



**O**n May 1, 2019 Ascension St. John Hospital hosted its annual Resident Research Day. This year, we tried a new format, with all presentations being oral presentations and with an optional poster exhibition. The poster exhibition was open to fellows, students and pharmacy residents.

We had a successful day with great attendance and participation. Even the students from Grosse Pointe North and South high schools asked interesting questions of our presenters.

There are many people who put hours of work into this event. Special thanks go to Debbie LaBuda, Administrative Assistant II, Graduate Medical Education, who helped to organize the event. None of this work would be possible without the associate medical researchers: Karen Hagglund, Alice Mar and Shelby Miller. We also could not conduct our research without the assistance of our IRB: Robert Dunne, chair; Lee Bowen, Consultant to the IRB; and Othuke Abada, IRB research assistant.

There are numerous faculty mentors who have worked with residents on their projects—from coming up with the idea, to interpreting and presenting the results. We also have the fantastic support from Department Chairs and Program Directors. We are always grateful for the unfailing support we receive from Dr. Grady and Mr. Hoban.

Every year, we also need to thank the Birk family for establishing the Robert E. Birk Excellence in Research fund. The Birk fund helps to pay the stipends to the winners as well as cover other costs of the day. Dr. Birk was a former Director of GME who had the foresight of recognizing the value and importance of research during residency.

Last, but certainly not least, we need to thank Dr. Steven Minnick, the Director of Graduate Medical Education, who has championed and supported our research endeavors. Thank you to all for another successful research day!

Happy Spring,

*Dr. Susanna Szpunar*

Director, Biomedical Investigations and Research

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## Fast Stats

### Entering the Post $p < 0.05$ Era

Over the past several years, there has been a debate about the proper use and meaning of p-values. The controversy arises because “over time it appears the p-value has become a gatekeeper for whether work is publishable, at least in some fields”.<sup>1</sup> This can lead to a publication bias in which papers with statistically significant outcomes are more likely to be published than adequately powered papers with non-significant findings. It also leads to practices such as “p-hacking” and “data dredging” that emphasize the search for small p-values over other statistical and scientific reasoning.<sup>1</sup>

P-values are used to test and dismiss a null hypothesis which generally states that there is no difference between groups or no association between variables. The smaller the p-value, the less likely an observed set of values would occur by chance—given that the null hypothesis is true.<sup>2</sup>

A p-value  $< 0.05$  signifies only that if the null hypothesis is true, and all other assumptions made are valid, there is a 5% chance of obtaining a result at least as extreme as the one observed.<sup>2</sup>

One proposed measure to address this problem is to define the p-value that would be called “significant” as  $< 0.0005$ , whereas p-values  $< 0.05$  would be called “suggestive”.<sup>3</sup> While this approach does not address the problem of needing transparent, appropriate, strong statistical analysis, it does help to diminish the many non-reproducible findings that are reported. The down side of this approach is that sample sizes would generally need to be increased by 70% to meet this new definition.<sup>3</sup> This would have a devastating effect on many scientific studies as well as on the people who are trying to obtain degrees and research funding.

Other approaches suggest eliminating the p-value entirely, showing only confidence intervals, and using statistical methods that emphasize estimation over testing.

One biostatistician compares the elimination of p-values as “addressing automobile accidents by telling people not to drive.”<sup>2</sup> Others say that statistics should be treated as a science, not a recipe.<sup>2</sup>

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**Resident Research Day 2019** (photo of presenters)



**Congratulations to the award winners of our annual Resident Research Day:**

**First Place:**

**Dr. Fawad Shahid, Internal Medicine**

*Lactic Acid/Albumin Ratio as a Prognostic Marker for Multiple Organ System Dysfunction Syndrome and Mortality in Patients with Sepsis Admitted to the Intensive Care Unit*

**Second Place (tie):**

**Dr. Lauren Greene, Family Medicine**

*Screening for Concussions in the Primary Care Setting: Are We Causing a Bigger Headache?*

