

YUE GU

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EDUCATION

University of Texas Health Science Center

2020-2025

Ph.D. in Biostatistics and Data Science

Minor in Health Economics, Breadth in Bioinformatics

Programming: R, Python, LaTeX, SAS, SQL, Linux, Stata, MS Access/Excel, MATLAB, Mathematica

Columbia University

2018-2020

M.S. in Biostatistics

University of Iowa

2014-2017

B.S. in Statistics, B.S. in Mathematics

HONORS AND AWARDS

- **Travel Awards for 10th Workshop on Biostatistics and Bioinformatics**, National Science Foundation, Georgia Chapter of the American Statistical Association (2025)
- **Outstanding New Student Scholarship**, University of Texas Health Science Center (2020-2021)
- **Statistics Departmental Scholarship and Awards**, University of Iowa (2017)
- **Dean's List**, University of Iowa (2015-2017)
- **University Honors**, University of Iowa (2014-2017)

RESEARCH INTERESTS

- Cancer Genomics; Somatic Mutation Calling; Genome Analysis; Molecular Oncology Profiling
- Monte-Carlo Methods; Simulation and Optimization; Statistical Modelling; Reproducible Analysis
- Computational and Mathematical Biology; Genetic Interactions; CRISPR Knockout Simulation Design

PUBLICATIONS

1. **Yue Gu**, Traver Hart, Luis Leon-Novelo, John Paul Shen. (2025) Double-CRISPR Knockout Simulation (DKOsim): A Monte-Carlo Randomization System to Model Cell Growth Behavior and Infer the Optimal Library Design for Growth-Based Double Knockout Screens. *PLOS Computational Biology*, under revision. bioRxiv: 2025-09. doi.org/10.1101/2025.09.11.675497.
2. Michael G. White, Mohammad A. Zeineddine, Eleanor A. Fallon, Fadl A. Zeineddine, Julia Dansby, Saikat Chowdhury, Nicholas Hornstein, Abdelrahman Yousef, Mahmoud Yousef, Neal Bhutiani, **Yue Gu**, Bryan Kee, Arvind Dasari, Michael J. Overman, Kanwal Raghav, Scott Kopetz, Abhineet Uppal, Melissa Taggart, Timothy Newhook, Keith Fournier, Beth Helmink, Leylah M. Drusbosky, John Paul Shen. (2025) The Landscape of ctDNA in Appendiceal Adenocarcinoma. *Clinical Cancer Research*. 31 (3): 551–560. doi.org/10.1158/1078-0432.CCR-24-2474.
3. John Paul Shen, **Yue Gu**, Saikat Chowdhury. (2024) Determining genetic interaction from double knockout CRISPR screening. *Molecular Cancer Therapeutics*. 23 (6_Supplement): A023. doi.org/10.1158/1538-8514.SYNTHLETH24-A023.
4. Vinay K. Pattalachinti, Ichiaki Ito, Saikat Chowdhury, Abdelrahman Yousef, **Yue Gu**, Betul Beyza Gunes, Emma R. Salle, Melissa W. Taggart, Keith Fournier, Natalie W. Fowlkes, John Paul Shen. (2024) Peritoneal Microenvironment Promotes Appendiceal Adenocarcinoma Growth: A Multi-omics Approach Using Patient-Derived Xenografts. *Molecular Cancer Research*. 22 (4): 329–336. PMID: 38226984. doi: 10.1158/1541-7786.MCR-23-0749.
5. Abdelrahman Yousef, Mahmoud Yousef, Mohammad A Zeineddine, Aditya More, Mohammad Fanaeian, Saikat Chowdhury, Mark Knafl, Paul Edelkamp, Ichiaki Ito, **Yue Gu**, Vinay Pattalachinti, Zahra Alavi Naini, Fadl A. Zeineddine, Jennifer Peterson, Kristin Alfaro, Wai Chin Foo, Jeff Jin, Neal Bhutiani, Victoria Higbie, Christopher

