

# Twelfth Annual

## SURGICAL RESEARCH FORUM

8:00 a.m. – 12:00 p.m.  
Friday, June 19, 2009  
The Heart Institute Auditorium  
Providence Hospital  
Southfield, MI

Surgical Education Committee:

Vijay Mittal, M.D., Committee Chair  
Program Director, General Surgery

Laurence Cheung, M.D.  
Chairman, Department of Surgery

Tamer Boules, M.D.	William Kestenberg, M.D.
Amir Damadi, M.D.	R. Kolachalam, M.D.
Linda Dubay, M.D.	Alasdair McKendrick, M.D.
Lorenzo Ferguson, M.D.	Kevin Nolan, M.D.
Jeffrey C. Flynn, Ph.D.	William Oppat, M.D.
Yousif Goriel, M.D.	Paraskevi Orfanou, M.D.
John Hramiec, M.D.	Ralph Pearlman, M.D.
Michael Jacobs, M.D.	Sumet Silapaswan, M.D.

## AGENDA

Breakfast 7:30 a.m.

Welcome by Vijay Mittal, M.D. 8:00 a.m.

Guest Speakers:

**J. David Marler, Jr., Ph.D.** 8:05 a.m.

Former Director, Graduate Medical Education  
Providence Hospital and Medical Centers  
Site Reviewer, ACGME  
“ACGME Perspective on Surgical Research and  
Scholastic Activity”

**Vijay Trisal, M.D.** 8:35 a.m.

Assistant Clinical Professor,  
Department of General Surgical Oncology  
City of Hope National Cancer Center  
Duarte, CA  
“Melanoma Management”

Break 9:05 – 9:15 a.m.

Resident Presentations:

**Elizabeth Kim, M.D.** 9:15 a.m.

“Targeted Therapy in Breast Cancer”

**Matthew Malamet, M.D.** 9:30 a.m.

“Should Incentives Play a Role in Encouraging General  
Surgery Faculty and Residents to Perform Research?”

**Karen McFarlane, M.D.** 9:45 a.m.

“The Lessons of Giving Back”

**Ahmad Ahad, M.D.** 10:00 a.m.

“Expression of Interferon Receptor Alpha/Beta in Human  
Pancreatic Cancer in Nude Mice is Essential for Tumor  
Response to Interferon Alpha Treatment”

**Paul Avenel, M.D.** 10:15 a.m.

“Acute Colonic Pseudo-obstruction (Ogilvie’s Syndrome)”

**David Machado-Aranda, M.D.** 10:30 a.m.

“Metastatic Leiomyosarcoma of the Ileo-femoral Vein  
System with Lower Extremity Vascular Reconstruction”

**Aditya Gupta, M.D.** 10:45 a.m.

“Parathyroidectomy with and without Intra Operative  
Parathormone Monitoring”

**Gokulakrishna Subhas, M.D.** 11:00 a.m.

“Endoscopy Training in General Surgery”