**Dr. Melissa Patterson, Family Medicine**

*Does Prior Exposure to Death and Dying Impact Discussing End-of-Life Wishes?*

**Third Place (tie):**

**Dr. Victoria Simmons, General Surgery**

*Opioid Prescribing Trends: A Comparison of Focused Resident Intervention and State of Michigan Mandates*

**Dr. Abdelkader Chaar, Internal Medicine**

*EUS-Guided versus Percutaneous Gallbladder Drainage in Patients Who Are Unfit for Cholecystectomy in a Community Hospital Setting*

**Dr. Kyle Nedic, Emergency Medicine**

*Absence of Delayed Intracranial Hemorrhage Following Minor Head Trauma in Patients on Direct-Acting Oral Anticoagulants*

**Honorable Mention (tie):**

**Dr. Safa Maki, Internal Medicine:**

*Code Status Documentation at Ascension St. John Hospital*

**Dr. Joseph Sheets, Emergency Medicine**

*Emergency Physician Diagnostic Interpretation of Necrotizing Fasciitis on Musculoskeletal Ultrasound*

**Dr. Brooke Blazius, Pediatrics**

*Evaluation of Frequency of Cardiac Malformations Identified in Infants Born to Mothers with Insulin Dependent Diabetes Mellitus*

**Dr. Sajad Salehi, Pathology**

*Evaluation of Kisspeptin Immunostaining in the Term Placenta of Women With or Without Obesity*

## Entering the Post $p < 0.05$ Era (continued)

For the present, the American Statistical Society has issued the following six statements<sup>1</sup>:

1. P-values can indicate how incompatible the data are with a specified statistical model.
2. P-values do not measure the probability that the studied hypothesis is true, or the probability that the data were produced by random chance alone.
3. Scientific conclusions and business or policy decisions should not be based only on whether a p-value passes a specific threshold.
4. Proper inference requires full reporting and transparency.
5. A p-value, or statistical significance, does not measure the size of an effect or the importance of a result.
6. By itself, a p-value does not provide a good measure of evidence regarding a model or hypothesis.

What do you think?

1. American Statistical Association. American Statistical Association releases statement on statistical significance and p-values. March 7, 2016 <https://www.amstat.org/asa/files/pdfs/P-ValueStatement.pdf>
2. Baker M. Statisticians issue warning on p values. Nature 2016 March;531:151.
3. Resnick B. What a nerdy debate about p-values shows about science—and how to fix it. Vox 2017 July. <https://www.vox.com/science-and-health/2017/7/31/16021654/p-values-statistical-significance-redefine-0005>

## Upcoming SEMCME Events

### 2019 SEMCME Research Forum & Lecture

May 22, 2019 at Lovett Hall, Dearborn

The presentations at this forum represent the best resident research selected from clinic day competition at each SEMCME member hospital. This year's keynote speaker will be Allen Silbergleit, MD, PhD. [www.semcme.org](http://www.semcme.org)

### 2019 Michigan Quality Improvement, Patient Safety & Wellness Summit

May 29, 2019: at the Somerset Inn, Troy

This forum showcases Quality Improvement/Patient Safety poster presentations by residents and fellows from across Michigan. Also, oral presentations for the top submitted abstracts, as well as a keynote speaker. [michiganqisummit.org](http://michiganqisummit.org)

## Winners at the ACP Michigan Chapter

Congratulations to our Internal Medicine residents who took first place prizes at the American College of Physician's meeting on May 3rd, 2019:

**Dr. Nouf Turki** won the first prize award in the Oral Clinical Vignette competition for her presentation, *A Case of Coronary Artery Milking*.

**Dr. Photios Vassilyadi** won the first prize award in the Oral Research competition for his presentation, *Young Adults in Medical Limbo – Analyzing Trends in Patients Without a Medical Home*.

Kudos also to **Mark Cooks**, one of our core Wayne State University medical students, for winning 3rd place amongst medical students for his presentation, *Diabetic Striatopathy* at the ACP. Congratulations!

