

# OPEN SKIES

Department of Surgery Newsletter

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University of Saskatchewan Surgical Residents



UNIVERSITY OF  
SASKATCHEWAN



Regina Qu'Appelle  
HEALTH REGION

## CHAIRMAN'S MESSAGE



*As we start 2017 and contemplate the year ahead, it is clear to me that the Department has made significant progress in a number of important fronts. The trauma program with a Trauma Team Leader (TTL) model has been established and is quickly developing under the leadership of Dr. Niroshan Sothilingam. The new Surgical Skills Laboratory is slated to open in the first months of 2017. Dr. Cole Beavis and his surgical skills committee are busy designing a surgical skills curriculum for the Department. Both the trauma program and surgical skills were urgent gaps needed to be addressed in our institution and their resolution has strengthened the Department clinically and academically.*

*Our undergraduate and residency programs are thriving with our faculty devoting more than 4500 hours of undergraduate teaching and 100% pass rate of all our residency programs in the Royal College examinations in 2016. The first teaching award banquet to recognize our faculty and residents teaching accomplishments was also established last year.*

*The research committee under the leadership of Dr. Nael Shoman has completed the first environmental scan of research in the Department and has started a series of workshops and seminars aimed at improving research education and guidance for faculty and residents. They also have instituted a very successful resident research incentive program to support resident's engagement in research. The research productivity in the Department in terms of research funding and publications continues to increase.*

*We look forward with confidence to the challenges and accomplishments that 2017 will bring!*

*Ivar Mendez, MD, PhD, FRCSC, FACS  
F.H. Wigmore Professor of Surgery*

OPEN SKIES newsletter is a publication of the Department of Surgery at the College of Medicine, University of Saskatchewan.

It is distributed to all surgical faculty, residents and collaborators of the Department of Surgery, as well as surgical teaching centres in Canada and abroad.

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ON THE COVER: Residents of the Department of Surgery, University of Saskatchewan



*Registering the Stereotactic Frame in a DBS Procedure using the O-Arm*

## **New generation mobile intra-operative three-dimensional imaging system in Saskatoon**

The first new generation intra-operative three-dimensional imaging system (O-arm) in Canada was delivered to the Royal University Hospital in November of 2016. This new system is a mobile CT scanner designed for intra-operative use, and can provide both standard fluoroscopic images and 3-D, volumetric CT scans. The ring design allows multi-planar image views without the need for repositioning the machine. The robotically controlled positioning system and integrated light-emitting diode (LED) tracker allows automated registration. Although the bulk of the procedures where the O-arm has been used are spine surgeries, a novel application of this technology is in Deep Brain Stimulation (DBS) procedures where 3-D imaging facilitates the registration of the stereotactic frame. The system can also be used to determine the accuracy of DBS lead placement intra-operatively.

The initial experience by our spine surgeons and functional neurosurgeons with this new generation O-arm has been positive with reduction of procedure times and less X-ray radiation exposure to the patients.

The purchasing of this equipment was possible by a contribution of the Royal University Hospital Foundation and its generous donors.

# ADVANCING THE TRAUMA PROGRAM



*Trauma Team at Royal University Hospital (RUH)*

Over the last year, our trauma program has undergone some major changes. The reason for this was to better serve our community and catchment area by providing more comprehensive care from transport, resuscitation in the trauma bay, multidisciplinary inpatient care and appropriate follow up.

For over a year now, we have moved to a Trauma Team Leader (TTL) model where a dedicated physician is on call for all level I trauma activations. TTLs are made up of ER physicians and general surgeons who have an interest in trauma management. This system allows trauma patients to be triaged/treated appropriately and managed quickly without burdening the ER physician on shift in the busy emergency department or the on call acute care surgeon. Residents feel more supported and are receiving better teaching.

All trauma patients will now receive a tertiary survey completed within 24 hrs. of admission. This has been proven to cut down on missed injuries at the time of discharge.

As part of our ongoing dedication to academic teaching, multidisciplinary trauma rounds have been instituted and cover a wide variety of trauma related topics. Residents from all disciplines take part in presenting at these monthly rounds.

Going forward, the addition of a trauma nurse coordinator to the service is crucial. This individual would help streamline continuity of care and facilitate patient transfers, tertiary survey completion, follow up appointments and help run a trauma clinic. Trauma M & M rounds will be held quarterly starting in March. These rounds will focus on systemic issues with the trauma service to better improve the program. The trauma registry will be implemented in the new year and start collecting data from all trauma patients. This information will be used to better understand the province's needs and demands as it relates to the trauma population.



The Department of Surgery is pleased to continue with the expansion of the Colorectal Surgery Program which emphasizes comprehensive and multidisciplinary care for both benign and malignant diseases related to the colon, rectum and anus. The vision for the Colorectal Surgery Program is to establish a centre of excellence which provides the most advanced and timely care for our patients.

In addition to recruiting new surgeons who specialize in the management of colorectal pathology, the Department of Surgery has also committed to introducing new technology which will revolutionize colorectal surgery in the province. One such example is the introduction of Transanal Endoscopic Microsurgery (TEM). This platform changes the operative approach for advanced rectal polyps and cancer to potentially minimize the morbidity of these conditions and decrease the length of stay in hospital, decrease the rates of a permanent colostomy and improve oncologic outcomes. Endorectal ultrasound, anal manometry and sacral nerve stimulation are other technologies which will be made more readily available for our patients in the near future and help limit the need for traveling to other provinces to get the care that they need and deserve.