## **Publications (2008-2009)**

- Brooks, S. E., R. F. Saidi, A. McKendrick, and M. J. Jacobs. Simultaneous duodenal villous adenoma, hepatocellular carcinoma, and colon carcinoma. *Surgical Rounds*, 31:43-45, 2008.
- Bu-Ali, H., M. Solh, A. Kapur, and V. Mittal. Receptor characteristics of the second tumor in synchronous versus metachronous breast cancer. *American Surgeon*, 74:702-706, 2008.
- Chaiyasate, K., A. K. Jain, L. Y. Cheung, M. J. Jacobs, and V. K. Mittal. Prognostic factors in primary adenocarcinoma of the small intestine: 13-year single institution experience. *World Journal of Surgical Oncology*, 6:12, 2008.
- Danquah-Ayensu, G., R. F. Saidi, and M. J. Jacobs. Retroperitoneal cystic lymphangioma in an adult. *Surgical Rounds*, 2008 (Accepted for publication).
- Robertson, A. G. N., D. J. McKeown, G. Bello-Rojas, Y.-J. Chang, A. Rogers, B. J. Beal, M. Blake, and I. T. Jackson. Use of buccal myomucosal flap in secondary cleft palate repair. *Plastic and Reconstructive Surgery*, 122:910-917, 2008.
- Chaiyasate, K., I. T. Jackson, and V. K. Mittal. Comparing FK-506 with basic fibroblast growth factor (b-FGF) on the repair of a peripheral nerve defect using an autogenous vein bridge model. *Journal of Investigative Surgery*, 2009 (Accepted for publication).
- Chang, Y.-J. and V. K. Mittal. Hepato-pancreato-biliary training in general surgery residency: is it enough for the real world? *American Journal of Surgery*, 197:291-295, 2009.
- Gupta, A., G. Subhas, V. K. Mittal, and M. J. Jacobs. Pancreatic schwannoma: literature review. *Journal of Surgical Education*, 2009 (Accepted for publication).
- Kansakar, E., Y.-J. Chang, M. Merhabi, S. Raheja, and V. Mittal. Expression of estrogen receptor, progesterone receptor and vascular endothelial growth factor-A in thyroid cancer. *American Surgeon*, 2009 (Accepted for publication).
- Kim, E. M. H., C. Loboeki, L. Dubay, and V. K. Mittal. A specific vascular endothelial growth factor receptor tyrosine kinase inhibitor enhances the antiproliferative effect of trastuzumab in human epidermal growth factor receptor 2 overexpressing breast cancer cell lines. *American Journal of Surgery*, 197:331-336, 2009.
- Kim, E., G. Subhas, V. K. Mittal, and E. S. Golladay. C-reactive protein estimation does not improve accuracy in the diagnosis of acute appendicitis in pediatric patients. *International Journal of Surgery*, 7:74-77, 2009.

- Machado-Aranda, D., M. Malamet, Y.-J. Chang, M. J. Jacobs, L. Ferguson, S. Silapaswan, Y. Goriel, R. Kolachalam, and V. K. Mittal. Prevalence and management of gastrointestinal stromal tumors. *American Surgeon*, 75:55-60, 2009.
- Patel, P., G. Subhas, A. Gupta, Y.-J. Chang, V. K. Mittal, and A. McKendrick. Oral vitamin A enhances the effectiveness of formalin 8% in treating chronic hemorrhagic radiation proctitis. *Diseases of the Colon and Rectum*, 2009 (Accepted for publication).
- Saidi, R. F. and M. J. Jacobs. Adjuvant interferon-based chemoradiation followed by gemcitabine for resected pancreatic adenocarcinoma: a single-institution phase II study. *Annals of Surgery*, 249:865, 2009.
- Subhas, G., S. Balaraman, V. K. Mittal, and R. Pearlman. Extraluminal rectal mucocele due to bowel sequestration at anastomotic site following sigmoidoscopy - case report and literature review. *American Surgeon*, 2009 (Accepted for publication).
- Subhas, G., A. Gupta, M. Nawalany, and W. Oppat. Spontaneous isolated superior mesenteric artery dissection - a case report and literature review with management algorithms. *Annals of Vascular Surgery*, 2009 (Accepted for publication).
- Subhas, G., V. K. Mittal, L. Ferguson, and S. Silapaswan. Abdominal wall pseudocyst fluid collection as a complication of pancreatic pseudocyst. *Journal of Surgical Education*, 2009 (Accepted for publication).
- Subhas, G., S. Yoo, Y.-J. Chang, D. Pieper, M. J. Frikker, D. L. Bouwman, A. Silbergleit, L. R. Lloyd, and V. K. Mittal. Benefits of mock oral examinations in a multi-institutional consortium for board certification in general surgery training. *American Surgeon*, 2009 (Accepted for publication).

## **Presentations (2008-2009)**

### **International Hepato-Pancreato-Biliary Association Meeting (Mumbai, India; February 27-March 2, 2008)**

#### Oral presentations:

- Chang, Y.-J., M. Jacobs, and V. Mittal. Necessity of advanced training in hepato-pancreato-biliary surgery.
- Mittal, V., E. Kansakar, Y.-J. Chang, M. Jacobs, S. Silapaswan, and L. Ferguson. Outcomes of pancreatic surgery improve after establishing a hepato-pancreato-biliary service in a community hospital.

Mittal, V. K. Whole organ pancreatic transplantation. (Guest speaker)

Video presentation:

Jacobs, M. J. Three-port laparoscopic subtotal distal pancreatectomy.

Poster presentations:

Ahad, A., P. Patel, M. Jacobs, and V. Mittal. Gallbladder cancer in a patient presenting with massive weight loss.

