

ANKOOR TALWAR

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PROFILE

An enthusiastic aspiring plastic surgeon who is eager to explore the creative bounds of surgery and technology to improve access and quality of patient care throughout the world.

EDUCATION

Albany Medical College – Albany, NY

Doctor of Medicine (M.D.) Candidate

Expected May 2023

- Step 1: 250
- Distinction in Research: Health Systems Analysis
- Member of Alpha Omega Alpha (AOA) Medical Honor Society

Clarkson University – Schenectady, NY

Master of Business Administration (M.B.A.) in Healthcare Administration

June 2018

- Leadership in Medicine Program

Union College – Schenectady, NY

Bachelor of Science (B.S.) in Chemistry and Economics

June 2018

- Leadership in Medicine Program
- Magna Cum Laude

CLINICAL & RESEARCH EXPERIENCES

Clinical Research Fellow

July 2021 – June 2022

Division of Plastic Surgery, University of Pennsylvania Health System

- Projects:
 - Modern computing as a tool to solve clinical problems:
 - *Machine Learning*: Optimizing hernia risk models using unsupervised, ensemble methodologies of ML and the power of supercomputing
 - *Natural Language Processing*: extracting text-mined data from clinical notes using large language (“foundation”) models like GPT-3 and RoBERTa; comparing the efficiency of text-mined to code-based data
 - *Computer Vision*: Extracting morphometric, linear, intensity-based, and texture-based features from preoperative CT scans; identifying optimal biomarkers to predict risk of hernia formation
 - Patient-Reported Outcomes:
 - Measuring nipple-areolar complex sensation of patients undergoing female-to-male transgender mastectomy
 - Characterizing functional and patient reported outcomes of single vs. two-stage digital salvage techniques for treatment of digital skin cancer
 - Comparing outcomes of free nipple graft vs. pedicled flap following breast reduction for gigantomastia
 - Understanding long-term patient-reported outcomes in ventral hernia repair using P4HB (Phasix) mesh
 - Breast Reconstruction:
 - Understanding how breast cancer stage correlates to vascular compromise in autologous breast reconstruction

- Determining how nerve allografts affect long-term sensation in breast reconstruction
- Characterizing complication profiles of prepectoral vs. submuscular implant-based breast reconstruction
- Understanding risk factors for complications in implant-based breast reconstruction
- Healthcare Systems Analysis:
 - Quantifying access to reconstruction for victims of Female Genital Mutilation (FGM)
 - Characterizing resident interest in learning FGM reconstruction
 - Exploring price transparency in plastic surgery and surgery, in general, and correlating price to objective quality metrics and hospital characteristics
- Surgical Ergonomics
 - Examining baseline ergonomics associated with microsurgical breast reconstruction and how it compares to subjective experiences of workload
 - Comparing ergonomics between straight vs. prismatic loupes for microsurgical breast reconstruction
- Aesthetic Surgery
 - Understanding how aesthetic facial surgery affects post-operative injection use
 - Using commercial artificial intelligence APIs to quantify age change in women receiving facial fillers
- Mentors: John Fischer M.D. M.P.H. john.fischer2@pennmedicine.upenn.edu, Joseph Serletti M.D. joseph.serletti@pennmedicine.upenn.edu, Robyn Broach Ph.D. robyn.broach@pennmedicine.upenn.edu

Research Assistant

Oct. 2018 – Present

Division of Plastic Surgery, Albany Medical Center

- Completed:
 - Systematic review of management of traumatic Orbital Apex Syndrome
 - Researched how obtaining Maxillo-facial CT scans change the operative management of facial trauma patients over just Head CT scans
 - Investigated literature to compare immediate vs. delayed cranioplasty after craniotomy
 - Researched the dearth of breast cancer treatment options and availability in New York State
- Mentors: Ashit Patel MBChB, patela6@amc.edu, Joseph A. Ricci M.D., josricci@montefiore.org

Research Assistant

Dec. 2020 – June 2021

Division of Plastic Surgery, Yale Medicine

- Completed:
 - Systematic review regarding restenosis of uninvolved cranial sutures following index surgery for craniosynostosis
- Mentor: Derek Steinbacher M.D., D.M.D. derek.steinbacher@yale.edu, Joseph A. Lopez M.D. M.B.A. joeyl07@gmail.com

Research Assistant

Jan. 2018 – Oct. 2019

Department of Neurological Surgery, Albany Medical Center

- Completed:
 - Examined the importance of routine clinic follow up visits in pediatric patients with hydrocephalus treated with ventricular shunt
- Mentor: Matthew A. Adamo M.D., adamom@amc.edu

PUBLICATIONS AND SCHOLARSHIP

Original Research Publications (Published)