We have also developed Multidisciplinary Rectal Cancer rounds in collaboration with our medical and radiation oncologists, radiologists, pathologists and surgeons. The first meeting is to be scheduled in the early new year. MDC rounds have been shown to improve cancer care and we believe that this will help facilitate improved collaboration between our specialists and provide the best possible care for the people of Saskatchewan.



*Dr. Dilip Gill, General Surgery*



# SILVANA PAPAGERAKIS

MD, PHD

*Oral Head and Neck  
Cancer*

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Dr. Silvana Papagerakis' interests encompass basic, translational and clinical research in the field of oral, head and neck cancer and oral health.

Her previous and ongoing work has sought to identify new targets for diagnostic and clinical interventions in patients with oral cancer, particularly those with advanced metastatic disease, with the ultimate goal of developing mechanism-based individualized therapies that will improve patients' survival and quality of life. Her research aims to advance the prediction, prevention and management of oral cancer and oral disease to improve outcomes through personalized diagnostic and therapeutic approaches.

Her research strategies are to investigate: the unique characteristics of each individual tumor by assessing at single cell level, the tumor heterogeneity, microenvironment and genetic signature; the impact of the viral (human papilloma virus) and chemical carcinogenesis on malignant transformation; and the effects of circadian disruption on oral cancer and oral disease progression, response to therapies and outcome, and the links with systemic health alterations. Her preliminary data shown that there is a significant circadian clock dysregulation that directly contributes to the disease heterogeneity and outcome in oral cancer patients.

WDr. Papagerakis plans on investigating the unique ethio-pathogenic and molecular characteristics of oral, head and neck cancer and its related risk factors in the Province of Saskatchewan, the crosstalk between chronic inflammation, bacterial infection, viral carcinogenesis, and other oral health disorders, as well as exploring novel therapeutic strategies to combat these oral health related issues.

# \$1 MILLION FOR NEW SURGICAL SUITE



*Rendering of the new Saskatchewan Children's Hospital*

The Ken Cugnet family of Weyburn has provided a generous gift of \$1 million to help fund a new pediatric surgical suite at the new Children's Hospital of Saskatchewan.

"We ask ourselves often, are we builders or bystanders? We hope this Christmas, in the spirit of giving, that others will choose to be builders for the Children's Hospital of Saskatchewan," explains Jo Bannatyne-Cugnet, who is a children's author and also worked as a nurse for twenty years after training at the University of Saskatchewan.

Located on the ground floor of the new maternal and children's hospital, these special surgical suites will be designed to meet the unique needs of children who require surgery. Conveniently located near the dedicated pediatric emergency department, the integrated suites include both an operative area and induction room allowing parents to stay with their child while anesthesia is being administered, offering a reassuring presence when preparing for surgery.

"Having to go for surgery can be a frightening experience for any child and their family," explains Brynn Boback-Lane, President and CEO of the Children's Hospital Foundation of Saskatchewan. "The new Pediatric Surgery Unit will be specially designed to help make each family's experience as comfortable and stress-free as possible. We are so incredibly grateful for the Cugnet family's special holiday gift that will provide the finest care possible for our province's youngest patients."

Working with a special team of anesthesiologists and nurses, pediatric surgeons will, for the first time, have access to equipment and facilities specifically designed for children at every age. When the doors open and you walk through the unit, you will see many thoughtful and purpose-built extras, including our private recovery rooms, all designed to improve the surgical experience for Saskatchewan families. This donation is critical to helping us realize patient-first, family-first surgical care for our youngest patients and their families.

## GENERAL SURGERY TEAM BUILDING

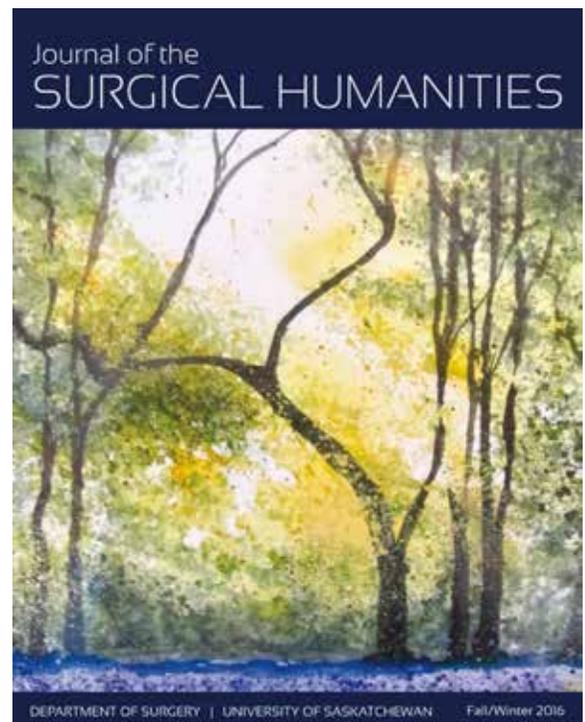


General Surgery Residents

Top row: Zeeshan Rana, Julie Kickbush, James Kickbush, Jeff Gu, Joel Herback, Krista deBoer, Haven Roy, Aaron Daters, Taylor Bereti, Brian Nocon  
Bottom Row: Hong Pham, Sarah Schmid, Niomi Singh, Jon Seto

The general surgery residents were recently out together for a team building event at the Apex Trampoline Center in Saskatoon. This was organized by Joel Herback as leader of our social committee.

This event was supported by the Division of General Surgery. The trampoline center was a unique place to get together, burn off steam, exercise and have a good time. The goal of our social committee is to enhance collegiality, group dynamics and social functions for the residents as a whole. Events will continue to be organized and held throughout the year.



**COMING SOON ...**

NEW ISSUE OF THE JOURNAL OF THE SURGICAL HUMANITIES

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