 (21%) had kHCC and 18 (3%) had iHCC. The most common liver disease etiology for iHCC was viral hepatitis (80%). The incidence of HCC recurrence appeared higher in iHCC than kHCC, though this difference was not statistically significant (22% vs 11%; $p=0.24$). iHCC patients had inferior overall survival than kHCC patients (mean survival 5.3 vs 8.8 years; $p=0.01$; Figure 1); 40% of iHCC deaths were due to recurrent HCC. iHCC patients had higher biologic MELD (25 vs 15; $p<0.01$), and diabetes incidence (50% vs 19%; $p=0.01$). iHCC lesions were smaller (1.7cm vs 2.2cm; $p=0.02$), and were mostly solitary (89%); the incidence of angiolymphatic invasion was similar (27% iHCC vs 23% kHCC; $p=0.77$). A higher percentage of iHCC patients were women (33% vs 8%; $p<0.01$); other demographics were similar between groups.

Conclusions: LT recipients with iHCC had inferior survival compared to those with kHCC. A high risk of HCC recurrence in transplant recipients with iHCC necessitates close follow-up and vigilance in this patient population.



[9C]

SHARE 35 HAS IMPROVED OUTCOMES IN MELD \geq 40 LIVER TRANSPLANTATION

Authors: V. Nekrasov, L. Matsuoka, S. Cao, S. Groshen, S. P. Alexopoulos

Institution: ¹University of Southern California

Presenter: Victor Nekrasov

Importance: Implementation of Share 35 has increased the number of liver transplants (LT) performed in recipients with a MELD \geq 40.

Objective: Describe the effect of Share 35 on LT outcomes in recipients with a MELD \geq 40

Design: Single-center retrospective study.

Setting: Tertiary academic medical center.

Participants: 226 adult deceased donor LT recipients with MELD \geq 40 at time of transplant from 4/21/2002-5/15/2015.

Main Outcome Measures: Patient and graft survival.

Results: 141 patients underwent LT prior to and 80 after Share 35. Overall 1-year patient and graft survival were 86% and 81%. Post-35 1-year patient and graft survival were both 94% compared to 82% and 76% in the pre-35 era ($p=0.016$ and 0.002 , respectively). Post-35 recipients were less cholestatic (bili 23.5 vs 33.3, $p<0.001$), more coagulopathic (INR 2.7 vs 2.2, $p=0.001$) and received more dialysis (93% vs 72%, $p<0.001$) versus pre-35 recipients. Post-35 recipients had less waitlist time (10 vs 16 days, $p=0.033$) and fewer hospitalizations for > 21 days prior to transplant (16% vs 30%, $p=0.035$) versus post-35 recipients. Post-35 recipients more frequently received a regional share organ (54% vs 23%, $p<0.001$). Multi-variable analysis identified bilirubin ≥ 30 , BMI < 20 , pre-35 LT, dialysis prior to LT and SBP as significant risk factors for graft failure and portal vein thrombosis, pre-35 LT, life support, and diabetes as significant risk factors for recipient death.

Conclusions: Share 35 has resulted in significant improvement in the outcome of LT in MELD \geq 40 recipients primarily through a decrease in waiting time.



[10C]

EXCELLENT SURVIVAL OUTCOMES FOLLOWING LIVER TRANSPLANTATION IN PATIENTS WITH CHRONIC LIVER DISEASE COMPLICATED BY HEPATOPULMONARY SYNDROME

Authors: E. Y. Cheng, D. H. Yu, V. G. Agopian, T. S. Wang, R. W. Busuttill

Institution: University of California - Los Angeles

Presenter: Elaine Cheng

Importance: Hepatopulmonary syndrome (HPS) affects up to one-third of patients with end-stage liver disease and is characterized by intrapulmonary vascular dilatations and arterial hypoxemia. Liver transplantation (LT) is the only effective treatment for HPS, yet outcomes in HPS patients receiving LTs remains poorly defined.

Objective: To compare post-LT survival and complications in HPS patients to outcomes among LT recipients without HPS.