- **Talwar AA**, Perry NJ, McAuliffe PB, Desai AA, Thrippleton S, Broach RB, Fischer JP. Shifting the Goalpost in Ventral Hernia Care: 5-Year Outcomes after Ventral Hernia Repair with Poly-4-Hydroxybutyrate Mesh. *Hernia*. PMID: 36114396
- **Talwar AA**, Copeland-Halperin L, Walsh LR, Christopher AN, Cunning JC, Broach RB, Baratta M, Copeland M, Shakaran V, Butler PD. Outcomes Of Extended Pedicled Technique Vs. Free Nipple Graft Reduction Mammoplasty For Patients With Gigantomastia. *Aesthetic Surgery Journal*. PMID: 36161307
- **Talwar AA**, Perry NJ, Barrero C, Desai AA, McAuliffe PM, Broach RB, Chang B, Lin IC. Patient-Reported and Clinical Outcomes of Single Vs. Two-stage Reconstruction Of Digital Mohs Defects. *Orthoplastic Surgery*.
- **Talwar AA**, Shulkin J, Hitchner MH, McAuliffe PM, Desai AA, Broach R, Percec I. Use of Cosmetic Facial Injectables After Facial Aesthetic Surgery. *Aesthetic Surgery Journal*. 2022. PMID: 35764098.
- McAuliffe PB, Desai AA, **Talwar AA**, Broach RB, Hsu JY, Serletti JM, Tong Y, Udupa JK, Torigan DA, Fischer JP. Preoperative Computer Tomography Morphological Features Associated with Hernia Formation. *Annals of Surgery*. PMID: 35837959.
- Rios-Diaz AJ, Cunning JR, **Talwar AA**, Christopher A, Broach RB, Hsu JY, Morris JB, Fischer JP. The Mesh Footprint Effect – Reoperation Through a Prosthetic-Reinforced Abdominal Wall and Its Association with Postoperative Outcomes and Longitudinal Healthcare Utilization. *JAMA Surgery*. PMID: 35921101.
- McAuliffe PB, Muss T, Desai AA, **Talwar AA**, Broach RB, Fischer JP. Complications of Aesthetic Surgical Tourism Treated in the USA: A Systematic Review. *Aesthetic Plastic Surgery*. PMID: 36315261
- **Talwar AA**, Ricci JA. A Meta-Analysis of Traumatic Orbital Apex Syndrome and the Effectiveness of Surgical and Clinical Treatments. *Journal of Craniofacial Surgery*. 2021. PMID: 33770036.
- Rubino S, Gabireddy SR, Altshuler J, **Talwar AA**, Feustel PJ, Adamo MA. Analysis of Shunted Hydrocephalus Follow-up: What do routine clinic visits yield? What factors affect revision surgery presentation and outcomes? *Journal of Clinical Neuroscience*. 2020. PMID: 33317743.
- **Talwar AA**, Heiman A, Kotamarti, V, Bommareddy K, Harris ES, Sandberg ML, Patel A, Ricci JA. High-Resolution Maxillofacial Computed Tomography Is Superior to Head Computed Tomography in Determining the Operative Management of Facial Fractures. *Journal of Surgical Research*. 2020. PMID: 32745748.
- Bhat D, Heiman A, **Talwar AA**, Dunne M, Amanjee K, Ricci, JA. Access to Breast Cancer Treatment and Reconstruction in Rural Populations: Do Women Have a Choice? *Journal of Surgical Research*. 2020. PMID: 32474195.
- **Talwar AA**, Bhat D, Heiman A, Ricci JA. Outcomes of Immediate Titanium Cranioplasty Following Post-Craniotomy Infection: A Systematic Review of the Literature. *Journal of Craniofacial Surgery*. 2020. PMID: 32310891.
- Johnson CK, Alley MC, **Talwar A**, Tirrell J, Leinhart A, Pauze DR, Pauze DK, Rosenbaum AJ. Does musculoskeletal health literacy differ between urban and rural orthopedic patients? *Current Orthopaedic Practice*. 2017.
- Sahni S, **Talwar A**, Khanijo A, Talwar A. Socioeconomic status and its relationship to chronic respiratory disease. *Advances in Respiratory Medicine*. 2017. PMID: 28440535.
- Talwar A, Sahni S, **Talwar A**, Kohn N, Klinger JR. Socioeconomic Status Effects Pulmonary Hypertension Disease Severity at Time of First Evaluation. *Pulmonary Circulation*. 2016. PMID: 27252845.

- Wang BC, Liu H, **Talwar A**, Jian J. New discovery rarely runs smooth: an update on progranulin/TNFR interactions. *Protein Cell*. 2015. PMID: 26408020.

Original Research Awaiting Publication (Accepted)

- **Talwar AA**, Desai AA, McAuliffe PB, Broach R, Percec I. Plastic Surgery Resident Training and Interest in Reconstruction for Female Genital Mutilation/Cutting. *Plastic and Reconstructive Surgery*.

Original Research Awaiting Publication (Submitted)

- **Talwar AA**, Desai AA, McAuliffe PB, Broach RB, Hsu J, Udupa J, Tong Y, Torigan D, Fischer JP. Optimal Image-Based Biomarkers For Prediction Of Incisional Hernia Formation. *Journal of the American College of Surgeons*.
- **Talwar AA**, Mazzaferro D, Morris MP, Davis H, Shulkin J, Hitchner MH, Broach RB, Brooks AD, Serletti JM. The Impact of Breast Cancer Type, Staging, and Treatment on Vascular Complications of Free Flap Breast Reconstruction. *Annals of Plastic Surgery*.
- **Talwar AA**, Lanni M, Ryan I, McAuliffe PB, Kodali P, Bernstein E, Broach RB, Serletti JM, Butler PD, Fosnot J. Prepectoral vs. Submuscular Implant-based Breast Reconstruction: A Matched-Pair Comparison of Outcomes. *Plastic and Reconstructive Surgery*.
- **Talwar AA**, Lazar SV, Reategui, AA, Sun AH, Kameni LE, Lopez J, Steinbacher DM. A Systematic Review of Idiopathic Restenosis Following Index Surgery for Craniosynostosis. *Journal of Craniofacial Surgery*.
- McAuliffe PB, **Talwar AA**, Desai A, Broach RB, Low D, Fischer JP. The Umbilicus in Plastic Surgery: A Review of Anatomy and Aesthetics. *Aesthetic Plastic Surgery*.
- McAuliffe P, Winter E, **Talwar A**, Desai A, Broach R, Fischer J. Pressure Ulcer Trends in the United States: A Cross-Sectional Assessment from 2008-2019. *Journal of Wound Care*.