Jacobs, M. and S. Malladi. Hepatocellular adenoma with malignant transformation: a case report.

Jacobs, M., E. Kansakar, and J. Chang. Primary adenocarcinoma of gallbladder with solitary intraabdominal metastasis from colonic adenocarcinoma.

Malladi, S. V., Y.-J. Chang, V. Mittal, L. Maas, and M. J. Jacobs. Autoimmune pancreatitis and obstructive jaundice - a challenging diagnosis.

Malladi, S. V., Y.-J. Chang, V. Mittal, and M. J. Jacobs. Giant lipoma of head of pancreas - a case report.

Yoo, S., C. N. Tchanque, Y.-J. Chang, M. J. Jacobs, and V. K. Mittal. Laparoscopic hand assisted necrosectomy for severe gallstone pancreatitis.

**XXXVI World Congress of the International College of Surgeons (Vienna, Austria; December 3-6, 2008)**

Mittal, V. K. Cardiovascular injuries. (Guest speaker)

Mittal, V. K. Safe surgery saves lives. (Guest speaker)

Patel, P., A. McKendrick, Y.-J. Chang, A. Gupta, and V. Mittal. Vitamin A enhances the effectiveness of formalin 8% in treating hemorrhagic radiation proctitis.

**International College of Surgeons – United States Section (Reno, NV; June 4-7, 2008)**

Chang, Y.-J. HPB experience in general surgery training. (Guest speaker)

Jacobs, M. J. Metastatectomy for liver tumors. (Guest speaker)

Kansakar, E., Y.-J. Chang, M. Merhabi, and V. Mittal. Comparison of estrogen, progesterone and vascular endothelial growth factor receptor expression in thyroid malignancies. (*Award: research scholarship*)

Mittal, V. K. Natural orifice transdermal endoscopic surgery (NOTES). (Guest speaker)

Taggarshe, D., D. Bakston, Y.-J. Chang, A. McKendrick, and V. K. Mittal. Is conservative management as effective as surgery for enterocutaneous fistulae? (*Award: research scholarship*)

**American Society of Colon and Rectal Surgeons Meeting (Boston, MA; June 7-11, 2008)**

Patel, P., A. McKendrick, Y.-J. Chang, A. Gupta, and V. Mittal. Efficacy of the combination of formalin 8% solution and Vitamin A in treating hemorrhagic radiation proctitis.

**Midwest Surgical Association Meeting (Mackinac Island, MI; August 3-6, 2008)**

Chang, Y.-J., M. J. Jacobs, and V. K. Mittal. Hepato-pancreato-biliary training in general surgery residencies: is it enough for the real world?

Kim, E., C. Loboeki, L. Dubay, and V. Mittal. A specific VEGF-R tyrosine kinase inhibitor enhances the antiproliferative effect of Trastuzumab in ErbB-2 overexpressing breast cancer cells.

**Southeastern Surgical Congress (Birmingham, AL; February 9-12, 2008)**

Oral presentations:

Bu-Ali, H., H. Marciano, M. Solh, and V. Mittal. Characteristics of the second tumor in synchronous versus metachronous breast cancer (*Award: Gold Medal Forum presentation*).

Malamet, M., D. Machado-Aranda, G. Danquah-Ayensu, K. Chaiyasate, L. Ferguson, S. Silapaswan, and V. Mittal. Increasing prevalence of gastrointestinal stromal tumor.

Poster presentation:

Yoo, S., M. Jacobs, S. Silapaswan, and V. Mittal. The rolled polypropylene mesh inguinal hernia repair.

**MI Chapter of American College of Surgeons (Coller Day; Frankenmuth, MI; May 15-16, 2008)**

Patel, P., A. McKendrick, Y.-J. Chang, A. Gupta, L. Cheung, and V. Mittal. Vitamin A enhances the effectiveness of formalin 8% in treating hemorrhagic radiation proctitis.

Yoo, S. and V. Mittal. Benefits of mock oral examinations in a multi-institutional consortium for board certification in general surgery training.