Design, Setting, and Participants: We performed a retrospective, matched case-control analysis of 35 adult HPS patients who underwent LT from 2003-2014 at our institution. Each patient had documented positive contrast echocardiography, portal hypertension, alveolar-arterial oxygen gradient $>15\text{mmHg}$ and $\text{PaO}_2 \leq 60\text{mmHg}$ on room air. Three controls were matched to each HPS case by the calculated MELD score, recipient age, donor age, and cold ischemia times. Comparisons between groups were carried out using conditional logistic regression and stratified Cox proportional hazards models.

Results: The 1-/3-/5-year patient and graft survival rates among HPS patients were 91/80/80% and 91/83/83%, respectively (Figs. 1-2). During LT, HPS patients were more likely to experience a postreperfusion syndrome (OR=4.59; 95%CI 1.82-11.6; $P=0.001$), characterized by marked hypotension following revascularization of the liver graft. Postoperative vascular complications, including hepatic arterial and portal venous thromboses, were more frequent among LT recipients with HPS (OR=7.50; 95%CI 1.46-38.7; $P=0.01$). There were no differences in the incidences of biliary or infectious complications between HPS cases and controls.

Conclusions: LT can be performed in HPS patients with excellent survival rates, but increased vigilance is needed to monitor for the development of postreperfusion syndrome and postoperative vascular complications.



[11C]

VALIDITY AND RELIABILITY OF FOURTH YEAR MEDICAL STUDENT TRAUMA & SURGICAL ICU PRESENTATION ASSESSMENTS: ARE WE SUCCESSFULLY PREPARING MEDICAL STUDENTS FOR SURGICAL TRAINING IN THE 21st CENTURY?

Authors: J. J. Watson, K. Ramsey, R. Mullins, J. Watters, L. Kiraly

Institution: Oregon Health and Science University

Presenter: Justin Watson

Importance: Traditional measures of student performance do not routinely correlate with subsequent residency performance. This complex interplay between medical school training and skills required for a surgical career warrants valid assessment.

Objective: Determine if multiple presentation assessments are reliable and correlate with current measures of clinical performance and match outcomes.

Design: Retrospective review of blinded direct-observation medical student presentation assessments 2013-2015.

Setting: Fourth-year Trauma and Surgical ICU clerkship multidisciplinary presentations.

Participants: 60 students, 39 evaluators.

Main Outcome Measures: Reliability of presentation assessments; correlation of scores to final exam, course grade and residency match outcomes.

Results: Assessment questions include: (1) case presentation, (2) problem definition, (3) question response, (4) use of literature. An average of 4.75 assessors/presentation and total of 1149 ratings were completed. Raters agreed on the same Likert scale in 62.5% of responses and within one Likert scale in 90.3%. Scores were not incorporated in course grade, yet questions 1-3 correlated to overall course grade. Mean scores for questions 3-4 were correlated with final-exam scores ($p < 0.05$). Scores and calendar-year timing were not predictive of match outcomes.

Conclusions: These findings highlight current gaps in assessment of knowledge, interpersonal, and technical skills. Certain scores were strongly correlated with course and/or final-exam grades, while match results were inconclusive. As surgical education evolves beyond knowledge-based assessments, valid performance measures are imperative for medical students and surgical residents. This study demonstrates validity for our student presentation assessment tool. Further research is necessary to optimize faculty development and continue improving current assessment methods.



[12C]

ACUTE RESPIRATORY DISTRESS SYNDROME IN PEDIATRIC TRAUMA PATIENTS: INCIDENCE, PREDICTORS, AND OUTCOMES

Authors: A. D. Roulette², R. V. Burke¹, J. Lim¹, S. Papillon¹, D. R. Bliss^{1,2}, J. S. Upperman^{1,2}, K. Inaba^{2,3}, A. R. Jensen^{1,2}

Institutions: ¹Children's Hospital Los Angeles, ²University of Southern California, ³LAC+USC Medical Center

Presenter: Amory Roulette

Importance: Acute Respiratory Distress Syndrome (ARDS) remains a challenge in the pediatric intensive care unit (PICU) with significant associated morbidity and mortality. Epidemiology and outcomes of ARDS have been described in adult trauma patients and mixed-population PICU patients, but not specifically in pediatric trauma patients.

Objective: To determine prevalence over time, predictors, and outcomes of ARDS in the pediatric trauma population.

Design: Administrative database review.

Setting: The ACS National Trauma Data Bank Research Data Set (2002-2010).

