

## Davis T. Weaver

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### **EDUCATION**

**Case Western Reserve University School of Medicine**, Cleveland, Ohio, *MD, PhD* July 2018 – Present

**Graduate GPA: 4.0**

**Duke University**, Durham, NC, *B.S. Biology*, 2012-2016

### **RESEARCH EXPERIENCE**

**Scott Lab, Cleveland Clinic**, Cleveland, Ohio, *Graduate Student Researcher*, March 2019 - Present

- I work with Dr. Jacob Scott, a physician-scientist and practicing radiation oncologist, in an interdisciplinary lab focused on cancer and microbial evolution.
- We are currently designing a novel analytical pipeline to identify miRNA that are predicted to kill cancer cells, using Ewing's Sarcoma as a model system.

**MGH Institute for Technology Assessment**, Boston, MA, *Research Associate*, June 2016 – June 2018

- I worked with Drs. Pandharipande and Knudsen as part of a multi-disciplinary team focused on decision analytics.
- We applied decision analytics and disease simulation to optimize treatment and screening protocols. My specific projects were focused on ovarian cancer treatment, pancreatic cancer screening, colorectal cancer screening, and designing a model to project the course of the current opioid crisis.

**Duke University: Department of Psychiatry**, Durham, NC, *Research Assistant*, January 2016-May 2016

- I worked with Dr. Zhi Deng in his lab focused on identifying biomarkers predictive of response to therapy in refractory depression.
- In the Deng Lab, I had my first hands-on exposure to research and began to develop the skills necessary to succeed in computational biology research. My project was focused on analyzing EEG data for patients with refractory depression that had either undergone ECT or MCT.

### **AWARDS**

**Cancer Center Trainee Award for Cancer Research**, Case Comprehensive Cancer Center, May, 2019

**Lepow Day Poster Award**, Case Western Reserve University School of Medicine, September, 2019

**Dean's List with Distinction**, Duke University, 2015

**Dean's List**, Duke University, 2014-2015

### **PUBLICATIONS AND PRESENTATIONS**

#### **Original Research Articles**

1. **Davis T. Weaver\***, Kathleen I. Pishas\*, Drew Williamson\*, Jessica Scarborough, Stephen L. Lessnick, Andrew Dhawan, Jacob G. Scott, "Network potential identifies therapeutic miRNA cocktails in Ewings Sarcoma", bioRxiv 854695; doi: <https://doi.org/10.1101/854695>. \*Denotes equal contribution, *Pre-print*
2. **Davis T. Weaver**, Anna P. Lietz, Sarah F. Mercaldo, Mary Linton B. Peters, Chin Hur, Chung Y. Kong, Brian M. Wolpin, Alec J. Megibow, Lincoln L. Berland, Amy B. Knudsen, Pari V. Pandharipande, "Testing for Verification Bias in Reported Malignancy Risks for Side-Branch Intraductal Papillary Mucinous Neoplasms: A Simulation Modeling Approach." *American Journal of Roentgenology*, 2018.
3. **Davis T. Weaver**, Tiana J. Raphael, Alexander Melamed, J. Alejandro Rauh-Hain, John O. Schorge, Amy B. Knudsen, Pari V. Pandharipande, "Modeling treatment outcomes for patients with advanced ovarian cancer: Projected benefits of a test to optimize treatment selection", *Gynecologic Oncology*, 2018, Volume 149, Issue 2, 256 – 262.
4. Badar J Kayani\*, **Davis T Weaver\***, Vishvaan Gopalakrishnan, Eshan S King, Emily Dolson, Nikhil Krishnan, Julia Pelesko, Michael J Scott, Masahiro Hitomi, Jennifer L Cadnum, Daniel F Li, Curtis J Donskey, Jacob G Scott, Ian

Charnas, “UV-C Tower for point-of-care decontamination of filtering facepiece respirators”, American Journal of Infection Control, 2020