### **Detroit Surgical Association Meetings**

- Kansakar, E., Y.-J. Chang, S. Silapaswan, L. Ferguson, W. Kestenberg, M. Jacobs, and V. Mittal. Outcomes of pancreatic surgery improve after establishing a hepato-pancreato-biliary service in a community hospital (January 28, 2008).
- Ahad, A., R. F. Saidi, I. Nalbantoglu, and M. J. Jacobs. The expression of interferon receptor alpha/beta in human pancreatic cancer in nude mice is essential for tumor response to interferon alpha treatment (September 15, 2008).
- Chang, Y.-J. and V. K. Mittal. Hepato-pancreato-biliary training in general surgery residencies: is it enough for the real world? (November 24, 2008).

### **SEMCME 30th Annual Research Forum (Rochester, MI; May 21, 2008)**

- Patel, P., A. McKendrick, Y.-J. Chang, A. Gupta, L. Cheung, and V. Mittal. Vitamin A enhances the effectiveness of formalin 8% in treating hemorrhagic radiation proctitis.

### **Providence Hospital Research Day (Southfield, MI; April 30, 2008)**

#### Oral presentations:

- Patel, P., A. McKendrick, Y.-J. Chang, A. Gupta, L. Cheung, and V. Mittal. Vitamin A enhances the effectiveness of formalin 8% in treating hemorrhagic radiation proctitis (*Award: Third place - Resident oral presentation*)
- Taggarshe, D., D. Bakston, Y.-J. Chang, A. McKendrick, and V. K. Mittal. Is conservative management as effective as surgery for enterocutaneous fistulae?

#### Poster presentations:

- Kansakar, E., Y.-J. Chang, M. J. Jacobs, S. Silapaswan, W. Kestenberg, and V. Mittal. Improvements in outcomes of pancreaticoduodenectomies at a community teaching hospital.
- Tchanque, C. N., N. Teklehaimanot, M. Malamet, K. N. McFarlane, S. Silapaswan, D. Lincoln, and M. J. Jacobs. Bilateral obturator hernias causing high grade small bowel obstruction.

### **41<sup>st</sup> North American Federation Congress of the International College of Surgeons (Montreal, Canada; May 27-30, 2009)**

- Gupta, A., G. Subhas, B. R. Herschman, S. Silapaswan, R. Kolachalam, W. Kestenberg, L. Ferguson, M. J. Jacobs, and V. K. Mittal. Comparative study of consecutive parathyroidectomies with and without intra operative parathormone monitoring. (*Award: First place, research scholarship honors*)
- Jacobs, M. J. Technical tips in laparoscopic pancreatic surgery. (Guest speaker)
- Mittal, V. K. Diabetes: is there a cure? (Guest speaker)
- Patel, P., G. Subhas, A. Gupta, Y.-J. Chang, V. K. Mittal, and A. McKendrick. Oral vitamin A enhances the effectiveness of formalin 8% in treating chronic hemorrhagic radiation proctitis. (*Award: Honorable mention*)
- Subhas, G., S. Yoo, Y.-J. Chang, D. Pieper, M. J. Frikker, D. L. Bouwman, A. Silbergleit, L. R. Lloyd, and V. K. Mittal. Benefits of mock oral examinations in a multi-institutional consortium for board certification in general surgery training.
- Virmani, S., L. Ferguson, M. Jacobs, and V. K. Mittal. Predicting cholecystectomy surgical approach by pre-operative clinical images. (*Award: Honorable mention*)

### **American Hepato-Pancreato-Biliary Association Meeting (Miami Beach, FL; March 12-15, 2009)**

- Saidi, R. F., A. W. Ahad, I. Nalbantoglu, and M. J. Jacobs. The expression of interferon receptor alpha/beta is essential for tumor response to interferon alpha treatment in human pancreatic cancer implanted in nude mice.

### **American Society of Colon and Rectal Surgeons Meeting (Hollywood, FL; May 2-6, 2009)**

- Subhas, G., S. Balaraman, A. Gupta, V. K. Mittal, and R. Pearlman. Non-cutting setons for progressive migration of complex fistula tracts: a new spin on an old technique.

### **Digestive Disease Week Meeting (Chicago, IL; May 30-June 4, 2009)**

#### Poster presentation:

- Virmani, S., S. Balaraman, M. J. Jacobs, L. Ferguson, and V. Mittal. Can pre-operative clinical and imaging findings predict the laparoscopic or open approach for cholecystectomy? A one-year study from a community based teaching hospital.

**Society of Laparoendoscopic Surgeons Meeting (Boston, MA; September 9-12, 2009)**

Oral presentations:

Gupta, A., G. Subhas, and V. K. Mittal. Necessity for improvement in endoscopy training during surgical residency.