Participants: Children <14 years old (N=618,985).

Main Outcome Measures: Predictors of ARDS identified by previous adult trauma studies and mixed-population PICU studies were compared in this pediatric trauma population. To avoid confounding from ARDS complicating ventilator-associated pneumonia, the complication code for 'pneumonia' was included in the risk-adjusted model.

Results: 1,755 patients developed ARDS (0.28%). The prevalence of ARDS appeared to be increasing over time (Figure, $p < 0.0001$). Independent risk factors associated with developing ARDS include TBI; pulmonary contusion; liver, pancreatic, or intestinal injury; femur fracture; penetrating mechanism; or burn (Table). Mortality, ventilator time, ICU length of stay, and tracheostomy use were all significantly higher in patients developing ARDS ($p < 0.0001$). The development of post-traumatic ARDS is significantly associated with an adjusted risk of mortality (OR=2.8; 95% CI = 2.3-3.4).

Conclusions: ARDS is associated with an increased risk of mortality in pediatric trauma patients, with increasing prevalence over time. Risk factors for post-traumatic ARDS include TBI, torso injuries, and femur fracture. Further research into prevention and management of this complication in these patients is warranted.





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PCSA PAST PRESIDENTS

PRESIDENT	ELECTED YEAR	LOCATION	MEETING YEAR	CAUCUS
Karen Deveney	2015	Kohala Coast, HI	2016	HA/OR
William P. Schecter	2014	Monterey, CA	2015	NC
Fred Weaver	2013	Dana Point, CA	2014	SC
Mika Sinanan	2012	Kauai, HI	2013	WA/BC/AK
James Holcroft	2011	Napa Valley, CA	2012	NC
James Atkinson	2010	Scottsdale, AZ	2011	SC
James J. Peck	2009	Maui, HI	2010	HA/OR
Orlo Clark	2008	San Francisco, CA	2009	NC
Bruce Stabile	2007	San Diego, CA	2008	SC
Michael J. Hart	2006	Kohala Coast, HI	2007	AK/BC/WA
Cornelius Olcott IV	2005	San Francisco, CA	2006	NC
Samuel Eric Wilson	2004	Laguna Niguel/Dana Point, CA	2005	SC
Livingston Wong	2003	Wailea, HI	2004	HA/OR
Thomas R. Russell	2002	Monterey, CA	2003	NC
Theodore X. O'Connell	2001	Las Vegas, NV	2002	SC
John K. MacFarlane	2000	Banff, AB	2001	AK/BC/WA
Robert C. Lim, Jr.	1999	San Francisco, CA	2000	NC
Thomas V. Berne	1998	San Jose del Cabo, Baja	1999	SC
R. Mark Vetto	1997	Kaanapali Beach, HI	1998	HA/OR
F. William Heer	1996	Napa Valley, CA	1997	NC
Ronald K. Tompkins	1995	San Diego, CA	1996	SC
Meredith P. Smith	1994	Seattle, WA	1995	AK/BC/WA
Norman M. Christensen	1993	Sacramento, CA	1994	NC
Louis L. Smith	1992	Scottsdale, AZ	1993	SC
Clare G. Peterson	1991	Keonelo Bay at Poipu, Kauai, HI	1992	HA/OR



PRESIDENT	ELECTED YEAR	LOCATION	MEETING YEAR	CAUCUS
Allen H. Johnson	1990	Pebble Beach	1991	NC
Eric W. Fonkalsrud	1989	Laguna Niguel, CA	1990	SC
George I. Thomas	1988	Vancouver, BC	1989	AK/BC/WA
John K. Stevenson	1988	Vancouver, BC	1989	AK/BC/WA
F. William Blaisdell	1987	San Francisco, CA	1988	NC
John E. Connolly	1986	Rancho Mirage, CA	1987	SC
Thomas J. Whelan, Jr.	1985	Maui, HI	1986	HA/OR
Roy Cohn	1984	Monterey, CA	1985	NC
Wiley F. Baker	1983	Newport Beach, CA	1984	SC
Hilding H. Olson	1982	Seattle, WA	1983	AK/BC/WA
David J. Dugan	1981	Napa Valley, CA	1982	NC
William R. Mikkelsen	1980	Coronado, CA	1981	SC
Thomas R. Montgomery	1979	Hawaii	1980	HA/OR
Philip R. Westdahl	1978	Yosemite, CA	1979	NC
William F. Pollock	1977	Newport Beach, CA	1978	SC
Carl R. Schlicke	1976	Palm Springs, CA	1977	AK/BC/WA
Ralph D. Cressman	1975	Monterey, CA	1976	NC
Max R. Gaspar	1974	Scottsdale, AZ	1975	SC
Allen M. Boyden	1973	Kaanapali Beach, HI	1974	HA/OR
Paul C. Samson	1972	Yosemite, CA	1973	NC
Gordon K. Smith	1971	San Diego, CA	1972	SC
Joel W. Baker	1970	Mexico City, Mexico	1971	AK/BC/WA
H. Brodie Stephens	1969	San Francisco, CA	1970	NC
Lyman A. Brewer III	1968	Palm Springs, CA	1969	SC
Matthew McKirdie	1967	Honolulu, HI	1968	HA/OR
Leon Goldman	1966	Monterey, CA	1967	NC



