



Ascension St. John Hospital held its annual Resident Research Day on March 29, 2023. This was the first live event since the start of the pandemic in 2020. We had an excellent slate of presentations and this year's winners represented a wide range of residency programs. The winners and the projects will be described later in this newsletter.

For our residents, conducting research can be a daunting task. It is, however, invaluable experience. Whether a resident seeks a career in research or never does such a project again, the process of conducting a project teaches a resident about the processes of doing research, about potential sources of bias, about data analysis and a host of other topics. Experience teaches in a way that one could never comprehend by reading. This experience helps them to understand research so that they can evaluate journal articles and medical findings in an educated way.

But, to get the task done, they need help. Of course, the Research Department helps with protocol development, IRB submission, and data analysis, but often the most difficult part of the project is finding a worthwhile research question. Who can help with this? The best advice comes from our very own faculty physicians. They are the subject matter experts. So, won't you please help a resident in need? Faculty members, please share your ideas and experience with our residents-in-need! Without you, our research endeavors would be sad. 😞

Thanks!

*Dr. Susanna Szpunar*

Director, Biomedical Investigations and Research



*If April showers bring May flowers, what do April snow showers deliver?*

## Fast Stats

### Superiority, Equivalence and Non-Inferiority

When you are reading a journal article about a randomized controlled clinical trial (RCT), you will come across the words “superiority”, “equivalence” and “non-inferiority.”

So, what's the difference?

1. Superiority trials: Superiority trials are the types of RCTs that we are most familiar with. The goal in these studies is to determine if an experimental treatment is **superior** to a placebo or to an existing treatment. The primary objective is to determine the magnitude of increased benefit of the experimental intervention over standard therapy on effectiveness outcomes.
2. Equivalence trials: These RCTs seek to determine that an experimental treatment is **“neither better nor worse”** (beyond a pre-specified margin) than the standard.
  - These trials require an *a priori* definition of the smallest difference in outcomes between the interventions that patients would consider large enough to justify a preference for the superior.
  - For the researchers to claim equivalence, the confidence interval (CI) for the estimated treatment effect at the end of the trial should exclude that difference.
3. Non-inferiority trials: These RCTs try to establish whether an experimental treatment is **“not much worse”** than a standard treatment, i.e. not so inferior that it would cause a concern. Non-inferiority is of interest if the new intervention has some other advantage, such as lower costs or fewer side effects, that mitigate the trade-off in effectiveness.

Remember that one of the determinants of sample size is the magnitude of the difference you are trying to detect. In both equivalence and non-inferiority trials, the magnitude of the difference will be very small, so these studies typically require large sample sizes. Thus, they are often multi-site, even multi-national studies.

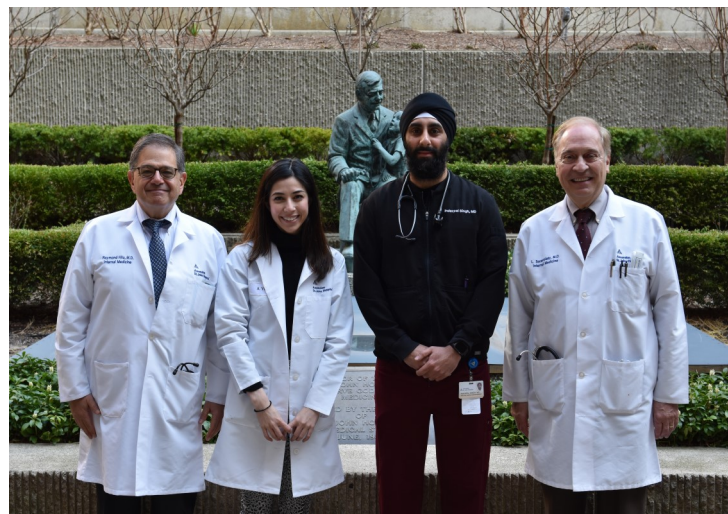


***Resident Research Day 2023***

- ☆ **First Place: Gabriella Rustia, MD.** Pain with Differing Insufflation Pressures During Robotic Sacrocolpopexy: A Randomized Controlled Trial. Obstetrics and Gynecology.
- ☆ **Second Place (tie): Lauren Messer, MD.** Patient Outcomes after CRS + HIPEC by Surgical Sequence: Is there a Learning Curve? General Surgery.
- ☆ **Second Place (tie): Catherine Shim, MD.** Tension-Free Vaginal Tape Mesh Exposure Confers a High Risk of Persistent Stress Urinary Incontinence. Obstetrics and Gynecology.
- ☆ **Third Place (tie): John Sorge, MD.** Improving Code Status Documentation in Inpatient Medicine. Internal Medicine.
- ☆ **Third Place (tie): Adrienne Yun, MD.** Hospital Mortality During COVID-19 Surges: A Comparison of Non-COVID-19 Mortality Rates During COVID Surges Compared to Pre-Pandemic Periods. Internal Medicine.
- ☆ **Honorable Mention: Haidy Elazzamy, MD.** Incidence/Pattern of Submucosal Involvement After Neoadjuvant Therapy for Rectal Cancer: Implications for Endoscopic Submucosal Resection. Pathology.
- ☆ **Honorable Mention: Neel Sharad, MD.** Effect of an Integrated Behavioral Health Provider on PHQ-9 and GAD-7 Scores in the Primary Care Setting. Family Medicine.
- ☆ **Honorable Mention: Inderpal Singh, MD.** The Association of Right Ventricular to Left Ventricular Size Ratio with Cardiac Index in Patients with Acute Pulmonary Embolism. Internal Medicine.



