

**An Overview of Perioperative Medicine 2024:**  
**From Outpatient Preoperative Assessment to Inpatient Postoperative**  
**Care Ritz-Carlton, Amelia Island, FL and LIVESTREAM**

*\*\*All times noted are Eastern Time (ET)\*\**

**September 10 – 14, 2024**

TUESDAY, SEPTEMBER 10, 2024

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**6:30 a.m. Registration and Continental Breakfast**

**Perioperative Medicine Panel #1 and Anesthesia Topics**

**7:30 a.m. Welcome and Course Overview**

**7:45 a.m. Perspectives on the Multi-Disciplinary Approach to Perioperative Medicine**

*Moderator: Margaret Beliveau, M.D.*

*Panel: John Bundrick, M.D., Adam Jacob, M.D., and Krystin A. Hidden, M.D*

- What are the roles of the medical consultant?
- What should a preoperative evaluation include?
- How can a multidisciplinary approach optimize patient care?

**8:15 a.m. Anesthesia Alerts for the Non-Anesthesiologist**

*Douglas Pfeil, M.D., Ph.D.*

- Is general anesthesia more risky than spinal anesthesia for some patients?
- How do I counsel my patients about energy drinks, alcohol, nicotine the night before surgery?
- What should I tell the patient about fasting?
- How do I accurately assign an ASA score?
- What are some of the post-anesthesia issues you might encounter?
- What should the consultant know about tranexamic acid intraoperatively?

**Cardiovascular Medicine Topics, Part 1**

**9:00 a.m. Cardiac Risk Assessment: Using Guidelines to Direct Practice**

*Karen F. Mauck, M.D.*

- How do I apply the current ACC/AHA guidelines to preoperative cardiac risk assessment?
- Should I use risk calculators?
- How might the Canadian and EU Guidelines impact my practice?
- Which patients should have NT-PROBNP and/or Troponins preoperatively?

**9:45 a.m. Cardiac Risk Reduction Strategies – Medical and Interventional**

*Howard H. Weitz, M.D.*

- What are the risks of general vs spinal anesthesia with respect to cardiac outcomes?
- What is the evidence for perioperative beta-blocker, statin and alpha-2-agonist use?
- When is cardiac revascularization indicated prior to non-cardiac surgery?
- How long should patients wait to have surgery after MI or revascularization?

**10:30 a.m. Question and Answer Session**

*Karen F. Mauck, M.D. and Howard H. Weitz, M.D.*

**10:45 a.m. Refreshment Break**

## Cardiovascular Medicine Topics, Part 2 and Clinical Shorts

- 11:00 a.m.**      **Management of Non-CAD Heart Disease in Non-Cardiac Surgery**  
*Howard H. Weitz, M.D.*
- How do I manage a patient with valvular heart disease perioperatively?
  - How soon after valve replacement can non-cardiac surgery be performed?
  - What issues need to be considered for a patient with heart failure preoperatively?
  - What are the issues with preoperative hypertension?
  - What are the preoperative issues for patients with chronic atrial fibrillation?
  - What perioperative issues need to be considered in a patient with hypertrophic cardiomyopathy?
  - What are the indications for a temporary pacemaker in the perioperative period?
  - How do I manage pacemakers and CIEDs in the perioperative period?
- 11:45 p.m.**      **Clinical Shorts**
- Cardiac Stress Tests**  
*Christopher A. Dinh, M.D.*
- How do I choose a cardiac stress test?
- Preoperative ECG and Echocardiogram**  
*Brian M. Dougan, M.D.*
- When are preoperative ECGs and echocardiograms indicated?
- Myocardial Injury after Non-Cardiac Surgery (MINS)**  
*Dennis W. Regan, M.D.*
- Is MINS significant and is there any evidence-based treatment?
  - Which patients should be surveilled for MINS?
- Pulmonary Hypertension**  
*Kathryn T. del Valle, M.D.*
- What perioperative issues need to be considered in a patient with pulmonary hypertension or elevated right sided pressures on TTE?
- 12:45 p.m.**      **Question and Answer Session**  
*Howard H. Weitz, M.D., Christopher A. Dinh, M.D., Brian M. Dougan, M.D., Dennis W. Regan, M.D., and Kathryn T. del Valle, M.D.*
- 1:00 p.m.**      **Adjourn**