Original Research Awaiting Submission

- **Talwar AA**, McAuliffe PB, Broach R, Fischer JP. Patient-Reported Outcomes: A Primer for Plastic Surgeons. *Plastic and Reconstructive Surgery*.
- Desai, A; **Talwar, A**; McAuliffe, P; Hsu, J; Broach, R; Fischer, J. Characterizing Morbidity And Mortality After Aesthetic Abdominal Surgery: A Nationwide Analysis. *Aesthetic Plastic Surgery*.
- Desai, A; Christopher, A; Cuning, J; Morris, M; Rios-Diaz, A; Nathan, S; **Talwar, A**; McAuliffe, P; Broach, R; Serletti, J; Tecce, M. Breast Flap Neurotization After Autologous Free Flap Breast Reconstruction: A Prospective Trial. *Plastic and Reconstructive Surgery*.
- Desai, A; **Talwar, A**; McAuliffe, P; Morris, M; Christopher, A; Patel, V; Broach, R; Serletti, J; Percec, I. Artificially Intelligent Facial Feature Quantification After Facial Filler Injection. [No target journal yet]
- Desai, A; **Talwar, A**; McAuliffe, P; Broach, R; Percec, I. Text Analysis and Other Hedonometrics: Understanding the Social Media Conversation About Plastic Surgery. [No target journal yet]
- McAuliffe P, Shulkin J, Desai A, **Talwar A**, Broach R, Fischer J. Patient-Reported Outcome Measures in Diastasis Literature. [No target journal yet]
- McAuliffe P, Kozak G, Bascone C, Desai A, **Talwar A**, Broach R, Fischer J. Outcomes of Botulinum Toxin for Ventral Incisional Hernia Repair. [No target journal yet]
- McAuliffe P, Couto J, **Talwar A**, Desai A, Broach R, Fischer J. A Narrative Review of the Umbilicus in Plastic Surgery: Surgical Techniques and Outcomes. *Archives of Plastic Surgery*.
- Desai, A; **Talwar, A**; McAuliffe, P; Liu, T; Broach, R; Ungar, L; Fischer, J. High-quality Risk Factor Extraction from Operative Notes with Surgical Text Mining. [No target journal yet]

Other Peer Reviewed Publications (Published)

- **Talwar AA**, Talwar A, Talwar A. Multiple Cases of Pediatric Umbilical Hernia in a Rural Ghanaian Village. *The Lancet*. 2019;394(10193):159. PMID: 31305253.
- **Talwar AA**. The Physicians Prayer. *The American Journal of Medicine*. 2018. PMID: 29969610.
- **Talwar A**, Talwar A, Talwar S. A 5-year-old boy with patches of hair loss [published online October 18, 2019]. *Consultant*360.
- Talwar SA, Talwar A, **Talwar A**. A Man With Yellowish Nail Discoloration – Tobacco Addiction. *Consultant*. 2018;58(4):27.
- Talwar SA, Talwar A, **Talwar A**. Can You Identify This Patient’s Bilateral Hand Deformities and Loss of Motion? – Dupuytren’s Contracture. *Consultant*. 2018;58(1):711.

Other Peer Reviewed Publications (Submitted)

- **Talwar AA**. When the Wall Falls Down. *The Pharos – Journal of the AOA*.
- **Talwar AA**, Serletti JM. Un Sueño, A Dream Come True! *Intima: A Journal of Narrative Medicine*.

Book Chapters

- **Talwar AA**, McAuliffe PB, Percec I. Ch. 68: Patient Perspectives. *Translational Plastic Surgery* [textbook]
- **Talwar A**, Singas E, Iakovou A, Talwar A. *Kidney and Pancreas Transplantation*. 2nd ed. New Delhi: Jaypee Brothers Medical Publishers; c2021. Chapter 27: Pre-operative Pulmonary Evaluation for Patients Undergoing Renal Transplantation.
- Talwar A, **Talwar A**, Talwar S. *Kidney and Pancreas Transplantation*. 2nd ed. New Delhi: Jaypee Brothers Medical Publishers; c2021. Chapter 28: Bone Disease Following Renal Transplantation.

PRESENTATIONS

Accepted/Presented Research Abstracts – Oral Presentations

- **Talwar AA**; Desai A.; McAuliffe, P.; Broach, R.; Percec, I. Access to Comprehensive Care for Female Genital Mutilation Including Reconstructive Surgery in Western Europe and the United States. *Plastic Surgery The Meeting*. Boston, MA. 2022.
- **Talwar AA**; Desai A.; McAuliffe, P.; Liu, T.; James, V.; Broach, R.; Ungar, L.; Fischer, J. Automated Machine Learning For Risk Prediction Of Incisional Hernia In Abdominal Surgery Patients. *Plastic Surgery The Meeting*. Boston, MA. 2022.
- **Talwar AA**; Copeland-Halperin L; Walsh LR; Christopher AN; Cunning JC; Broach RB; Baratta M; Copeland M; Shankaran V; Butler PD. Outcomes Of Extended Pedicled Technique Vs. Free Nipple Graft Reduction Mammoplasty For Patients With Gigantomastia. *Plastic Surgery The Meeting*. Boston, MA. 2022.
- **Talwar AA**; Lanni M; Ryan I; McAuliffe PB; Desai AA; Broach RB; Butler PD; Serletti JM; Fosnot J. Patient and Operative Risk Factors for Complications following Pre-pectoral Implant-based Breast Reconstruction. *Plastic Surgery The Meeting*. Boston, MA. 2022.

