

MIHRAN YENIKOMSHIAN
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Mr. Yenikomshian specializes in data analysis and economic modeling, and has consulted on economic and strategic issues to companies in a variety of industries, including pharmaceuticals, medical insurance, blockchain and cryptocurrency, computer software and technology, and cybersecurity. He has extensive experience analyzing large datasets such as administrative insurance medical claims and transactional software sales data. Mr. Yenikomshian has calculated damages in antitrust, health care product liability, kickback, and off-label pharmaceutical promotion matters, and in a variety of consumer class action cases. He has served as a testifying expert in a criminal matter, provided critiques of data and analytical methodologies in support of rebuttal testimony, and assisted attorneys with discovery, cross-examination strategy, and settlement negotiations. He has also developed interactive software tools to help clients make strategic decisions. Mr. Yenikomshian is a member of the American Bar Association and serves as co-chair of its Big Data Committee and Data Science Working Group, as well as vice chair of its Artificial Intelligence and Robotics Committee. Prior to joining Analysis Group, he was a partner in a software development and staffing technology firm.

EDUCATION

2006 M.B.A., F.W. Olin Graduate School of Business, Babson College
2003 B.A., quantitative economics and computer science, Tufts University

PROFESSIONAL EXPERIENCE

2006–Present Analysis Group, Inc.
 Managing Principal (2021–Present)
 Vice President (2015–2021)
 Manager (2011–2014)
 Associate (2006–2010)
2003–2006 Crossfire Consulting
 Senior Consultant and Partner

SELECTED CONSULTING EXPERIENCE

- ***County of Suffolk v. Purdue Pharma L.P., et al., County of Nassau v. Purdue Pharma L.P., et al., The State of New York v. Purdue Pharma L.P., et al.***
Submitted an affidavit on behalf of Teva USA regarding direct and indirect transactional sales data produced in the litigation. Replicated an analysis presented by counsel for the State of New York during closing arguments that was purportedly based on these data and corrected the calculations,

showing that the figures presented by counsel to the jury during closing arguments were vastly overstated (by 80 to over 500 times).

- ***Apple Inc. v. Corellium, LLC***
US District Court, Southern District of Florida
Supported a cybersecurity expert in a copyright infringement case involving the replication of Apple's OS and applications on virtual machines for alleged security research and testing. Assisted in the development of reports on industry norms for good-faith security research and fair use.
- ***US ex rel. Bawduniak v. Biogen Idec Inc.***
Submitted a declaration on behalf of Biogen in a civil matter to determine whether information responsive to specific interrogatories could be ascertained from the data produced during discovery.
- ***US v. Jitesh Thakkar***
Provided expert testimony on behalf of the US Department of Justice (DOJ) in a criminal matter involving a software developer who allegedly designed and sold a software program that assisted a commodities trader engaged in spoofing. Analyzed the code to determine whether the software program operated in a manner consistent with the trader's requirements document.
- **Government investigations concerning prescription drug and medical device marketing practices, including:**
 - Atrovent, Combivent, Aggrenox/Boehringer Ingelheim (District of Maryland)
 - Bextra, Lyrica, Zynox/Pfizer (District of Massachusetts)
 - Depakote/Abbott Laboratories (Western District of Virginia)
 - Lovaza/GlaxoSmithKline (Office of the Inspector General)
 - Protonix/Pfizer (District of Massachusetts)
 - Rituxan/Genentech (Eastern District of Pennsylvania)
 - Tarceva/Genentech (Northern District of California)
 - Zyprexa/Eli Lilly (Eastern District of Pennsylvania)

Used economic, biostatistical, and epidemiologic approaches to evaluate the alleged conduct, quantify the relevant sales, and assess the causal connection, if any, between the allegations in each case and the sales at issue.

- ***Ischemia Research and Education Foundation v. Pfizer Inc.***
Superior Court of the State of California, County of Santa Clara
Supported statistical, economic, and clinical experts in various analyses resulting from an alleged misappropriation of trade secrets. Assessed function of source code.
- ***US, et al. ex rel. Brown v. Celgene Corp.***
US District Court, Central District of California
Provided consulting support to counsel for Celgene in connection with allegations of improper marketing practices with respect to Thalomid and Revlimid.
- ***US v. State of Florida***
US District Court, Southern District of Florida
Provided consulting support to counsel for the state of Florida in a dispute over whether the state has

caused some medically complex or fragile children to be unnecessarily segregated in nursing facilities, and placed others at risk of being unnecessarily segregated in such facilities.