Subhas, G., A. Gupta, L. Ferguson, M. J. Jacobs, W. Kestenber, R. B. Kolachalam, S. Silapaswan, and V. K. Mittal. Prolonged (>3 hours) laparoscopic cholecystectomy - reasons and results.

Video presentation:

Subhas, G., E. Kim, V. K. Mittal, and A. McKendrick.  
Laparoscopic loop ileostomy with a single port stab incision.

**Midwest Surgical Association Meeting (Lake Geneva, WI; August 2-5, 2009)**

Oral presentations:

Subhas, G., A. Gupta, and V. K. Mittal. Necessity for improvement in endoscopy training during surgical residency.

Subhas, G., A. Gupta, D. Bakston, B. Silberberg, C. Loboeki, L. Andrus, M. Decker, V. K. Mittal, and M. J. Jacobs. Protective effect of methylprednisolone on warm ischemia-reperfusion injury in a cholestatic rat liver.

Oral/Poster presentation:

Subhas, G., D. Bakston, A. Gupta, M. J. Jacobs, V. K. Mittal, and S. Silapaswan. IROBFS (Internal ring occlusion blockage and floor support) - a novel technique for inguinal hernia mesh repair.

Poster presentation:

Gupta, A., G. Subhas, L. Dubay, S. Silapaswan, R. Kolachalam, W. Kestenber, L. Ferguson, M. J. Jacobs, Y. Goriel, and V. K. Mittal. Review of re-excision for narrow or positive margins of invasive and intraductal carcinoma (DCIS).

**Southeastern Surgical Congress (Atlanta, GA; February 7-10, 2009)**

Oral presentation:

Kansakar, E., Y.-J. Chang, M. Merhabi, S. Raheja, and V. Mittal. Expression of estrogen receptor, progesterone receptor and

vascular endothelial growth factor expression in thyroid cancer.

Poster presentation:

Yoo, S., Y.-J. Chang, M. J. Frikker, D. L. Bouwman, A. Silbergleit, L. R. Lloyd, and V. K. Mittal. Benefits of mock oral examination in a multi-institutional consortium for board certification in general surgery training.

**Southwestern Surgical Congress (San Diego, CA; March 22-25, 2009)**

Poster presentations:

Gupta, A., G. Subhas, L. Dubay, S. Silapaswan, R. Kolachalam, W. Kestenber, L. Ferguson, M. J. Jacobs, Y. Goriel, and V. K. Mittal. Re-excision for narrow or positive margins of invasive and intraductal carcinoma (DCIS).

Gupta, A., G. Subhas, B. R. Hershman, S. Silapaswan, R. Kolachalam, W. Kestenber, L. Ferguson, M. J. Jacobs, and V. K. Mittal. Comparative study of consecutive parathyroidectomies with and without intra operative parathormone monitoring (IOPM).

**MI Chapter of American College of Surgeons (Coller Day; Bellaire, MI; May 14-15, 2009)**

Ahad, A. and M. J. Jacobs. The expression of interferon receptor alpha-beta in human pancreatic cancer in nude mice is essential for tumor response to interferon alpha treatment.

Bilmoria, N. and M. J. Jacobs. Interferons augment antitumoral activity of sorafenib in human pancreatic cancer cell lines.

Englehardt, R. K. and V. K. Mittal. Primary tumors of the appendix: a retrospective analysis.

Gupta, A. and V. K. Mittal. Parathyroidectomy with and without intra operative parathormone monitoring (IOPM): a comparative study.

Tchanque, C. and K. Nolan. Short-term outcome of infrainguinal percutaneous atherectomy in the treatment of symptomatic peripheral vascular occlusive disease (PVOD).

**Detroit Surgical Association Meetings**

Taggarshe, D., D. Bakston, Y.-J. Chang, A. McKendrick, and V. K. Mittal. Is conservative management as effective as surgery for enterocutaneous fistulae? (January 26, 2009).

Englehardt, R. K., N. K. Durrani, Y.-J. Chang, and V. K. Mittal. Primary tumors of the appendix: a retrospective analysis (February 23, 2009).

Gupta, A., G. Subhas, B. R. Herschman, S. Silapaswan, R. Kolachalam, W. Kestenberg, L. Ferguson, M. J. Jacobs, and V. K. Mittal. Comparative study of consecutive parathyroidectomies with and without intraoperative parathormone monitoring (IOPM) (March 23, 2009).