- **Talwar AA**, Perry, N.; Desai, A.; McAuliffe, P.; Barrero, C.; Broach, R.; Chang, B.; Lin, I. Patient-Reported and Clinical Outcomes of Single Vs. Two-stage Reconstruction Of Digital Mohs Defects. Plastic Surgery The Meeting. Boston, MA. 2022.
- **Talwar AA**; Morris MP; Desai A.; McAuliffe, P.; Broach, R.; Serletti, J.; Percec, I. Volumetric and Patient-Reported Outcomes Three Months after Hyaluronic Acid Facial Filler Injection. Plastic Surgery The Meeting. Boston, MA. 2022.
- **Talwar AA**, Perry, N.; Desai, A.; McAuliffe, P.; Broach, R.; Serletti JM. Understanding Transition Regret and Gender-Affirming Surgery: A Systematic Review. Plastic Surgery The Meeting. Boston, MA. 2022.
- McAuliffe P, Bascone C, Kozak G, **Talwar A**, Desai A, Broach R, Fischer J. Botulinum Toxin Utilization for Abdominal Wall Reconstruction. Plastic Surgery the Meeting. Boston, MA. 2022.
- McAuliffe P, Muss T, Desai A, **Talwar A**, Broach R, Fischer J. Complications of Medical Tourism Treated in the US: A Systematic Review. Plastic Surgery the Meeting. Boston, MA. 2022.
- McAuliffe P, Bascone C, **Talwar A**, Desai A, Broach R, Fischer J. Biosynthetic Mesh Exposure Management and Outcomes. Plastic Surgery the Meeting. Boston, MA. 2022.
- Desai AA, **Talwar AA**, McAulife PB, Broach R, Percec I. Text Analysis and Other Hedonometrics: Understanding the Social Media Conversation About Plastic Surgery. Plastic Surgery the Meeting. Boston, MA. 2022.
- **Talwar AA**; Desai A; McAuliffe P; Thrippleton S; Broach R; Fischer JP. Minimizing the Mesh Footprint: 5-Year Follow up After Hernia Repair using Poly-4-Hydroxybutyrate Mesh. European Hernia Society. Manchester, UK. 2022.
- **Talwar AA**; Mazzaferro D; Morris MP; Davis H; Shulkin J; Hitchner MH; Broach RB; Brooks AD; Serletti JM. The Impact of Breast Cancer Type, Staging, and Treatment on Vascular Complications of Free Flap Breast Reconstruction. Northeastern Society of Plastic Surgeons. Newport, RI. 2022.
- **Talwar AA**; Desai, A; Christopher, A; Cuning, J; Morris, M; Rios-Diaz, A; Nathan, S; McAuliffe, P; Broach, R; Serletti, J; Tecce, M. Breast Flap Neurotization After Autologous Free Flap Breast Reconstruction: A Prospective Trial. Northeastern Society of Plastic Surgeons. Newport, RI. 2022.
- **Talwar AA**; Lanni M; Ryan I; McAuliffe PB; Desai AA; Broach RB; Butler PD; Serletti JM; Fosnot J. Patient and Operative Risk Factors for Complications following Pre-pectoral Implant-based Breast Reconstruction. Northeastern Society of Plastic Surgeons. Newport, RI. 2022.
- **Talwar AA**; Desai A.; McAuliffe, P.; Liu, T.; James, V.; Broach, R.; Ungar, L.; Fischer, J. Automated Machine Learning For Risk Prediction Of Incisional Hernia In Abdominal Surgery Patients. Northeastern Society of Plastic Surgeons. Newport, RI. 2022.
- Kozak G; McAuliffe PB; Bascone C; **Talwar AA**; Desai A; Broach RB; Kovach S; Fischer JP. Botulinum Toxin Utilization for Abdominal Wall Reconstruction. Northeastern Society of Plastic Surgeons. Newport, RI. 2022.
- McAuliffe P, Muss T, Desai A, **Talwar A**, Broach R, Fischer J. Complications of Medical Tourism Treated in the US: A Systematic Review. Northeastern Society of Plastic Surgeons. Newport, RI. 2022.
- **Talwar AA**; Copeland-Halperin L; Christopher AN; Shankaran V; Butler PD. Outcomes Of Extended Pedicled Technique Vs. Free Nipple Graft Reduction Mammoplasty For Patients With Gigantomastia. The Society of Black Academic Surgeons Annual Meeting. Philadelphia, PA. 2022.
- **Talwar AA**; Desai A. Penn Plastic Surgery: Incubating the Next Generation of Surgical Research. Penn Plastic Surgery Centennial Celebration. Philadelphia, PA. 2022.
- **Talwar AA**; Desai A.; McAuliffe, P.; Liu, T.; James, V.; Broach, R.; Ungar, L.; Fischer, J. Automated Machine Learning For Risk Prediction Of Incisional Hernia In Abdominal Surgery Patients. Plastic Surgery Research Council. Toronto, ON. 2022.
- **Talwar, AA**; Desai, A; McAuliffe, P; Broach, R; Percec, I. Artificially Intelligent Facial Feature Quantification After Facial Filler Injection. Plastic Surgery Research Council. Toronto, ON. 2022