## Institutional Review Board

### Engaged in Research

In general, an institution is considered to be engaged in human subjects research when its employees or agents:

- ♦ obtain data about living individuals for research purposes through intervention or interaction with them,
- ♦ obtain individually identifiable private information for research purposes (45 CFR 46.102(d),(f)) <http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.html#46.102>
- ♦ or obtain the informed consent of human subjects.

Employees and agents, including students, are individuals performing institutionally designated activities and acting on behalf of the institution or exercising institutional authority or responsibility.

In general, an institution is considered to be engaged in human subjects research whenever it receives a direct HHS award to support such research, even if all of the human subjects activities will be performed by agents or employees of another institution. In general, simply informing potential subjects about a research study is not considered engagement in research. Also, providing written information about a research study, including how to contact the investigators for information and enrollment, and seeking and obtaining prospective subjects' permission for investigators to contact them are not considered engagement in research.

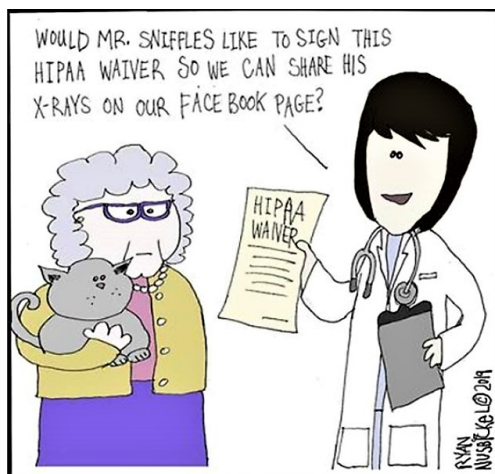
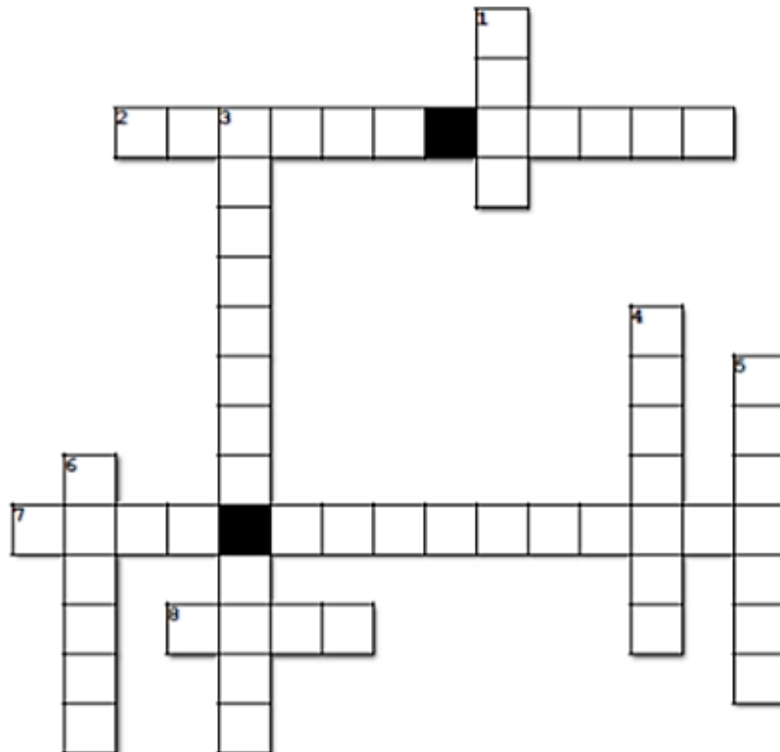
**ACROSS:**

2. The U.S. Surgeon General
7. In stats, what we try to reject
8. Color for breast cancer awareness

**DOWN:**

1. Another word for systematic error
3. A measure of association from prospective studies
4. Person who developed the chi-squared test
5. Disease that has re-appeared in Michigan
6. A database to search for journal articles

Complete the crossword puzzle below



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