- **Confidential analysis of technology evolution**
Supported a technology evolution expert on behalf of a software company, including evaluation of source code and software developer practices.
- **Confidential cryptocurrency issue**
Supported an expert in analyzing an assessment of cryptocurrency markets.
- **Cryptocurrency intellectual property (IP) issue**
Supported an analysis of the value of an alleged cryptocurrency trademark violation.
- ***Multiple State Attorneys General v. GlaxoSmithKline***
Provided economic, statistical, and epidemiological consulting support to counsel for GlaxoSmithKline in connection with allegations of improper marketing practices with respect to Avandia.
- ***US ex rel. Strom v. Scios, Inc. and Johnson & Johnson***
US District Court, Northern District of California
Supported an economic expert in analyzing the impact of alleged off-label promotion and payment of kickbacks with respect to Natrecor.
- ***US ex. rel. John Underwood v. Genentech, Inc.***
US District Court, Eastern District of Pennsylvania
Supported an economic expert in analyzing the impact of alleged off-label promotion and payment of kickbacks with respect to Rituxan.
- ***In re: Zyprexa Products Liability Litigation***
US District Court, Eastern District of New York
Supported multiple economic and statistics experts in assessments of causation and damages, as well as the cost effectiveness of Zyprexa.
- ***Grider v. Keystone Health Plan Central, et al.***
US District Court, Eastern District of Pennsylvania
Supported the defendant's liability expert concerning allegations of improper payment for physician services.

ARTICLES AND PUBLICATIONS

“HSD77 Real-World Dosing Patterns of Eculizumab-Naive and Eculizumab-Experienced Patients with Paroxysmal Nocturnal Hemoglobinuria Receiving Ravulizumab in the US,” Cheng WY, Fishman J, Yenikomshian M, Mahendran M, Kunzweiler C, Vu JD, Duh, MS. *Value in Health*, 25 (2022).

“Real-World Eculizumab Dosing Patterns Among Patients with Paroxysmal Nocturnal Hemoglobinuria in a US Population,” Cheng W, Sarda S, Mody-Patel N, Krishnan S, Yenikomshian M, Kunzweiler C, Vu J, Cheung HC, Duh MS. *ClinicoEconomics and Outcomes Research*, 14 (2022).

“Mitigating Antitrust Concerns when Competitors Share Data Using Blockchain Technology,” Arcelus A, Nocera N, Yenikomshian M. *Harvard Journal of Law & Technology*, 34 (2021).

“Health Cos. Can Reduce FCA Risk by Leveraging Data,” Jenny B, Yenikomshian M, Greenberg PE. *Law360*, (2021).

“Trifluridine/Tipiracil (FTD/TPI) and Regorafenib in Patients with Metastatic Colorectal Cancer (mCRC): A Retrospective Study at a Tertiary Oncology Center,” Patel AK, Abhyankar R, Brais LK, Duh MS, Barghout VE, Huynh L, Yenikomshian MA, Ng K, Fuchs CS. *Oncologist*, 26(12) (2021).

“Real-World Healthcare Resource Utilization (HRU) and Costs of Patients with Paroxysmal Nocturnal Hemoglobinuria (PNH) Receiving Eculizumab in a US Population,” Cheng WY, Sarda SP, Mody-Patel N, Krishnan S, Yenikomshian M, Mahendran M, Lejeune D, Yu LH, Duh MS. *Advances in Therapy*, 07; 38(8) (2021).

“Real-World Treatment Patterns and Healthcare Resource Utilization (HRU) of Patients (Pts) with Paroxysmal Nocturnal Hemoglobinuria (PNH) Receiving Eculizumab in a US Population,” Cheng WY, Sarda SP, Mody-Patel N, Krishnan S, Yenikomshian M, Scoble PJ, Mahendran M, Lejeune D, Yu L, Duh MS, *Blood*, 11; 136(Supplement 1) (2020).

“Real-World Adherence in Patients with Metastatic Colorectal Cancer Treated with Trifluridine plus Tipiracil or Regorafenib,” Patel, AK, Barghout V, Yenikomshian MA, Germain G, Jacques P, Laliberté F, Duh, MS. *Oncologist*, 25(1) (2020).

“Modeling the potential impact of abuse-deterrent opioids on medical resource utilization,” Yenikomshian, MA, White AG, Carson ME, Jia ZB, Mendoza MR, Roland CL. *Journal of Medical Economics*, 22(10) (2019).

“Cardiac arrhythmia detection outcomes among patients monitored with the Zio patch system: a systematic literature review,” Yenikomshian M, Jarvis J, Patton C, Yee C, Mortimer R, Birnbaum H, Topash M. *Current Medical Research and Opinion*, 35(10) (2019).