WEDNESDAY, SEPTEMBER 11, 2024

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- 6:30 a.m.**      **Breakfast with the Professor featuring Tuesday's Course Faculty**
- Come with questions, discussion and your tough cases for the course faculty!

## Pain Management and Substance Use Topics

- 7:30 a.m.**      **Pain Management in the Perioperative Period**  
*Eric S. Schwenk, M.D.*
- What are the key issues in patients on chronic opioids preoperatively?
  - What are the common PCA doses for postoperative pain control?

- What are some of the basics for use of ketamine and multimodal analgesia postoperatively?
- What are the commonly used opioids in the postoperative setting and how do I choose (elderly, renal failure, liver disease)?
- How should patients on multiple sedating medications postoperatively be monitored?
- What is the best strategy for prescribing opioids on hospital discharge?

**8:15 a.m. Managing the Patient with Perioperative Substance Use Disorders**

*Charles P. Reznikoff, M.D.*

- How do I screen for substance use preoperatively?
- Are there drug interactions with cannabis and what are the other perioperative considerations in patients with regular or recent cannabis use?
- What are the perioperative issues with the use of common substances such as methamphetamine, heroin, and cocaine?
- When should surgery be delayed or postponed in patients with substance use?
- How do I manage patients on Suboxone and methadone perioperatively?
- How can I use prescription monitoring programs in the perioperative setting?

**9:15 a.m. Question and Answer Session**

*Eric S. Schwenk, M.D. and Charles P. Reznikoff, M.D.*

**Clinical Shorts**

**9:30 a.m. Non-Cardiac Device Management**

*Adam K. Jacob, M.D.*

- How do I manage non-cardiac devices perioperatively, such as deep brain stimulators, pain pumps, acupuncture devices, etc?

**Prehabilitation**

*Margaret Beliveau, M.D.*

- Does exercise prehabilitation have a role in some patients prior to surgery?

**Preoperative Anemia and Iron Therapy**

*David Raslau, M.D.*

- When should I consider perioperative iron therapy and how is it administered?

**10:15 a.m. Refreshment Break**

**10:30 a.m. Laparoscopic Surgery and Patient Positioning – Why it Matters**

*Adam K. Jacob, M.D.*

**Physiologic Effects of Anesthetic Drugs**

*Douglas Pfeil, M.D., Ph.D.*

- What does the medical consultant need to know about the paralytic agents and the physiologic effects of anesthesia?

**Alcohol Use Disorder in the Perioperative Setting**

*Charles P. Reznikoff, M.D.*

- How should I manage patients with AUD in the perioperative setting?

**11:15 a.m. Question and Answer Session**

*Adam K. Jacob, M.D., Margaret Beliveau, M.D., David Raslau, M.D., Douglas Pfeil, M.D., Ph.D., and Charles P. Reznikoff, M.D.*

## Perioperative Medicine Panel #2

### 11:30 a.m. Stop or Go? Perioperative Show Stoppers

*Moderator: Rick Silbert, M.D.*

*Panel: Karen Mauck, M.D. Adam Jacob, M.D., Joan M. Irizarry Alvarado, M.D., Dennis Regan, M.D.*

- What patients are not appropriate for outpatient surgery?
- Outpatient prep for next day surgery – who should be delayed?
- First case! Are there hospitalized patients with an urgent surgical indication who would benefit from 24-48 hours of medical optimization?
- What are some of the issues that justify delaying surgery?