- **Desai AA**, Christopher AN, Cunning, J, Morris M, Rios-Diaz AJ, Nathan S, **Talwar AA**, McAuliffe PB, Broach RB, Serletti JM, Tecce MG. Breast Flap Neurotization After Autologous Free Flap Breast Reconstruction: A Prospective Trial. Plastic Surgery Research Council. Toronto, ON. 2022.
- **Desai, A; Talwar, AA**; McAuliffe, P; Hsu, J; Broach, R; Percec, I; Fischer, J. Characterizing Morbidity and Mortality After Aesthetic Abdominal Surgery: A Nationwide Analysis. Plastic Surgery Research Council. Toronto, ON. 2022.
- **Talwar AA**; Desai A.; McAuliffe, P.; Broach, R.; Serletti, J.; Percec, I. Access to Comprehensive Care for Female Genital Mutilation Including Reconstructive Surgery in Western Europe and the United States. European Association of Plastic Surgeons. Naples, IT. 2022.
- **Talwar AA**; **McAuliffe, P.**; Desai A.; Broach, R.; Serletti, J.; Percec, I. Volumetric and Patient-Reported Outcomes Three Months after Hyaluronic Acid Facial Filler Injection. European Association of Plastic Surgeons. Naples, IT. 2022.
- **Desai, A; Talwar, AA**; McAuliffe, P; Hsu, J; Broach, R; Percec, I; Fischer, J. Characterizing Morbidity and Mortality After Aesthetic Abdominal Surgery: A Nationwide Analysis. European Association of Plastic Surgeons. Naples, IT. 2022.
- **Tecce, M**; Desai, A; Christopher, A; Cunning, J; Morris, M; Rios-Diaz, A; Nathan, S; **Talwar AA**; McAuliffe, P; Broach, R; Serletti, J. Breast Flap Neurotization After Autologous Free Flap Breast Reconstruction: A Prospective Trial. European Association of Plastic Surgeons. Naples, IT. 2022.
- **Mazzaferro, D**; Morris, M; **Talwar, AA**; Davis, H; Shulkin, J; Hitchner, MH; Broach, R; Brooks, AD; Serletti, J.M. The Impact of Breast Cancer Type, Staging, and Treatment on Vascular Complications of Free Flap Breast Reconstruction. European Association of Plastic Surgeons. Naples, IT. 2022.
- **Talwar, AA**; Desai, A; McAuliffe, P; Broach, R; Serletti, J; Percec, I. Use of Cosmetic Facial Injections after Facial Aesthetic Surgery. The Aesthetic Meeting. San Diego, CA. 2022
- **Desai, A; Talwar, AA**; McAuliffe, P; Broach, R; Serletti, J; Percec, I. Artificially Intelligent Facial Feature Quantification After Facial Filler Injection. The Aesthetic Meeting. San Diego, CA. 2022.
- **Fischer JP**; McAuliffe P; Desai A; **Talwar AA**; Broach, R.; Serletti, J.; Tong Y; Udupa J; Torigan D. Preoperative Computed Tomography Morphological Features Associated with Hernia Formation. American Surgical Association. Chicago, IL. 2022.
- **Talwar AA**; Desai A.; McAuliffe, P.; Broach, R.; Serletti, J.; Percec, I. Access to Comprehensive Care for Female Genital Mutilation Including Reconstructive Surgery in Western Europe and the United States. Robert H. Ivy Society Scientific Meeting. Hershey, PA. 2022.
- **Talwar AA**; Desai A.; McAuliffe, P.; Liu, T.; James, V.; Broach, R.; Ungar, L.; Fischer, J. Automated Machine Learning For Risk Prediction Of Incisional Hernia In Abdominal Surgery Patients. Robert H. Ivy Society Scientific Meeting. Hershey, PA. 2022.
- **Talwar AA**, Perry, N.; Desai, A.; McAuliffe, P.; Barrero, C.; Broach, R.; Chang, B.; Lin, I. Patient-Reported and Clinical Outcomes of Single Vs. Two-stage Reconstruction Of Digital Mohs Defects. Robert H. Ivy Society Scientific Meeting. Hershey, PA. 2022.
- **Talwar AA**, Walsh, L; Desai, A.; McAuliffe, P.; Broach, R.; Copeland-Halperin, L.; Shankaran, V.; Butler, P. An Aesthetic Comparison Of Extended Pedicled Technique Vs. Free Nipple Graft Reduction Mammoplasty For Patients With Gigantomastia. Robert H. Ivy Society Scientific Meeting. Hershey, PA. 2022.
- Tecce, M; **Desai, A**; Christopher, A; Cunning, J; Morris, M; Rios-Diaz, A; Nathan, S; **Talwar AA**; McAuliffe, P; Broach, R; Serletti, J. Breast Flap Neurotization After Autologous Free Flap Breast Reconstruction: A Prospective Trial. Robert H. Ivy Society Scientific Meeting. Hershey, PA. 2022.
- **Desai, A; Talwar AA**; McAuliffe, P; Hsu, J; Broach, R; Fischer, J. Characterizing Morbidity And Mortality After Aesthetic Abdominal Surgery: A Nationwide Analysis. Robert H. Ivy Society Scientific Meeting. Hershey, PA. 2022.
- **Desai, A; Talwar AA**; McAuliffe, P; Broach, R; Serletti, J; Percec, I. Artificially Intelligent Facial Feature Quantification After Facial Filler Injection. Robert H. Ivy Society Scientific Meeting. Hershey, PA. 2022.

- **McAuliffe P**, Winter E, **Talwar A**, Desai A, Broach R, Fischer J. Pressure Ulcer Trends in the US 2012-2017. Robert H. Ivy Society Scientific Meeting. Hershey, PA. 2022.
- **Talwar AA**, Reategui AA, Sun A, Kameni LH, Phillips SJ, Lopez J, Steinbacher DM. A Systematic Review of Restenosis of Uninvolved Cranial Sutures Following Index Surgery for Craniosynostosis. Academic Surgical Congress. Orlando, FL. 2022.
- **Talwar AA**, Ricci JA. Understanding the Management of Traumatic Orbital Apex Syndrome: A Systematic Review of the Literature. American Society of Plastic Surgery: Plastic Surgery The Meeting. Atlanta, GA. 2021.
- Christopher AN, Othman S, Morris MP, **Talwar AA**, Broach RB, Percec I. Clinical and Patient Reported Outcomes of 19 Patients Undergoing Clitoral and Labial Reconstruction After Female Genital Mutilation/Cutting. American Society of Plastic Surgery: Plastic Surgery The Meeting. Atlanta, GA. 2021.
- Morris MP, Toyoda Y, Christopher AN, **Talwar AA**, Broach RB, Percec I. Systematic Review of Aesthetic Training in Plastic Surgery Residency: Suggestions and Implications. American Society of Plastic Surgery: Plastic Surgery The Meeting. Atlanta, GA. 2021.
- **Bhat D**, **Talwar AA**, Heiman A, Ricci JA. Dedicated High-resolution Maxillo-facial Computed Tomography In Determining The Operative Management Of Facial Trauma Patients: Is It Necessary? American Association of Plastic Surgeons. Miami, FL. 2021.
- **Talwar AA**, Kotamarti V, Bhat D, Heiman A, Patel A, Ricci JA. The Importance of Dedicated High-Resolution Maxillo-Facial Computed Tomography in Determining the Operative Management of Facial Trauma Patients. American Society of Plastic Surgery: Plastic Surgery The Meeting. 2020.
- Kotamarti V, **Talwar AA**, Heiman A, Ricci JA. Dedicated High-resolution Maxillo-facial Computed Tomography In Determining The Operative Management Of Facial Trauma Patients: Is It Necessary? Plastic Surgery Research Council. Toronto, ON. 2020. [Canceled due to COVID-19]
- **Talwar AA**, **Kotamarti V**, Bhat D, Heiman A, Ricci JA. Dedicated High-Resolution Maxillo-Facial Computed Tomography in Determining the Operative Management of Facial Trauma Patients: Is It Necessary? Oral Presentation. New York Regional Society of Plastic Surgery Residents Night. New York, NY. 2020.
- **Talwar AA**, Bhat D, Ricci JA. Dedicated Maxillo-Facial Computed Tomography is Important for Operative Management of Facial Trauma. Academic Surgical Congress. Orlando, FL. 2020.
- **Talwar AA**, Bhat D, Ricci JA. Systematic Review of the Complications of Immediate vs. Delayed Cranioplasty Following Craniotomy. Academic Surgical Congress. Orlando, FL. 2020.
- **Bhat D**, Amanjee K, Dunne M, **Talwar AA**, Ricci JA. Access to Microsurgical Breast Reconstruction in Upstate New York: Do Women Really Have a Choice? Academic Surgical Congress. Orlando, FL. 2020.