PRESIDENT	ELECTED YEAR	LOCATION	MEETING YEAR	CAUCUS
Arthur Pattison	1965	Palm Springs, CA	1966	SC
Ralph H. Loe	1964	Vancouver, BC	1965	AK/BC/WA
Carleton Mathewson, Jr.	1963	San Francisco, CA	1964	NC
John C. Jones	1962	Palm Springs, CA	1963	SC
John E. Raaf	1961	Portland, OR	1962	HA/OR
Robert A. Scarborough	1960	San Francisco, CA	1961	NC
Clarence J. Berne	1959	Palm Springs, CA	1960	SC
Caleb S. Stone, Jr.	1958	Victoria, BC	1959	AK/BC/WA
H. Glenn Bell	1957	Santa Barbara, CA	1958	NC
William J. Norris	1956	Palm Springs, CA	1957	SC
Louis R. Gambée	1955	Palm Springs, CA	1956	HA/OR
Loren R. Chandler	1954	Yosemite, CA	1955	NC
E. Eric Larson	1953	Santa Barbara, CA	1954	SC
Alexander B. Hepler	1952	Harrison Hot Springs, BC	1953	AK/BC/WA
Alson R. Kilgore	1951	Del Monte, CA	1952	NC
William K. Kroger	1950	Coronado, CA	1951	SC
Eugene W. Rockey	1949	Gearhart, OR	1950	HA/OR
Howard C. Naffziger	1948	San Francisco, CA	1949	NC
Leroy B. Sherry	1947	Los Angeles, CA	1948	SC
Homer D. Dudley	1946	Victoria, BC	1947	AK/BC/WA
Philip K. Gilman	1945	San Francisco, CA	1946	NC
Philip K. Gilman	1944	No meeting due to WWII	1945	NC
Philip K. Gilman	1943	No meeting due to WWII	1944	NC
Philip K. Gilman	1942	No meeting due to WWII	1943	NC
Philip K. Gilman	1941	No meeting due to WWII	1942	NC
Charles T. Sturgeon	1940	Los Angeles, CA	1941	SC



PRESIDENT	ELECTED YEAR	LOCATION	MEETING YEAR	CAUCUS
Richard B. Dillehunt	1939	Pointland, OR	1940	HA/OR
Sumner Everginham	1938	Del Monte, CA	1939	NC
Wayland A. Morrison	1937	Los Angeles, CA	1938	SC
Otis F. Lamson	1936	Vancouver, BC	1937	AK/BC/WA
Harold Brunn	1935	Del Monte, CA	1936	NC
E. C. Moore	1934	Santa Barbara, CA	1935	SC
Ernst A. Sommer	1933	Gearhart, OR	1934	HA/OR
Emmet Rixford	1932	Del Monte, CA	1933	NC
Rea Smith	1931	Santa Barbara, CA	1932	SC
J. Tate Mason	1930	Victoria, BC	1931	
Wallace I. Terry	1929	Del Monte, CA	1930	NC
A. Stewart Lobinger	1928	No info available	1929	No info available
Robert C. Coffey	1927	No info available	1928	No info available
Stanley Stillman	1926	No info available	1927	No info available
Charles D. Lockwood	1925	Del Monte, CA	1926	NC
Founder's Meeting		San Francisco, CA	1925	