## Infectious Disease

### 12:00 p.m. Perioperative Infectious Disease Issues

*Mary J. Kasten, M.D.*

- How do I approach the postoperative fever workup?
- Which patients need antibiotic prophylaxis perioperatively and for how long?
- Do I need to order a urinalysis and culture prior to total joint surgery?
- Is there a role for the use of probiotics to prevent postoperative infections?

### 12:30 p.m. Perioperative COVID-19 Issues

*David M. Phelan, M.D.*

- What is the best approach for preoperative COVID-19 testing?
- How do I manage a patient who is COVID-19 positive and requires urgent surgery?
- How long should patients wait to have surgery after COVID-19 infection?

### 12:45 p.m. Question and Answer Session

*Mary J. Kasten, M.D. and David M. Phelan, M.D.*

### 1:00 p.m. Adjourn

## Optional Workshop with Lunch (*pre-registration required*)

### 1:20 p.m. Workshop Option #1: The Multidisciplinary Approach to Perioperative Medicine

*Adam K. Jacob, M.D.; Karna K. Sundsted, M.D.; Karen F. Mauck, M.D., Geno J. Merli, M.D., Margaret Beliveau, M.D., James W. Manz, M.D., Joan M. Irizarry Alvarado, M.D., Lisa M. Belch, APRN, C.N.P.; Jessica A. Lindblom, APRN, C.N.P.; Shari M. Phelan, P.A.-C.*

- Review the role of NP/PAs, anesthesiologists, internists, and hospitalists in the continuum of perioperative care at Mayo
- How do patients get triaged for video vs face-to-face visits?
- How is the EMR used to perform the preoperative checklist?
- Which patients require a more complex preoperative evaluation with an anesthesiologist or internist?
- How does the patient flow work in the preop clinic?

- How are patients with anemia or penicillin allergy managed preop?
- How are complex postoperative patients managed in the inpatient setting?
- How are learners incorporated in the perioperative setting?

**1:20 p.m. Workshop Option #2: Using Point of Care Ultrasound in Your Perioperative Practice**

*Joshua Overgaard, M.D., Will M. Schouten, M.D., David N. Brennan, M.D.*

- What are the basics of POC ultrasound and how can it help me in the perioperative setting?
- How can I quickly assess for fluid status at the bedside?
- What brands of handheld ultrasounds are available?
- This workshop will include a hands-on opportunity to use a handheld device to assess the vena cava

**3:20 p.m. Adjourn**

THURSDAY, SEPTEMBER 12, 2024

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**6:30 a.m. Breakfast with the Professor featuring Wednesday's Course Faculty**

- Come with questions, discussion, and your tough cases for the course faculty!

**Cardiovascular Part 3, Medication and Fluid Management Topics**

**7:30 a.m. Managing Postoperative Cardiac Complications**

*Howard H. Weitz, M.D.*

- Which patients should have an ECG and/or troponin surveillance for postoperative MI?
- How do I manage hyper- and hypotension postoperatively?
- What are the precipitating factors for postoperative arrhythmias and conduction disorders and how do I manage them?
- Which surgeries and patients have high risk for postoperative atrial fibrillation? Are there ways to prevent postoperative atrial fibrillation? How do I manage postoperative atrial fibrillation?
- How do I diagnose and manage postoperative myocardial ischemia and infarction?
- How important is "troponin leak" postoperatively?
- What special perioperative management is needed for patients with heart failure (systolic heart failure and heart failure with preserved ejection fraction)?

**8:15 a.m. Understanding Perioperative Fluid Management**

*John B. Bundryck, M.D.*

- What is unique about fluid management perioperatively?
- Which is better-- liberal or restrictive fluid management?
- What type of fluid is optimal?
- How can POC ultrasound be helpful in fluid management?