Accepted/Presented Research Abstracts - Posters

- **McAuliffe P**, **Talwar A**, Desai A, Broach R, Low D, Fischer J. The Umbilicus in Plastic Surgery: A Review of Anatomy and Aesthetics. Plastic Surgery the Meeting. Boston, MA. 2022.
- **Talwar AA**; Desai A; McAuliffe P; Broach R; Thrippleton S; Fischer JP. Minimizing the Mesh Footprint: 5-Year Follow up After Hernia Repair using Poly-4-Hydroxybutyrate Mesh. ACS Clinical Congress. San Diego, CA. 2022.
- **Talwar AA**; Desai A.; McAuliffe, P.; Broach, R.; Percec, I. Access to Comprehensive Care for Female Genital Mutilation Including Reconstructive Surgery in Western Europe and the United States. Northeastern Society of Plastic Surgeons. Newport, RI. 2022.
- **Talwar AA**; Desai A.; McAuliffe, P.; Broach, R.; Percec, I. Access to Comprehensive Care for Female Genital Mutilation Including Reconstructive Surgery in Western Europe and the United States. Plastic Surgery Research Council. Toronto, ON. 2022.

- McAuliffe P, Hsu J, Morris M, Christopher A, **Talwar A**, Desai A, Percec I, Broach R, Fischer J. Systematic Variable Reduction for Simplification of Incisional Hernia Risk Prediction Instruments. Plastic Surgery Research Council Annual Meeting. Toronto, ON. 2022.
- McAuliffe P, **Talwar A**, Desai A, Broach R, Percec I, Fischer J. Pressure Ulcer Trends in the US 2012-2017. Plastic Surgery Research Council Annual Meeting. Toronto, ON. 2022.
- Mazzaferro, D; Morris, M; **Talwar, AA**; Davis, H; Shulkin, J; Hitchner, MH; Broach, R; Brooks, AD; Serletti, J.M. The Impact of Breast Cancer Type, Staging, and Treatment on Vascular Complications of Free Flap Breast Reconstruction. American Association of Plastic Surgeons. San Diego, CA 2022.
- **Talwar, AA**; Desai, A; McAuliffe, P; Broach, R; Serletti, J; Percec, I. Artificially Intelligent Facial Feature Quantification After Facial Filler Injection. American Association of Plastic Surgeons. San Diego, CA 2022.
- McAuliffe P, Winter E, **Talwar A**, Desai A, Broach R, Fischer J. Pressure Ulcer Trends in the US 2012-2017. American Association of Plastic Surgeons Annual Meeting. San Diego, CA. 2022.
- **Talwar AA**, Mazzaferro D, Martin M, Hitchner M, Christopher A, Davis H, Shulkin J, Walsh J, Broach R, Serletti JM. The Impact of Breast Cancer Type, Staging, and Treatment on Free Flap Breast Reconstruction Complications. Robert H. Ivy Society Meeting. Hershey, PA. 2022
- **Talwar AA**; Morris, M.; Christopher, A.; Patel, V.; Desai, A.; McAuliffe, P.; Broach, R.; Serletti, J.; Percec, I. Volumetric Analysis and Quality of Life Outcomes Three Months After Hyaluronic Acid Injectable Facial Filler. Robert H. Ivy Society Meeting. Hershey, PA. 2022.
- **Talwar AA**, McAuliffe, P.; Desai, A.; Broach, R.; Percec, I. Analysis Of Use Of Aesthetic Facial Injections After Cosmetic Facial Surgery: A Single Surgeon Experience. Robert H. Ivy Society Meeting. Hershey, PA. 2022.
- McAuliffe, P; Bascone, C; Desai, A; **Talwar AA**; Broach, R; Fischer, J. Biosynthetic Mesh Exposure Management and Outcomes. Robert H. Ivy Society Meeting. Hershey, PA. 2022.
- McAuliffe P, Hsu J, Morris M, Christopher A, Borovskiy Y, **Talwar A**, Desai A, Broach R, Fischer J. Systematic Variable Reduction for Simplification of Incisional Hernia Risk Prediction Instruments. Robert H. Ivy Society Meeting. Hershey, PA. 2022.
- Desai, A.; Malphrus, E.; McAuliffe, P.; **Talwar AA**; Broach, R.; Butler, P. What's in a cup? Understanding Public Perception of Breast Size. Robert H. Ivy Society Meeting. Hershey, PA. 2022.
- Heiman A, **Talwar AA**, Ricci JA. Outcomes Of Immediate Titanium Cranioplasty Following Postcraniotomy Infections: A Systematic Review Of The Literature. Plastic Surgery Research Council. Toronto, ON. 2020. [Canceled due to Coronavirus]
- Rubino S, Gabbireddy S, Altshuler J, **Talwar A**, Feustel P, Adamo MA. Analysis of Traditional Outpatient Follow-Up in Shunted Hydrocephalus: Do routine clinic visits alter care for asymptomatic patients? American Association of Neurological Surgeons. Boston, MA. 2020. [Canceled due to Coronavirus]
- **Talwar AA**. The Importance of Dedicated High-Resolution Maxillo-Facial Computed Tomography in Determining the Operative Management of Facial Trauma Patients. American Association of Physicians of Indian Origin – Queens, Long Island Young Investigator Research Competition. Old Westbury, NY. 2019.
- **Talwar AA**. Community Pediatric Health Assessment in Rural Ghana. American Association of Physicians of Indian Origin – Queens, Long Island Young Investigator Research Competition. Old Westbury, NY. 2019.
- **Talwar AA**. The Importance of Dedicated High-Resolution Maxillo-Facial Computed Tomography in Determining the Operative Management of Facial Trauma Patients. Albany Medical College Medical Student Investigation Day. Albany, NY. 2019.
- **Talwar AA**. Community Pediatric Health Assessment in Rural Ghana. Albany Medical College Medical Student Investigation Day. Albany, NY. 2019.