PCSA NEW MEMBERS

CLASS OF 2016



SOPHOCLIS ALEXOPOULOS, MD

Spouse/Partner: Margaret O'Connor

Children: Ameila, Leo and Lucy

Caucus: Southern California

Specialty: Transplant Surgery

Position/Location: Assistant Professor of Clinical Surgery at University of Southern California

Interests: Running, reading

Sponsors: Fred Weaver, Rick Selby and Vincent Rowe



MIGUEL BURCH, MD

Spouse/Partner: Liv Hagstrom

Children: Liam

Caucus: Southern California

Specialty: GI Surgery

Position/Location: Assistant Professor at Cedars Sinai Medical Center

Interests: Hiking, climbing, surfing, running

Sponsors: Edward Phillips, Erik Dutson and Shirin Towfigh



ALIVIA CETAS, MD

Spouse/Partner: Justin

Children: Joaquin and Lucia

Caucus: Oregon & Hawaii

Specialty: Surgical Oncology

Position/Location: Medical Director at Legacy Medical Group

Interests: Hiking, yoga, cooking, birds, kids

Sponsors: Nathalie Johnson, Joe Frankhouse and Karen Deveney



ALICE CHUNG, MD

Spouse/Partner: Scott Wardrum

Children: Lucy

Caucus: Southern California

Specialty: Breast Surgery

Position/Location: Assistant Program Director at Cedars Sinai Medical Center

Interests: Hiking, skiing

Sponsors: Armando Giuliano, Edward Phillips and Sharon Lum



IMAD DANDAN, MD

Spouse/Partner: Randa H. Dandan, PhD

Children: Lana, Tala and Raya

Caucus: Southern California

Specialty: Trauma Surgeon

Position/Location: Chair of Operative Services at Scripps Memorial Hospital

Interests: Scuba diving, skiing, swimming, hiking, photography, auto racing

Sponsors: Gail Tominaga, A. Brent Eastman and Suniyl Bhojru



CATHERINE DANG, MD

Spouse/Partner: Andrew Li, MD

Children: Jason, Lucas and Evan Li

Caucus: Southern California

Specialty: Breast Surgery

Position/Location: Associate Director, Staff Physician at Cedars Sinai Medical Center

Interests: Exercising, kids

Sponsors: Edward Phillips, O. Joe Hines, Christian de Virgilio



ANDRE' DICK, MD

Spouse/Partner: Anita Tiwari

Children: Kiran

Caucus: Washington/BC/Alaska

Specialty: Abdominal Transplant

Position/Location: Associate Professor, Attending Surgeon at Seattle Children's Hospital

Interests: Cooking, hiking, soccer, traveling

Sponsors: Robert Sawin, Jorge Reyes and John Waldhausen



ALESSANDRO FICHERA, MD

Spouse/Partner: Lia

Children: Paolo and Patrizio

Caucus: Washington/BC/Alaska

Specialty: Colorectal Surgery

Position/Location: Chief of Gastrointestinal Surgery at University of Washington

Sponsors: Carlos Pellegrini, Robert Sawin and Mika Sinanan



JENNIFER GARREAU, MD

Spouse/Partner: Gregory Rosenblatt

Caucus: Oregon & Hawaii

Specialty: Surgical Oncology

Position/Location: Staff Surgeon at Legacy Good Samaritan Hospital

Interests: Bike riding

Sponsors: Karen Deveney, Nathalie Johnson, Joe Frankhouse



ERIN GILBERT, MD

Spouse/Partner: Elizabeth Piercy

Caucus: Oregon & Hawaii

Specialty: General Surgery

Position/Location: Assistant Professor at Oregon Health & Science University

Sponsors: Daniel Herzig, Brett Sheppard and Kim Lu



MELANIE GOLDFARB, MD

Caucus: Southern California

Specialty: Endocrine Surgery

Position/Location: Assistant Professor of Surgery at John Wayne Cancer Institute

Interests: Tennis, hiking, wine/food

Sponsors: Avital Harari, Stephen Sener and Kenneth Gow



MISTY HUMPHRIES, MD

Caucus: Northern California

Specialty: Vascular Surgery

Position/Location: Associate Program Director and Assistant Professor of Surgery at University of California, Davis Medical Center