**8:45 a.m. Perioperative Medication Jeopardy**

*Host: Christopher R. Stephenson, M.D.*

- What overarching issues need to be considered for perioperative medication management?
- Test your knowledge of the how to manage common perioperative medications!
- Learn how to manage herbals/supplements, weight loss drugs and ICIs
- Apply the SPAQI consensus statements to perioperative medication management

**9:45 a.m. Question and Answer Session**

10:00 a.m. Refreshment Break

## Rheumatology and Hip Fracture

10:15 a.m. **Perioperative Rheumatology Considerations**

*Ashima Makol, M.B.B.S.*

- How do I manage DMARDS and other rheumatologic medications in patients who require surgery?
- What are the perioperative risks associated with rheumatologic diseases?
- How do I diagnose and manage acute crystalline arthritis in the surgical patient?

10:45 a.m. **Perioperative Management of Hip Fractures: Internal Medicine and Orthopedic Surgery Perspectives**

*Karna K. Sundsted, M.D. and Krystin A. Hidden, M.D.*

- What are the areas of collaboration and controversy in the management of patients with hip fracture?
- How long do we have for medical optimization of hip fracture patients?
- What are some hip fracture basics that are helpful to the internist?

11:30 a.m. **Question and Answer Session**

*Ashima Makol, M.B.B.S., Karna K. Sundsted, M.D. and Krystin A. Hidden, M.D.*

11:45 a.m. **Lunch On Your Own**

## Pulmonary and Geriatric Topics

1:15 p.m. **Preoperative Pulmonary Risk Stratification, Risk Reduction and Postoperative Management Strategies**

*Sandeep R. Pagali, M.D.*

- Which factors contribute to pulmonary risk in non-cardiac surgery?
- Which pulmonary risk index best predicts postoperative pulmonary complications?
- When is pulmonary testing recommended preoperatively?
- What measures can be employed to help minimize postoperative pulmonary complications in at-risk patients?
- How should I approach a new oxygen requirement postoperatively?
- When should postoperative non-invasive ventilation be considered?

2:00 p.m. **Perioperative Care of the Elderly Patient**

*Margaret Beliveau, M.D.*

- How old is too old to consider surgery?
- What are the risk factors and preventive measures for postoperative delirium?
- What diagnostic workup is recommended for patients with suspected postoperative delirium?
- Do DNR orders need to be suspended prior to surgery and if so, when should DNR orders be reinstated postoperatively?

2:30 p.m. **Recognizing and Addressing Frailty**

*Donna Miller, M.D.*

- How is the frailty index used to identify patients at risk of postoperative complications?

- Are there preoperative management strategies to address frailty?
- How should frailty be managed in the postoperative period to minimize risk?

**3:00 p.m.**

**Question and Answer Session**

*Sandeep R. Pagali, M.D., Margaret Beliveau, M.D., and Donna Miller, M.D.*

**Perioperative Medicine Panel #3**

**3:15 p.m.**

**Acute Postoperative Complications Not to Miss**

*Panel: Deanne T. Kashiwagi, M.D., Karna K. Sundsted, M.D., Aditya P. Devalapalli, M.D., Bright P. Thilagar, M.D.,*

- When should I be concerned about fat embolism syndrome and how is it treated?
- What is an important cause of fever in patients who have undergone spine surgery?
- When should retroperitoneal hematoma be considered in a patient with postoperative anemia?
- What are some important clinical features of postoperative compartment syndrome?

**4:15 p.m.**

**Attendee Reception**

**4:45 p.m.**

**“Consult Guys” Presentation:**

(CME credit will not be provided for this session)

*Geno J. Merli, M.D. and Howard H. Weitz, M.D.*

**5:15 p.m.**

**Adjourn**

FRIDAY, SEPTEMBER 13, 2024

**6:30 a.m.**

**Breakfast with the Professor featuring Thursday’s Course Faculty**

**Sleep Medicine and Neurology Topics**

**7:30 a.m.**

**Management of Documented or Suspected Obstructive Sleep Apnea in Patients Undergoing Noncardiac Surgery**

*Eric Olson, M.D.*

- What are the consequences of OSA in the perioperative period?
- What factors increase risk of postoperative complications in patients with OSA?
- How should patients be screened for OSA?
- What are the risks of obesity hypoventilation syndrome?
- Which patients need to be tested prior to surgery to decrease the risk of potential complications?
- Which patients can be treated as “presumed” OSA and proceed with surgery with additional precautions?
- Are there guidelines available to help guide management of patients with OSA in the perioperative period?
- What postoperative monitoring is recommended for patients with suspected or confirmed OSA?