“Real-world Treatment Patterns Among Patients With Colorectal Cancer Treated With Trifluridine/Tipiracil and Regorafenib,” Patel AK, Duh MS, Barghout V, Yenikomshian MA, Xiao Y, Wynant W, Tabesh M, and Fuchs CS. *Clinical Colorectal Cancer*, 17(3) (2018).

“Projecting the cost, utilization, and patient care impact of prescribing extended release non-abuse-deterrent opioids to chronic pain patients,” Yenikomshian MA, White AG, Carson ME, Garrison LP, Oderda GM, Biskupiak JE, Hlavacek PR, Roland CL. *Journal of Opioid Management*, 13(5) (2017).

“Practical Uses for Machine Learning in Health Care Cases,” Yenikomshian M, Pinheiro L, Royer J, Greenberg P. *Law360* (2016).

“Cost-analysis model of colonoscopy preparation using split-dose reduced-volume oral sulfate solution (OSS) and polyethylene glycol with electrolytes solution (PEG-ELS),” Huynh L, Yermakov S, Davis M, Campbell R, Cleveland M, Farraye FA, Yenikomshian M. *Journal of Medical Economics*, 19(4) (2016).

“The economic impact of implementing a multiple inflammatory biomarker-based approach to identify, treat, and reduce cardiovascular risk,” Penn MS, Yenikomshian MA, Cummings AK, Klemes A, Damron JM, Purvis S, Beidelschies M, Birnbaum HG. *Journal of Medical Economics*, 18(7) (2015).

“The epidemiology of herpes zoster and its complications in Medicare cancer patients,” Yenikomshian MA, Guignard AP, Haguinet F, LaCasce AS, Skarin AT, Trahey A, Karner P, Duh MS. *BMC Infectious Diseases*, 15(1) (2015).

PRESENTATIONS AND SPEAKING ENGAGEMENTS

“Trifluridine/tipiracil (FTD/TPI) and regorafenib (REG) in patients with metastatic colorectal cancer (mCRC): A single institution retrospective study,” American Society of Clinical Oncology (ASCO) Annual Meeting, Chicago (June 2019)

Panel on digital ethics concerning big data (moderator and participant), American Bar Association Pre-RSA Conference Information Security Meeting (March 2019)

“Statistical Sampling and Extrapolation in FCA litigation: Leveraging Opportunities,” The Knowledge Group Webinar (June 2018)

“Real-world adherence in patients with metastatic colorectal cancer (mCRC) treated with trifluridine/tipiracil (FTD/TPI) or regorafenib (REG),” ASCO Annual Meeting, Chicago (June 2018)

“Comparison of the real-world adherence and compliance patterns with trifluridine/tipiracil (FTD/TPI) and regorafenib (REG) for the treatment of metastatic colorectal cancer (mCRC),” Gastrointestinal Cancers Symposium, San Francisco (January 2018)

“Real-world adherence and treatment discontinuation with trifluridine/tipiracil (FTD-TPI) compared with regorafenib (REG) for the treatment of metastatic colorectal cancer (mCRC),” ASCO Annual Meeting, Chicago (June 2017)

“Everything You Wanted to Know About the Use of Statistical Sampling to Establish FCA Liability (But Were Afraid to Ask),” Sidley Austin Webinar, Chicago (March 2017)

“A Model to Quantify Potential Medical Events Avoided and Cost Savings from Abuse Deterrent Opioids,” American Pain Society 35th Annual Scientific Meeting, Austin (May 2016)

“Projecting the cost, utilization, and patient care impact of prescribing extended-release non-abuse-deterrent opioids to chronic pain patients.,” International Society for Pharmacoeconomics and Outcomes Research (ISPOR) 21st Annual International Meeting, Washington, DC (May 2016)

“A Cost Comparison of Split-Dose Reduced-Volume oral Sulfate Solution (OSS) And Polyethylene Glycol with Electrolytes Solution (Peg-El),” ISPOR 20th Annual Meeting, Philadelphia (May 2015)

“The Economic Impact of Implementing a Multiple Inflammatory Biomarker-Based Approach to Identify, Treat, and Reduce Cardiovascular Risk,” ISPOR 19th Annual Meeting, Montreal (June 2014)

“The Epidemiology of Herpes Zoster and Its Complications in Medicare Patients,” 29th International Conference of Pharmacoepidemiology & Therapeutic Risk Management, Montreal (August 2013)

“Health Care Resource Utilization and Costs of Medicare Patients with Non-small Cell Lung Cancer (NSCLC),” ISPOR 18th Annual Meeting, New Orleans (May 2013)