Interests: Marathons, triathlons

Sponsors: Richard Bold, Diana Farmer and Lisa Abramson



NEEL JOSHI, MD

Spouse/Partner: Melanie S. Dewar, MD

Children: Dylan and Nina

Caucus: Southern California

Specialty: General Surgery

Position/Location: Clinical Assistant Professor at Cedars Sinai Medical Center

Interests: Golf, long distance running, food/wine, travel

Sponsors: Edward Phillips, Bruce Gewertz and Daniel Margulies



KAREN LYNN KWONG, MD

Spouse/Partner: Martin Schreiber, MD

Caucus: Oregon & Hawaii

Specialty: General Surgery

Position/Location: Clinical Associate Professor at Oregon Health & Science University Department of Surgery/ PVAMC

Sponsors: Karen Deveney, Clifford Deveney and Jennifer Watters



LYDIA LAM, MD

Caucus: Southern California

Specialty: Trauma/Critical Care Surgery

Position/Location: Assistant Professor of Clinical Surgery at Los Angeles County/USC Medical Center

Interests: Dining, traveling, movies

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CHRISTOPHER MARSH, MD

Spouse/Partner: Pique

Children: Meghan

Caucus: Southern California

Specialty: Transplant Surgery

Position/Location: Vice President, Surgical Specialties/ Chief of Staff at Scripps Clinic

Interests: Surfing, golf, biking

Sponsors: Ralph Dilley, Giacomo DeLaria, Richard Saik and Darren Malinoski



FLAVIO ROCHA, MD

Spouse/Partner: Elisa Boden, MD

Children: Leila and Mateo

Caucus: Washington/BC/Alaska

Specialty: Surgical Oncology

Position/Location: Clinical Instructor at Virginia Mason Medical Center

Interests: Travel photography, hiking, soccer

Sponsors: Thomas Biehl, Richard Thirlby and Robert Sawin



NAVENRAJ SOLOMON, MD

Caucus: Southern California

Specialty: Surgical Oncology

Position/Location: Assistant Professor Surgery/Attending Surgeon at Loma Linda University

Interests: Snowboarding, hiking, traveling, beach activities

Sponsors: Sharon Lum, Carlos Garberoglio and Kevork Kazanjian



DONN SPIGHT, MD

Caucus: Oregon & Hawaii

Specialty: General Surgery

Position/Location: Associate Professor at Oregon Health & Science University

Interests: Theater, travel, literature, languages, reading

Sponsors: Karen Deveney, Clifford Deveney and John Hunter



BRIAN WONG, MD

Spouse/Partner: Shellie Yamashita

Children: Caleb and Joshua

Caucus: Oregon & Hawaii

Specialty: General Surgery

Position/Location: General Surgeon at Kaiser Permanente

Interests: Fantasy Football, golf, running

Sponsors: Karen Deveney, Daryl Kurozawa and Mark Yamamura



IN MEMORIAM

DECEASED MEMBERS

Robert C. Coe, MD

Stanley Jacob, MD

David State, MD

In Memoriam

ROBERT (BOB) COE

1911-2015



Bob Coe died July 17th, 2015 in Seattle at the age of 94 within 2 months of his wife Bobby's death, a marriage of 75 years. His father Herbert Coe and grandfather Franz Coe were both surgeons who practiced in Seattle. Following WW2, Bob attended and graduated from Harvard Medical School, becoming a faculty member after residency at the Massachusetts General Hospital for several years, then returning to Seattle. Bob established his practice at Swedish Hospital where he worked until retirement in 1990.

He was a gifted general, vascular, and thoracic surgeon, and an attending clinical faculty surgeon at Harborview Hospital, a University of Washington affiliated hospital, for over 25 years. He was a clever writer of medical issues and his seminal authorship was the history of the Seattle Surgical Society published in book form in 1989. This was a detailed review of the many taped interviews and conversations with senior surgeons, events, and historical records related to the society. Bob was president of this society in 1969.

His love of "real estate" as his principal investments outside of medicine resulted in two prized acquisitions...4 acres of prized land in Wialea, Maui, ultimately housing 4 homes, his own, and chosen friends from Seattle, and a large 800 acre guest ranch east of Seattle (Hidden Valley) still owned and managed by the family.