Kansakar, E., Y.-J. Chang, M. Merhabi, S. Raheja, and V. K. Mittal. Expression of estrogen receptor, progesterone receptor and vascular endothelial growth factor expression in thyroid cancer (April 20, 2009).

**SEMCME 31st Annual Research Forum (Rochester, MI; May 20, 2009)**

Oral presentation:

Ahad, A., R. F. Saidi, M. Decker, J. Tilak, I. Nalbantoglu, and M. J. Jacobs. The expression of interferon receptor alpha/beta in human pancreatic cancer in nude mice is essential for tumor response to interferon alpha treatment.

Poster presentations:

Kansakar, E., Y.-J. Chang, M. Mehrabi, S. Raheja, and V. Mittal. Expression of estrogen receptor, progesterone receptor and vascular endothelial growth factor expression in thyroid cancer.

Malamet, M., G. Subhas, E. Kim, V. K. Mittal, and A. McKendrick. Laparoscopic loop ileostomy with a single port stab incision.

**Providence Hospital Research Day (Southfield, MI; April 29, 2009)**

Oral presentations:

Ahad, A., R. F. Saidi, M. Decker, J. Tilak, I. Nalbantoglu, and M. J. Jacobs. The expression of interferon receptor alpha/beta in human pancreatic cancer in nude mice is essential for tumor response to interferon alpha treatment. (Award: Second place - Resident oral presentation)

Avenel, P., G. Subhas, D. Bakston, A. Gupta, M. J. Jacobs, V. K. Mittal, and S. Silapaswan. IROBFS (Internal ring occlusion blockage and floor support) - a novel technique for inguinal hernia mesh repair.

Gupta, A., G. Subhas, B. R. Hershman, S. Silapaswan, R. Kolachalam, W. Kestenberg, L. Ferguson, M. J. Jacobs, and

V. K. Mittal. Parathyroidectomy with and without intra operative parathormone monitoring (IOPM): a comparative study. (Award: Third place - Resident oral presentation)

Kim, E., H. VanDusen, L. Dubay, and C. Loboeki. Temsirolimus enhances the growth inhibitory effect of trastuzumab in HER2-positive breast cancer cell lines.

Taggash, D., G. Subhas, S. Balaraman, A. Gupta, V. K. Mittal, and R. Pearlman. Non-cutting setons for progressive migration of complex fistula tracts: a new spin on an old technique.

Tchanque, C. N., H. Bu-Ali, M. Kruger, and K. Nolan. Short-term outcome of infrainguinal percutaneous atherectomy in the treatment of symptomatic peripheral vascular occlusive disease (PVOD).

Virmani, S., L. Ferguson, Y. Goriel, M. Jacobs, and V. K. Mittal. Predicting surgical approach for cholecystectomy by pre-operative clinical imaging.

Poster presentations:

Ahad, A., A. Shah, J. Tilak, and V. Mittal. Increased white blood cell count predict worse outcomes for *Clostridium difficile* colitis.

Englehardt, R. K., N. K. Durrani, Y.-J. Chang, and V. K. Mittal. Primary tumors of the appendix: a retrospective analysis

Gupta, A., G. Subhas, L. Dubay, S. Silapaswan, R. Kolachalam, W. Kestenberg, L. Ferguson, M. Jacobs, Y. Goriel, and V. Mittal. Review of re-excision for narrow or positive margins of invasive and intraductal carcinoma (DCIS).

Kansakar, E., Y.-J. Chang, M. Mehrabi, S. Raheja, and V. Mittal. Expression of estrogen receptor, progesterone receptor and vascular endothelial growth factor expression in thyroid cancer. (Award: Second place - Resident poster presentation)

Kim, E., G. Subhas, V. K. Mittal, and E. S. Golladay. C-reactive protein estimation does not improve accuracy in the diagnosis of acute appendicitis in pediatric patients.

Malamet, M., G. Subhas, E. Kim, V. K. Mittal, and A. McKendrick. Laparoscopic loop ileostomy with a single port stab incision. (Award: First place - Resident poster presentation)

McFarlane, K. N., Y.-J. Chang, and V. Mittal. Assessing surgical skills with the operating room (OR) competency model.