- P. Scally, Bryan Kee, Scott Kopetz, Drew Goldstein, Madeleine Strach, Andrew Williamson, Omer Aziz, Jorge Barriuso, Abhineet Uppal, Michael G. White, Beth Helmink, Keith F. Fournier, Kanwal P. Raghav, Melissa W. Taggart, Michael J. Overman, John Paul Shen. (2024) Serum Tumor Markers and Outcomes in Patients with Appendiceal Adenocarcinoma. *JAMA Network Open*. 7(2):e240260. doi:10.1001/jamanetworkopen.2024.0260.
6. Michael G. White, B. Helmink, S. Rivero-Hinojosa, N. Bhutiani, V. Aushev, Saikat Chowdhury, **Yue Gu**, A. Jurdi, M.C. Liu, K.F. Fournier, John Paul Y.C. Shen. (2023) The genomic landscape of appendiceal adenocarcinoma (AA) revealed by 855 whole exome sequences (WES). *Annals of Oncology*. 34, no. 2_suppl. doi.org/10.1016/j.annonc.2023.09.2965.
7. Abdelrahman Yousef, Mahmoud Yousef, Mohammad Zeineddine, Aditya More, Saikat Chowdhury, Mark Knafl, Paul Edelkamp, Ichiaki Ito, **Yue Gu**, Vinay Pattalachinti, Zahra Alavi Naini, Fadl Zeineddine, Jennifer Peterson, Kristin Alfaro, Wai Chin Foo, Jeff Jin, Neal Bhutiani, Victoria Higbie, Christopher Scally, Bryan Kee, Scott Kopetz, Drew Goldstein, Abhineet Uppal, Michael G. White, Beth Helmink, Keith Fournier, Kanwal Raghav, Melissa Taggart, Michael J. Overman, John Paul Shen. (2023) The Clinical Significance of CEA, CA19-9, and CA125 in Management of Appendiceal Adenocarcinoma. medRxiv. 2023.09.10.23295319. doi: 10.1101/2023.09.10.23295319. PMID: 37745596; PMCID: PMC10516068.
8. Abdelrahman Yousef, Mahmoud Yousef, Mohammad Zeineddine, Ichiaki Ito, Saikat Chowdhury, **Yue Gu**, Mark Knafl, Jeff Jin, Paul Edelkamp, Abhineet Uppal, Neal Bhutiani, Kristin Alfaro-Munoz, Neus Neus Bota-Rabassedas, Beth A. Helmink, Michael White, Melissa Taggart, Kanwal Pratap Singh Raghav, Michael J. Overman, Keith F. Fournier, John Paul Y.C. Shen. (2023) Prognostic and Predictive Significance of Pre- and Post-operative Plasma Tumor Markers in Patients with Appendiceal Adenocarcinoma Undergoing Cytoreductive Surgery: Insights from a Single-Center Study. *Journal of Clinical Oncology*. 41, no. 16_suppl: 3539-3539. doi: 10.1200/JCO.2023.41.16_suppl.3539.
9. Vinay K. Pattalachinti, Ichiaki Ito, Saikat Chowdhury, Abdelrahman Yousef, **Yue Gu**, Keith F. Fournier, John Paul Shen. (2023) Peritoneal microenvironment promotes appendiceal adenocarcinoma tumor formation in PDX models. *Cancer Research*. 83 (7_Supplement): 6546. doi.org/10.1158/1538-7445.AM2023-6546.
10. Fadl A. Zeineddine, Mohammad A. Zeineddine, Abdelrahman Yousef, **Yue Gu**, Saikat Chowdhury, Arvind Dasari, Ryan W. Huey, Benny Johnson, Bryan Kee, Michael S. Lee, Maria Pia Morelli, Van K. Morris, Michael J. Overman, Christine Parseghian, Kanwal Raghav, Jason Willis, Robert A. Wolff, Yoshikuni Kawaguchi, Jean-Nicolas Vauthey, Ryan Sun, Scott Kopetz, John Paul Shen. (2023) Survival Improvement for Patients with Metastatic Colorectal Cancer Over Twenty Years. *NPJ Precision Oncology*. 7 (16). PMID: 36781990. doi.org/10.1038/s41698-023-00353-4.
11. Abdelrahman M.G. Yousef, Aditya More, Mohammad A. Zeineddine, Saikat Chowdhury, **Yue Gu**, Julia Dansby, Zahra Alavi Naini, Abhineet Uppal, Kanwal Pratap Singh Raghav, Michael J. Overman, Keith F. Fournier, John Paul Y.C. Shen. (2023) Utility of tumor marker levels in predicting survival of patients with appendiceal adenocarcinoma. *Journal of Clinical Oncology*. 41, no. 4_suppl: 221-221. doi: 10.1200/JCO.2023.41.4_suppl.221.
12. Aditya More, Ichiaki Ito, Valsala Haridas, Saikat Chowdhury, **Yue Gu**, Princess Dickson, Natalie Fowlkes, John Paul Shen. (2022) Oncogene addiction to GNAS in GNAS^{R201} mutant tumors. *Oncogene*. (41) 4159-4168. PMID: 35879396. doi.org/10.1038/s41388-022-02388-6.
13. **Yue Gu**, Abdelrahman M.G. Yousef, Saikat Chowdhury, John Paul Shen. (2022) Gene expression analysis of appendiceal adenocarcinomas highlights tumor heterogeneity between high and low-grade. *Cancer Research*. 82 (12_Supplement): 5794. doi.org/10.1158/1538-7445.AM2022-5794.
14. Ichiaki Ito, Michael G. White, Abdelrahman Yousef, Princess N. Dickson, **Yue Gu**, Keith F. Fournier, John Paul Shen. (2022) Orthotopic patient-derived xenograft models of appendiceal adenocarcinoma identify intraperitoneal paclitaxel treatment as an active therapeutic agent. *Cancer Research*. 82 (12_Supplement): 6040. doi.org/10.1158/1538-7445.AM2022-6040.
15. **Yue Gu**. (2017) Study and Prevention of Systematic Risk of Insurance Industry of China. *Proceedings of the*