Bob was a dedicated sailor and yachtsman, progressing from flatties to 6 meters, then designing and building a 65 foot yawl, the "Sea Fever" sailing in many Puget Sound and off shore races, both on the Pacific and Atlantic Oceans. Subsequently, his love of boating turned into owning the Gillcrest, a 70 foot Canadian tug converted into a pleasure craft, enabling Bob and Bobb along with friends to continue summer trips to Alaska and Desolation Sound in Canada.



After years of offshore sailing and racing, he was invited to join the Cruising Club of America, one of his many honors. This prestigious yachting society made up of accomplished offshore yachtsman with emphasis on long distance ocean racing is an invitation only membership with members being required to be complete seaman and a good shipmate. Bob was all of that and more!

Finally, not only was he successful as a Swedish Hospital surgeon, but he was a local community City Councilman on Mercer Island, his home, and a former Chairman of the Washington State Medical Quality Control Board. One of his last gestures was to honor his father by endowing the Herbert E. Coe Chair of Pediatric Surgery at the University of Washington Children's Hospital.

- Submitted by George Thomas, MD and Alan Morgan, MD

In Memoriam

STANLEY W. JACOB

1924 - 2015



Stanley W. Jacob was born in Philadelphia January 7, 1924. He was raised in New Jersey, and attended Ohio State University, where he earned his undergraduate and his medical degree. In 1948 he graduated, cum laude, from the medical school. As a medical student Stanley Jacob was inspired by the new chair of surgery at Ohio State, Dr. Robert Zollinger, who helped instill in Dr. Jacob a lifelong interest in research. Dr Jacob served his internship and residency at the Beth Israel Hospital in Boston. In 1950 he began a two year Research Fellowship at Harvard Medical School.

In 1952-53, the last year of the Korean War, Dr Jacob was commissioned in the Army Medical Corps and he was deployed to an Army General Hospital in Japan. After one year, he returned to the US and he worked, primarily doing research, at Walter Reed Hospital in Washington, D.C. Dr Jacob was always proud of his US Army service, and in the last years of his life often wore an Army lapel pin. Returning to Boston in 1956, Dr Jacob served for one year as the Chief Resident in Surgery, on the Harvard Surgical Service at Boston City Hospital. His Professor of Surgery was J. Englebert Dunphy, who would have a major influence on Dr Jacob's career. In 1957, Dr Jacob was appointed to the faculty of Harvard Medical School as an Instructor. The year 1959 was pivotal in Dr Jacob's career; Dr Dunphy had accepted the position of the Mackenzie Professor and Chair of Surgery at the University of Oregon, and he invited Stanley Jacob to join him as an Assistant Professor at Oregon's medical school. In 1960, Dr Jacob's success as an investigator was recognized when he was awarded for five years a coveted Markel Scholarship. Dr Jacob studied the problem of preserving kidneys prior to transplantation, and while engaged in those studies made the observation that dimethyl sulfoxide, an anti-inflammatory agent, had properties that included preservation of organs. When Dr Dunphy moved to San Francisco in 1963, Dr Jacob declined the invitation to move again, and remained on the faculty in Oregon, fully



supporting the new Chair of Surgery, William Krippaehne and his three successors. Dr Jacob championed his entire career the potential therapeutic benefits of DMSO, and consequently had both a large cadre of grateful patients and harsh critics. One grateful patient was the philanthropist Mrs. Beatrice Lee Gerlinger, who endowed the Gerlinger Professor of Surgery and Surgical Research, to which Dr Jacob was appointed in 1981. Dr Jacob wrote a very successful text book Structure and Function in Man illustrated by the University of Oregon's accomplished illustrator Clarice Francone; the book had five editions. Dr Jacob was an enthusiastic and steadfast member of the faculty of the Medical School in Oregon for 56 years, and a member of the Pacific Coast Surgical Association since 1970. He died on January 17, 2015.

- Submitted by Richard J Mullins, MD, FACS

In Memoriam

DAVID STATE

1914-2015



A native of London, Ontario and later a naturalized American citizen, David State received B.A. and M.D. degrees at the University of Western Ontario in Canada. He was trained in general surgery by Dr. Owen Wangenstein at the University of Minnesota School of Medicine, also receiving M.S. and Ph.D. degrees during his training and becoming certified in Surgery and Thoracic Surgery. Following training, Dr. State joined the Minnesota faculty, rose in academic stature to be considered Dr. Wangenstein's second in command of one of the premier academic departments in the nation, and served as Director of the Cancer Detection Center at the University of Minnesota Hospital. After six years at Minnesota, Dr. State left for a short stint in private practice in Arizona.