Drs. Rustia, Aslam and Shim (left to right)



Drs. Hilu, Yun, Singh & Saravolatz (left to right)



Dr. Lauren Messer



### Resident Research Day 2023



Steven E. Minnick, MD, MBA  
DIO, Ascension St. John GME

- ◆ If you would like to view the presentations, follow this link:  
<https://stjohnmedicaledu.mediasite.com/Mediasite/Play/d897ea46c2fd4ee081d69a847cdc3b5b1d>
- ◆ If you would like a copy of the abstract book, please email  
Dr. Susanna Szpunar at [susan.szpunar@ascension.org](mailto:susan.szpunar@ascension.org)

**Congratulations to all the presenters!**

*“Nothing has such power to broaden the mind as the ability to investigate systematically and truly all that comes under thy observation in life.” —Marcus Aurelius (120-180)*



### Recent Publications

Aprilliano B, Giuliano C, Paxton RA, Edwin SB. Risk of bleeding with factor Xa inhibitors versus unfractionated heparin in patients with acute kidney injury. *Pharmacotherapy*. 2023 Feb;43(2):129-135.

Baalbaki N, Giuliano C, Hartner CL, Kale-Pradhan P, Johnson L. Azithromycin versus beta-lactams in hospitalized patients with acute exacerbations of COPD. *J Gen Intern Med*. 2022 Dec;37(16):4183-4188.

Huang K, Sanjuan-Sanjuan A, Cannavo M, Cass T, Ramirez CA. Does transcervical styloideotomy for eagle syndrome improve quality of life? *J Oral Maxillofac Surg*. 2022 Dec;80(12):1989-1995.

Elazzamy H, Bhatt M, Mazzara P, Barawi M, Zeni A, Aref A. Incidence and pattern of submucosal involvement in surgical specimens following neoadjuvant therapy for locally advanced rectal cancer: Implications for endoscopic submucosal resection. *J Gastrointest Surg*. 2023 Jan 19.

Saravolatz LD, Depcinski S, Sharma M. Molnupiravir and nirmatrelvir-ritonavir: oral coronavirus disease 2019 antiviral drugs. *Clin Infect Dis*. 2023 Jan 6;76(1):165-171.

Saravolatz LD, Pawlak J. In vitro activity of fosfomicin alone and in combination against *Staphylococcus aureus* with reduced susceptibility or resistance to methicillin, vancomycin, daptomycin or linezolid. *J Antimicrob Chemother*. 2022 Dec 23;78(1):238-241.

Zavoshi S, Lu E, Boutros PC, Zhang L, Harari A, Hatchell KE, Nielsen SM, Esplin ED, Ouyang K, Nykamp K, Wilde B, Christofk H, Shuch B. Fumarate hydratase variants and their association with paraganglioma/pheochromocytoma. *Urology*. 2023 Feb 9:S0090-4295(23)00054-7.





**Clinical Trials Day, May 20, 2023**

<https://www.clinicaltrialsday.org/#ctd2023>



The full potential of clinical research to change lives can only be unlocked when we all work together, embrace each other’s perspectives, and are invested in shared goals. This is when true and meaningful progress is made. This is when new breakthroughs occur. This is when we literally change the world. (ACRP)

**Upcoming SEMCME Programs**

**SEMCME Annual Michigan Summit on Quality Improvement and Patient Safety**

May 12th, 2023, 8:00-4:30 pm  
MSU Management Education Center, Troy, MI

**SEMCME Research Forum**

May 24th, 2023, 8:00-2:30 pm  
Lovett Hall, The Henry Ford, Dearborn, MI

**CME Update**

- ◆ No upcoming seminars are currently scheduled.
- ◆ Contact Nancy DeRita for more information:



**Rest in Peace**



**Devon Hoover, MD**, was a dedicated and well respected member of the Ascension Michigan family and will be greatly missed by our community. Our sincerest condolences and heartfelt prayers are with his family, friends and fellow associates during this incredibly difficult time.

Dr. Hoover was with Ascension St. John Hospital for more than 20 years. He was an incredible surgeon who improved the lives of countless members of our community through his surgical expertise. More than that, he was a values-driven colleague, friend and mentor. His impact will be felt for years to come. We will miss him more than words can express.

**Research Staff**

<b>Susanna Szpunar, PhD</b>	Director, Biomedical Inv. & Research	<a href="mailto:Susan.szpunar@ascension.org">Susan.szpunar@ascension.org</a>
<b>Deborah Spampinato</b>	Administrative Asst. II	<a href="mailto:Deborah.spampinato@ascension.org">Deborah.spampinato@ascension.org</a>
<b>Karen Hagglund, MS</b>	Clinical Scholar	<a href="mailto:Karen.hagglund@ascension.org">Karen.hagglund@ascension.org</a>
<b>Alice Mar, BA</b>	Clinical Scholar	<a href="mailto:Alice.mar@ascension.org">Alice.mar@ascension.org</a>
<b>Shelby Miller, MPH</b>	Clinical Scholar	<a href="mailto:Shelby.miller@ascension.org">Shelby.miller@ascension.org</a>
<b>Othuke Abada, MS</b>	Clinical Scholar	<a href="mailto:Othuke.abada@ascension.org">Othuke.abada@ascension.org</a>
<b>Mary (Chase) Trost, MA</b>	Research Assistant	<a href="mailto:Mary.chase@ascension.org">Mary.chase@ascension.org</a>