**8:15 a.m.**

**Managing Patients with Neurologic Disease in the Perioperative Period**

*Andrea N. Leep Hunderfund, M.D., MHPE*

- How do I manage patients with seizure disorder in the perioperative period?
- How do I manage patients with Parkinson’s disease perioperatively?

- What do I do if I find an asymptomatic carotid bruit during a preoperative evaluation?
- How do I determine appropriate timing for elective surgery after ischemic stroke?

**8:45 a.m. Question and Answer Session**

*Eric Olson, M.D. and Andrea N. Leep Hunderfund, M.D., MHPE*

**VTE Prophylaxis, Hematology and Anticoagulation**

**9:00 a.m. DVT/PE Prophylaxis in the Surgical Patient I: The Internist's Perspective**

*Geno J. Merli, M.D.*

- What are the patient- and surgery-related risk factors for perioperative DVT; what tool should I use to calculate risk?
- What guideline should I use for DVT prophylaxis in surgical patients?
- When is extended DVT prophylaxis indicated?
- How does renal function affect the management of DVT prophylaxis?
- How do I determine which patients are at increased risk of postoperative bleeding?

**9:30 a.m. DVT/PE Prophylaxis in the Surgical Patient II: The AAOS Guidelines and the Orthopedist's Perspective**

*Krystin A. Hidden, M.D.*

- What concerns do orthopedists have about DVT prophylaxis?
- What are the AAOS Guideline recommendations for DVT prophylaxis in orthopedic surgical patients?
- When is extended DVT prophylaxis indicated and which agent is best?

**10:00 a.m. Perioperative Management of Direct Oral Anticoagulants**

*Geno J. Merli, M.D.*

- How long should I hold dabigatran, rivaroxaban or apixaban before surgery?
- Now that some reversal agents are available, should we routinely be using these to expedite DOAC reversal preoperatively in patients who need urgent surgery?
- When should target specific oral anticoagulants be restarted postoperatively?
- Do patients on target specific oral anticoagulants need to be bridged?
- How do I manage prolonged DVT prophylaxis in patients who are also taking dabigatran, rivaroxaban, edoxaban or apixaban?
- How should we reverse these agents if major bleeding occurs?

**10:30 a.m. Question and Answer Session**

*Geno J. Merli, M.D. and Krystin A. Hidden, M.D.*

**10:45 a.m. Refreshment Break**

**11:00 a.m. Cases from the Vascular Clinic**

*Matthew Bartlett, M.D.*

- Which patients with atrial fibrillation need bridging anticoagulation perioperatively?
- Which patients with mechanical heart valves need bridging anticoagulation perioperatively?
- Can you recommend an approach to anticoagulation dosing and the timing of bridging?
- How and when should anticoagulation be restarted after surgery?

**11:30 a.m. Common Hematology Issues in the Perioperative Period**

*Rajiv K. Pruthi, M.B.B.S.*



- Which transfusion strategy is best in the perioperative period—conservative or liberal?
- What should trigger transfusion in the postop period?
- When are factor concentrates and/or FFP indicated preoperatively?
- What is the role of platelet transfusion in patients taking antiplatelet agents who need emergent or urgent surgery?
- How do I diagnose and treat heparin induced thrombocytopenia in the perioperative period?
- How do I manage non-HIT thrombocytopenia?
- How do I manage patients with sickle cell disease perioperatively?