2017 3rd International Conference on Economics, Social Science, Arts, Education and Management Engineering (ESSAEME 2017). doi:10.2991/essaeme-17.2017.221.

16. **Yue Gu.** (2017) Research on Operation Dilemmas and Innovations of Chinese Insurance Companies. *2nd International Conference on Education, Sports, Arts and Management Engineering (ICESAME 2017)*. doi:10.2991/icesame-17.2017.269.

TEACHING EXPERIENCE

Graduate Teaching Assistant, University of Texas Health Science Center

Fall 2025

➤ Courses:

- Categorical Data Analysis - PH 1830 (class size: 43)
- Introduction to Biostatistics in Public Health - PH 1690 (class size: 48)

PROFESSIONAL EXPERIENCE

Graduate Research Assistant

Sep. 2020-Dec. 2025

Department of Gastrointestinal Medical Oncology, MD Anderson Cancer Center

Research Assistant

Apr. 2019-May 2020

Department of Biostatistics, Columbia University and New York State Psychiatric Institute (NYSPI)

Research Data Analyst

Aug. 2017-May 2018

Department of Surgery, University of Iowa

Consulting Intern

May 2016-July 2016

Performance Improvement, PricewaterhouseCoopers (PwC)

Consulting Intern

May 2015-Aug 2015

Performance Improvement, Ernst & Young (EY)

PRESENTATIONS

1. **Yue Gu**, Traver Hart, Luis Leon-Novelo, John Paul Shen. (2024) Double-CRISPR Knockout Simulation Scheme to Compare Genetic Interactions Detection Methods and to Design Double Knockout Genomic Experiments [invited], at Special Conference on Biostatistics in the New Era of Data-Driven Sciences, UTHealth 55th Anniversary of the Department of Biostatistics and Data Science, Houston, TX.
2. John Paul Shen, **Yue Gu**, Saikat Chowdhury. (2024) Determining genetic interaction from double knockout CRISPR screening [invited poster], at American Association for Cancer Research (AACR) Special Conference in Cancer Research: Expanding and Translating Cancer Synthetic Vulnerabilities, Montreal, Quebec, Canada.
3. Emma R. Salle, Vinay K. Pattalachinti, Ichiaki Ito, Saikat Chowdhury, Abdelrahman Yousef, **Yue Gu**, Keith F. Fournier, John Paul Shen, Natalie W. Fowlkes. (2023) Appendiceal Adenocarcinoma PDX Models Have Improved Tumor Growth in an Orthotopic Tumor Environment [contributed poster], at MD Anderson Cancer Center, Houston, TX.
4. **Yue Gu**, Abdelrahman M.G.Yousef, Saikat Chowdhury, John Paul Shen. (2022) Gene expression analysis of appendiceal adenocarcinomas highlights tumor heterogeneity between high and low-grade [contributed poster], at American Association for Cancer Research (AACR) annual meeting 2022, New Orleans, LA.
5. **Yue Gu**, Hanga C. Galfalvy, Melanie M. Wall. (2020) Reproducible clustering analysis based on neuropsychological data emphasized on patients in MDD, Bipolar and Remitted Depressed Study [contributed poster], at Columbia University Practicum Session, New York, NY.

EXTRACURRICULAR

Language: English (Fluent), Mandarin Chinese (Native), Cantonese (Native)

Leadership: Cultural Leader, Friends without Borders; Treasurer, Omicron Delta Kappa Honor Society; Tippie Business Buddies, University of Iowa Tippie College of Business; Principal Flute, Concert Band.

Volunteer: International Chinese Statistical Association (ICSA) conference Volunteer; Volunteer Income Tax Assistance (VITA) – International Programs; CCTV “Community Hero” Volunteer