In 1954, Dr. State was recruited to Cedars of Lebanon Hospital (now Cedars-Sinai Medical Center) in Los Angeles to serve as the first full time Director of the Department of Surgery. Well known in academic circles for his publications and research in gastrointestinal surgery and highly recommended for the position by Dr. Wangenstein, Dr. State was appointed with the charge of building an academic department. During his years at Cedars, Dr. State established a surgical residency program and an active research program along with Dr. Leon Morgenstern and others. He also was a member of the clinical faculty of the University of Southern California School of Medicine during this time.

In 1958, Dr. State was recruited to Albert Einstein College of Medicine in New York to become Professor of Surgery and Chairman of the Department of Surgery. He also served as Director of Surgery and Chief of Cardiovascular and Thoracic Surgery at both the Bronx Municipal Hospital and the Hospital of the Albert Einstein College of Medicine.

In 1971, Dr. State returned to California as Professor of Surgery and Chair of the Department of Surgery at the Los Angeles County Harbor-UCLA Medical Center and Vice Chair of Surgery at UCLA, positions he held until 1981. He is remembered by his resident, and later colleague, Dr. M. Michael Shabot as "a good person, never mean



spirited or egotistical" and "a complete classical general surgeon from the days when general surgeons did everything, with skills in endocrine surgery, breast surgery, chest surgery, trauma surgery, and pediatric surgery. He was happy to teach and never wanted to do a case himself. When he had to get his hands wet, he was adept and quick... The first time I ever saw him, I joined a conference and he was in the back of the room, operating the lantern slide projector, in baggy khaki slacks and a short sleeve shirt, no tie. I thought he was the projectionist - seriously." Regarding the burdens of administration, "Dave's approach was to ignore it. One day he showed me his correspondence drawer, where he put memos and letters he had received. His way of dealing with them was to age them sight unseen for two weeks or so and then review ones from the bottom. He said most problems had gone away or were forgotten by then, so the memos could be tossed. It makes you wonder when we feel so pressed to reply to emails and texts almost instantly."

A gifted and engaging educator recognized for teaching by example, Dr. State trained more than 100 chief residents during his career. Dr. State also was an avid surgical scientist and prolific author who conducted and published research on diverse topics including gastrointestinal physiology and surgery, fluid replacement therapy, pulmonary embolism, and pancreatic and intestinal transplantation among many others. He described a technique for nerve-sparing parotidectomy, and the "State Procedure," a low anterior resection, was an early treatment for Hirschprung's Disease. Dr. State was a prominent member of many professional and scholarly organizations, including the American Surgical Association, the American Association for the Advancement of Science, and the Halsted Society. Among his honors, he received the Sherman M. Mellinkoff Faculty Award of the UCLA School of Medicine in 1990. He was a member of the Pacific Coast Surgical Association since 1973.

Dr. State is survived by his beloved wife of 69 years, Avis State; his three daughters, Claudia Feld, an artist, Leslie Tarlow, a nurse practitioner, and Rosanne State, M.D., a psychiatrist; his son Matthew State, M.D., Ph.D., Chairman and Distinguished Professor of Psychiatry at UC San Francisco; and seven grandchildren and three great-grandchildren. Dr. State's son Norman predeceased him.

Dr. State remained active at Harbor for many years after his retirement from the chair, keeping busy with teaching, running the breast clinic, and operating with the residents. He died on April 20, 2015 at the age of 100. David State is remembered as a working general surgeon from a bygone era, but whose many contributions to surgical education and surgical science continue to distinguish him today.

- Submitted by Jonathan R. Hiatt, MD, FACS



FUTURE MEETINGS

2017

FEBRUARY 17-20, 2017

HOST: Southern California

SITE: Hyatt Regency Indian Wells
Resort & Spa, Indian Wells, CA

2018

FEBRUARY 16-19, 2018

HOST: Northern California

SITE: The Meritage Resort and Spa, Napa, CA



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