a. \*: contributed equally

5. Tom Radivoyevitch, **Davis T. Weaver**, Brian Hobbs, Jaroslaw P. Maciejewski, Rudiger Hehlmann, Qian Jiang, Andreas Hochhaus, Robert P. Gale, “Do persons with chronic myeloid leukaemia have normal or near normal survival?”, *Leukemia*, Pages 1-3, 2019
6. Kyle J Card, Dena Crozier, Andrew Dhawan, Mina Dinh, Emily Dolson, Nathan Farrokhian, Vishhvaan Gopalakrishnan, Emily Ho, Tanush Jagdish, Eshan S King, Nikhil Krishnan, Gleb Kuzmin, Jeff Maltas, Jinhan Mo, Julia Pelesko, Jessica A Scarborough, Jacob G Scott, Geoff Sedor, Enze Tian, **Davis T Weaver**, “UV sterilization of personal protective equipment with idle laboratory biosafety cabinets during the Covid-19 pandemic”, *medRxiv*, 2020, *pre-print*
7. Lietz AP\*, **Weaver DT\***, Melamed A, Rauh-Hain JA, Wright JD, Wright AA, Knudsen AB, Pandharipande PV. Potential survival benefits from optimized chemotherapy implementation in advanced ovarian cancer: projections from a microsimulation model. *PLoS One*. \* Denotes equal contribution
8. Steven D. Criss, **Davis T. Weaver**, Deirdre F. Sheehan, Richard J. Lee, Pari V. Pandharipande, Chung Yin Kong, Effect of PD-L1 testing on the cost-effectiveness and budget impact of pembrolizumab for advanced urothelial carcinoma of the bladder in the United States, *Urologic Oncology: Seminars and Original Investigations*, 2018, ISSN 1078-1439, <https://doi.org/10.1016/j.urolonc.2018.11.016>.
9. Tiana J. Raphael, **Davis T. Weaver**, Lincoln L. Berland, Brian R. Herts, Alec J. Megibow, Amy B. Knudsen, Pari V. Pandharipande, “Imaging Follow-up of Low-Risk Incidental Pancreas and Kidney Findings: Effects of Patient Age and Comorbidity on Projected Life Expectancy”, *Radiology*, 2018, Volume 287, Issue 2, <https://doi.org/10.1148/radiol.2018171701>
10. Chen Q, LaRoche MR, **Weaver DT**, Lietz AP, Mueller PP, Mercaldo S, Wakeman SE, Freedberg KA, Raphael TJ, Knudsen AB, Pandharipande P, Chhatwal J. Prevention of prescription opioid misuse and projected overdose deaths in the United States. *JAMA Network Open*. 2018.
11. Mary Linton B Peters, Andrew Eckel, Peter P. Mueller, Angela C. Tramontano, **Davis T. Weaver**, Anna Lietz, Chin Hur, Chung Yin Kong, Pari V. Pandharipande, “Progression to pancreatic ductal adenocarcinoma from pancreatic intraepithelial neoplasia: Results of a simulation model”, *Pancreatology*, 2018, ISSN 1424-3903, <https://doi.org/10.1016/j.pan.2018.07.009>.

## Review Articles

1. Chishanae D. Neal, **Davis T. Weaver**, Tiana J. Raphael, Anna P. Lietz, Efren J. Flores, Sanja Percac-Lima, Amy B. Knudsen, Pari V. Pandharipande, “Patient Navigation to Improve Cancer Screening in Underserved Populations: Reported Experiences, Opportunities, and Challenges”, *Journal of the American College of Radiology*, 2018, ISSN 1546-1440, <https://doi.org/10.1016/j.jacr.2018.03.001>.

## Published Abstracts

1. Audrey H. Calderwood, **Davis T. Weaver**, Lynn Butterly, Amy B. Knudsen, “Mo1624 - Adenoma and Colorectal Cancer Rates by Time to Repeat Colonoscopy after Colonoscopy with Fair Bowel Preparation”, *Gastroenterology*, Volume 154, Issue 6, S-773.

## Oral Presentations

1. Modeling Ovarian Cancer Treatment Outcomes: Projected Benefits of a Test to Optimize Treatment Selection, Oral Presentation, 39<sup>th</sup> Annual Meeting of the Society for Medical Decision-Making, October, 2017
2. Modeling Ovarian Cancer Treatment Outcomes: Projected Benefits of a Test to Optimize Treatment Selection, Oral Presentation, Copper Talk Series, Dana Farber Cancer Institute, April 2017

## Poster Presentations

1. **Davis T. Weaver**, Kathleen I. Pishas, Drew Williamson, Jessica Scarborough, Stephen L. Lessnick, Andrew Dhawan, Jacob G. Scott, “Network potential identifies therapeutic miRNA cocktails in Ewings Sarcoma”, Poster Presentation, Lepow Day, Case Western Reserve University School of Medicine, 2019
2. **Davis T. Weaver**, Kathleen I. Pishas, Drew Williamson, Jessica Scarborough, Stephen L. Lessnick, Andrew Dhawan, Jacob G. Scott, “Network potential identifies therapeutic miRNA cocktails in Ewings Sarcoma”, Virtual

**Technical Skills**

1. R (>5 years of experience), including package development, data science, and bioinformatics.  
<https://github.com/DavisWeaver>
2. Python (> 2 years of experience)
3. SQL
4. C++
5. Linux command line (used for high performance computing)