- **Talwar AA**, Patel H, Hyde J, Manford S, Pandya D, Shah H, Kurup P, Talwar A. Assessment of Community Pediatric Health in Rural Ghana. American Medical Student Association Conference. Washington D.C. 2019.
- **Talwar AA**. How Do Variations in Health Literacy Affect Preventive Care Usage in the United States? American Association of Physicians of Indian Origin – Queens, Long Island Young Investigator Research Competition. Old Westbury, NY. 2018.
- **Talwar AA**, Talwar A. Healthy, Wealthy and Wise – An Interventional Study on the Effect of a Structured Health Curriculum on the Knowledge Base of Elementary School Students. American Medical Student Association Conference. Washington D.C. 2017.
- **Talwar AA**, Does musculoskeletal health literacy differ between urban and rural orthopaedic patients? American Association of Physicians of Indian Origin – Queens, Long Island Young Investigator Research Competition. Old Westbury, NY. 2016.
- **Talwar AA**. Progranulin Protects Against Titanium-induced Inflammatory Osteolysis by Targeting TNF Signaling. Union College Steinmetz Symposium. Schenectady, NY. 2016.
- **Talwar AA**. Progranulin Protects Against Titanium-induced Inflammatory Osteolysis by Targeting TNF Signaling. American Association of Physicians of Indian Origin – Queens, Long Island Young Investigator Research Competition. Old Westbury, NY. 2015.
- **Talwar AA**. Development of Nitric Oxide-Releasing nanoparticles and their assessment in an in vitro hypoxia model. American Association of Physicians of Indian Origin – Queens, Long Island Young Investigator Research Competition. Old Westbury, NY. 2015.
- **Talwar AA**. Development of Nitric Oxide-Releasing nanoparticles and their assessment in an in vitro hypoxia model. American Thoracic Society Conference. San Diego, CA. 2014.

Submitted Research Abstracts

- **Talwar AA**; Desai A.; McAuliffe, P.; Broach, R.; Percec, I. Access to Comprehensive Care for Female Genital Mutilation Including Reconstructive Surgery in Western Europe and the United States. American Council of Academic Plastic Surgeons Winter Meeting. New Orleans, LA. 2023.
- **Talwar AA**; Hu S; McAuliffe P; Desai A; Broach R; Serletti J; Fischer JP. Predicting Costs of Breast Cancer Care: Lessons from the CMS Price Transparency Rule. American Society of Reconstructive Microsurgery. Miami, FL. 2023.
- **Talwar AA**; Lanni M; Ryan I; McAuliffe PB; Desai AA; Broach RB; Butler PD; Serletti JM; Fosnot J. Prepectoral vs. Submuscular Implant-based Breast Reconstruction: A Matched-Pair Comparison of Outcomes. American Society of Reconstructive Microsurgery. Miami, FL. 2023.
- **Talwar AA**; Desai A; McAuliffe P; Broach R; Hsu Y; Tong Y; Udupa JK; Torigan DA; Fischer JP. Optimal Image-Based Biomarkers for Prediction of Incisional Hernia Formation. American Society of Reconstructive Microsurgery. Miami, FL. 2023.
- **Talwar AA**; Desai A; McAuliffe P; Broach R; Thrippleton S; Fischer JP. Minimizing the Mesh Footprint: 5-Year Follow up After Hernia Repair using Poly-4-Hydroxybutyrate Mesh. American Society of Reconstructive Microsurgery. Miami, FL. 2023.
- **Mazzaferro D**; **Talwar AA**; Morris MP; Davis H; Shulkin J; Hitchner MH; Broach RB; Brooks AD; Serletti JM. The Impact of Breast Cancer Type, Staging, and Treatment on Vascular Complications of Free Flap Breast Reconstruction. American Society of Reconstructive Microsurgery. Miami, FL. 2023.
- **Messa C**; **Talwar AA**; Broach RB; Fischer JP. A 4-Year Assessment of Transverse Abdominis Release for Massive Ventral Hernia Repair: A Long-term Evaluation of Clinical Outcomes and Prospective Quality of Life. American Society of Reconstructive Microsurgery. Miami, FL. 2023.
- **Davis H**; **Talwar AA**; Habarth-Morales T; Braoch RB; Serletti JM. Operative Takebacks of Autologous Breast Reconstruction: A Single Surgeon's 15-year Experience. American Society of Reconstructive Microsurgery. Miami, FL. 2023.

- McAuliffe PB; Winter E; Desai A; **Talwar AA**; Broach R; Fischer JP. Pressure Ulcers Trends in the US 2012-2017. American Society of Reconstructive Microsurgery. Miami, FL. 2023.
- McAuliffe PB; Desai AA; **Talwar AA**; Broach RB; Fischer JP. Qualitative Assessment of the Patient Experience of Diastasis Toward Development of a Patient-Reported Outcome Measure. American Society of Reconstructive Microsurgery. Miami, FL. 2023.

INVITED LECTURES AND PANELS

- Panel: Setting up a Dedicated Research Year. Albany Medical College. Albany, NY. March 30th, 2022.
- Lecture: Dedicated Year in Surgical Research. Albany Medical College. Albany, NY. November 19th, 2023.

PROFESSIONAL EXPERIENCES AND VOLUNTEERING

PremedHQ

Mar 2018 – present

Head Coach

- Coach high school children who are interested in medicine on how to explore medicine and how to tackle college and medical school applications
- Board member of Diversity In Medical Education (D.I.M.E.) Initiative to recruit and coach students from minority or disadvantaged backgrounds
- Oversee 7 other primary coaches and assist in their interactions with their own students
- Contact: shad@premedhq.com

Penn Center for Surgical Health

Aug 2021 – present

Personal Patient Navigator

- Volunteer to navigate the health system with undocumented patients to find coverage for their urgent surgical needs
- Worked with one patient who had surgery for inguinal hernia, and one who had gender-affirming mastectomy
- Contact: eric.li@pennmedicine.upenn.edu

Albany Medical Student Data Science Course

July 2022 – present

Course Instructor

- Invited by Albany Med administration to teach principles of research, how to organize research opportunities, and how to develop data science skills
- Devised a 5-week course to teach M1 students the basics of data science using R language in RStudio
 - Topics: data transformation, tidying, analysis, modeling, and visualization
- Contact: SidhuM@amc.edu