**12:15 p.m. Question and Answer Session**  
*Matthew Bartlett, M.D. and Rajiv K. Pruthi, M.B.B.S.*

**12:30 p.m. Adjourn**

SATURDAY, SEPTEMBER 14, 2024

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**6:30 a.m. Breakfast with the Professor featuring Friday's Course Faculty**

### Perioperative Endocrine and Nephrology Topics

**7:30 a.m. Managing the Diabetic Patient in the Perioperative Period**

*Vinaya Simha, M.B.B.S., M.D.*

- Should I be screening for diabetes preoperatively in patients who are at risk?
- When would I recommend postponing an elective surgical procedure because of poor diabetic control?
- How should I manage patients on insulin therapy in the perioperative period?
- How should I manage patients on oral hypoglycemics in the perioperative period?
- How should I manage patients on insulin pumps in the perioperative period?
- What is the optimal glycemic control in the postop setting?

**8:15 a.m. Perioperative Management of the Patient with Kidney Disease**

*Andrea G. Kattah, M.D.*

- What perioperative issues do I need to consider for a patient with kidney disease?
- How do I manage patients with advanced kidney disease, at risk for requiring perioperative hemodialysis?
- What are the key considerations for patients on peritoneal dialysis?
- How do I prevent acute kidney injury in the perioperative period?
- Which electrolyte abnormalities should delay surgery?
- Are there some key perioperative recommendations for patients who are on the kidney transplant list?

**8:45 a.m. Perioperative Management of Endocrine Issues: Stress Dose Steroids, Adrenal Insufficiency, Thyroid Disease**

*Vinaya Simha, M.B.B.S., M.D.*

- What issues do I need to consider in patients with hypothyroidism or hyperthyroidism in the perioperative period?
- Which patients should have thyroid function testing preoperatively?
- Who is at risk for adrenal insufficiency perioperatively?
- How do I determine the need for and the dose of stress dose steroids in the surgical patient?

- Do patients who receive dexamethasone for prevention of nausea and vomiting also need stress dose hydrocortisone as well?

**9:15 a.m. Question and Answer Session**  
*Vinaya Simha, M.B.B.S., M.D. and Andrea G. Kattah, M.D.*

**9:30 a.m. Refreshment Break**

### Gastrointestinal and Nutrition Topics

**9:45 a.m. Perioperative Management of the Patient with Liver Disease**

*William Sanchez, M.D.*

- How do I approach preoperative risk assessment in a patient with liver disease?
- What is the VOCAL-PENN Score?
- Which patients with liver disease may not be good candidates for elective surgery due to a significant increase in perioperative morbidity and mortality?
- What are the common postoperative issues for patients with advanced liver disease and clinical pearls for managing them?
- What do I need to know about managing the transplant patient undergoing non-cardiac surgery?

**10:30 a.m. Management of Postoperative Gastrointestinal Complications**

*Arya B. Mohabbat, M.D.*

- How do I prevent and manage postoperative nausea and vomiting?
- How should I evaluate a patient with postoperative diarrhea?
- What agents are recommended to prevent stress related mucosal disease in the surgical patient?
- How do I manage postoperative constipation and postoperative ileus?

**11:00 a.m. Perioperative Nutrition Considerations**

*Ryan T. Hurt, M.D., Ph.D.*

- from a preoperative nutrition consultation?
- What preoperative testing is useful to assess nutritional status?
- Does optimizing nutrition preoperatively improve outcomes?
- When should patients receive TPN in the perioperative setting?
- What can be done postoperatively?

**11:30 a.m. Question and Answer Session**

*William Sanchez, M.D., Arya B. Mohabbat, M.D. and Ryan T. Hurt, M.D., Ph.D.*

### Finale: Perioperative Literature Update

**11:45 a.m. Recently Published Practice Changing Evidence in Perioperative Medicine**

*Maleka Khambaty, M.D.*

- What are some of the key perioperative publications from the past year?
- How do I apply this recent evidence to my practice?
- What are some of the limitations of the publications?

**12:15 p.m. Adjourn**