Albany Medical Center Tobacco Cessation Service

Sep 2018 – Feb 2020

Student Counselor

- Certified in Clinician-Assisted Tobacco Cessation
- Consulted to speak with inpatients at Albany Medical Center interested in tobacco cessation
 - Counseled patients on medication options and behavioral strategies (substitutions, delay tactics)
 - Connected patients with further resources for more information (AMC cardiopulmonary therapists, NYS Quitline)
- Redesigned documentation for the Service
- Completed 101.75 hours of service

Global Project Hope Inc. (www.globalprojecthope.com)

2009 – 2020

Co-founder

- Organized a trip for and lead a group of students to Cape Coast, Ghana to participate in medical and educational outreach among the rural villages (December 2018)
- Helped develop a project-based health education curriculum for primary schoolchildren called “*Healthy, Wealthy, and Wise*” with a health workbook for students
 - Currently ongoing as the Square One project at Northwestern University

AMSA Anatomy Peer Instruction

Nov 2019

- Volunteered to teach the anatomy of the forearm and hand (bones, muscles, nerves, arteries, landmarks) to massage therapy students using cadavers at Albany Medical College

- Penn Serving the Homeless Dinner** Aug 2021 – May 2022
- Once a month the Penn community sets up dinner for the homeless population at the Chosen 300 Ministries
 - Completed 21 hours of service
 - Contact: laura.lombardo@pennmedicine.upenn.edu

- Albany Medical College Plastic Surgery Interest Group (PSIG)** Sept 2018 – present
- Organize events for students to learn more about the field of plastic surgery

- Albany Medical College Prescribed Books for Kids (PBK)** Aug 2018 – July 2020
Leadership Board
- Planned budget and schedule for club operations in academic year 2019-20
 - Developed a new way to store and carry books to the pediatric wards using a professional book truck
 - Organized a student body-wide gift wrapping for pediatric patients during Christmas

- AMC Taking Responsibility for the Earth and Environment Subcommittee (T.R.E.E.S.)** Apr 2021 – present
- Volunteered twice to clean up garbage around Albany Medical Center and Washington Park
 - An enjoyable experience that I look forward to continuing in the future

- Union College Writing Center** Sep 2015 – May 2018
Fellow
- Coached students in weekly peer review conferences to improve their writing abilities. This included idea development, thesis, structure, organization, argument, use of evidence, clarity, and grammar.
 - Contact: writingprograms@union.edu

AWARDS AND HONORS

- Onyekwere Emmanuel Akwari, MD Award – 3rd place Oral Presentation, Society of Black Academic Surgeons Annual Meeting, 2022
- Distinction in Research: Health Systems Analysis, 2022
- Inductee into Alpha Omega Alpha Medical Honor Society, 2021
- Albany Medical College Alumni Association Travel Grant, 2020
 - For Academic Surgical Congress, Orlando, FL, 2020
- Albany Medical College Alumni Association Travel Grant, 2019
 - For American Medical Student Association, Washington D.C., 2019
- American Association of Physicians of Indian Origin – Queens Long Island Young Investigator Research Award 3rd place, 2016
- Union College Presidential Scholarship, 2015-2018
- Intel Science Talent Search Semifinalist, 2014
 - For project titled: An in vitro Assessment of Nitric Oxide-Releasing Nanoparticles as a Potential Drug Delivery Vehicle for Treating Hypoxia-Induced Pulmonary Vascular Inflammation
- National Merit Scholar, 2014
- National AP Scholar with Distinction, 2014

CERTIFICATIONS

- Basic Medical Spanish, 2022 (ongoing)
- Clinician-Assisted Tobacco Cessation, 2018
- Emergency Medical Technician, 2016-2018

GRANTS AND FELLOWSHIPS

Awarded

- Institute for Translational Medicine and Therapeutics - Translational Bio-Imaging Center (TBIC) Grant of \$50,000, 2022
 - To study image analysis and its use in quantifying risk of post-surgical hernia formation
- Plastic Surgery Foundation's (PSF) National Endowment for Plastic Surgery (NEPS) Grant of \$50,000, 2022
 - To study surgical risk prediction using image analysis
- Center for Human Appearance Grant of \$20,000, 2022
 - To use a comprehensive Inertial Measurement Unit (IMU) system to study intraoperative surgical ergonomics in plastic surgical operations and assess methods to improve ergonomics
- Penn Plastic Surgery Clinical Research Fellowship, University of Pennsylvania, 2021-2022
 - Funded opportunity to conduct clinical research in plastic surgery over the 2021-2022 academic year
- Summer Research Fellowship, Albany Medical College, 2019
 - Funded opportunity to conduct clinical research over an 8-week summer period
- Klemm Fellowship, 2017
 - Funded opportunity to conduct public health outreach and education in Cape Coast, Ghana

MEMBERSHIPS IN PROFESSIONAL SOCIETIES

National:

- American Society of Plastic Surgeons (ASPS)
 - Medical Student Member, 2019 - current
- American Society for Peripheral Nerve (ASPN)
 - Candidate Member, 2022 - current
- Migraine Surgery Society (MSS)
 - Medical Student Member, 2022 - current
- The Aesthetic Society
 - Medical Student Member, 2022 - current
- American College of Surgeons (ACS)
 - Medical Student Member, 2021 - current
- Association of American Physicians of Indian Origin (AAPIO)
 - Medical Student Member, 2019 - current
- South Asian Medical Student Association (SAMSA)
 - Medical Student Member, 2021 - current
- American Medical Association
 - Medical Student Member, 2018 - current

SKILLS

R Programming Language & RStudio
REDCap
CAVASS
Public Speaking
Teamwork
Leadership
Research
Data Science
Project Management

LANGUAGES

English
Hindi

INTERESTS

Drumming
Personal Fitness
Narrative Writing
Machine Learning, Foundation Models,
Computer Vision, Natural Language
Processing
Mentorship
Global Health
Formula 1
Bollywood
Making Sense with Sam Harris Podcast

REFERENCES

References can be made available upon request.