



## Anna Luan

Clinical Assistant Professor, Surgery - Plastic & Reconstructive Surgery

### CLINICAL OFFICE (PRIMARY)

- **Stanford Plastic Surgery Clinic**

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### ACADEMIC CONTACT INFORMATION

- **Administrative Contact**

Tania Lomeli Franco - Administrative Associate

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### Bio

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#### BIO

Dr. Anna Luan received her Bachelor and Master of Science degrees in Bioengineering at the University of California, San Diego. She obtained her medical degree and continued on to complete residency in Plastic and Reconstructive Surgery at Stanford. During this time, she was a Donald Laub fellow in global reconstructive surgery with ReSurge International, and was the Ron Milliken Resident Teacher of the Year. Following residency, she completed the combined orthopaedic/plastic surgery Hand and Upper Extremity fellowship at Massachusetts General Hospital/Harvard, with further experience in hand and wrist trauma, peripheral nerve surgery, and complex upper limb reconstruction. She is currently a Clinical Assistant Professor in the Division of Plastic and Reconstructive Surgery within the Department of Surgery.

Her research interests are in innovation and translational research, clinical outcomes, and global surgery. She has particular interests in improving patient care and outcomes by leveraging advanced technologies such as artificial intelligence, including machine learning and deep learning. She is an Affiliated Faculty of the Stanford Center for Artificial Intelligence in Medicine and Imaging (AIMI).

#### CLINICAL FOCUS

- Peripheral Nerve Injuries
- Amputation Stumps
- Hand Injuries
- Spasticity
- Hand Deformities
- Peripheral Nerve Diseases
- Nerve Pain
- Prosthesis, Arm
- Myoelectric Prostheses
- Post Stroke Rehabilitation

- Spastic Tetraplegias
- Paraplegia
- Spastic Paraplegias
- Plastic and Reconstructive Surgery

## ACADEMIC APPOINTMENTS

- Clinical Assistant Professor, Surgery - Plastic & Reconstructive Surgery

## BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Candidate Member, American Society of Plastic Surgeons (2024 - present)
- Candidate Member, American Association for Hand Surgery (2022 - present)
- Candidate Member, American Society for Surgery of the Hand (2020 - present)
- Member, California Society of Plastic Surgeons (2017 - present)

## PROFESSIONAL EDUCATION

- Fellowship: Harvard Hand and Upper Extremity Fellowship (2024) MA
- Residency: Stanford University Dept of Plastic Surgery (2023) CA
- Medical Education: Stanford University School of Medicine (2016) CA
- MS, University of California, San Diego , Bioengineering (2011)
- BS, University of California, San Diego , Bioengineering (2010)

## Publications

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### PUBLICATIONS

- **Application of Machine Learning to Osteoporosis and Osteopenia Screening Using Hand Radiographs.** *The Journal of hand surgery*  
Luan, A., Maan, Z., Lin, K., Yao, J.  
2024
- **Automatic Detection of Perilunate and Lunate Dislocations on Wrist Radiographs Using Deep Learning.** *Plastic and reconstructive surgery*  
Pridgen, B., von Rabenau, L., Luan, A., Gu, A. J., Wang, D. S., Langlotz, C., Chang, J., Do, B.  
2023
- **Impact of Adding Carpal Tunnel Release or Trigger Finger Release to Carpometacarpal Arthroplasty on Postoperative Complications\*.** *Plastic and reconstructive surgery*  
Trinh, P., Luan, A., Tawfik, V. L., Sheckter, C., Rochlin, D., Fox, P., Curtin, C.  
2023
- **Economic Evaluation of a Global Reconstructive Surgery Visiting Educator Program.** *Annals of surgery open : perspectives of surgical history, education, and clinical approaches*  
Luan, A., Meyers, N., Le Thua, T. H., Dang, H. T., Phu, Q. V., Auten, B., Chang, J.  
2022; 3 (3): e181
- **Expansion of Reconstructive Surgical Capacity in Vietnam: Experience from the ReSurge Global Training Program.** *Plastic and reconstructive surgery*  
Luan, A., Hau, L. T., Thom, D. H., Viet, P. Q., Auten, B., Chang, J.  
1800
- **Are We Curing by Cutting? A Call for Long-Term Follow Up and Outcomes Research in Global Surgery Interventions - Perspective.** *International journal of surgery (London, England)*  
Luan, A., Mghase, A. E., Meyers, N., Chang, J.  
2021

- **Lymphatic Microsurgical Preventive Healing Approach (LYMPHA) for Lymphedema Prevention after Axillary Lymph Node Dissection-A Single Institution Experience and Feasibility of Technique.** *Journal of clinical medicine*  
Lipman, K., Luan, A., Stone, K., Wapnir, I., Karin, M., Nguyen, D.  
2021; 11 (1)
- **Single-Unit technique for the use of acellular dermal matrix in immediate expander-based breast reconstruction.** *Journal of plastic, reconstructive & aesthetic surgery : JPRAS*  
Luan, A., Patel, A. A., Martin, S. A., Nazerali, R. S.  
2020
- **Assessing the Accuracy of a 3-Dimensional Surface Imaging System in Breast Volume Estimation.** *Annals of plastic surgery*  
Kwong, J. W., Tijerina, J. D., Choi, S. n., Luan, A. n., Feng, C. L., Nguyen, D. H., Lee, G. K., Nazerali, R. S.  
2020
- **Pathway Analysis of Gene Expression in Murine Fetal and Adult Wounds.** *Advances in wound care*  
Hu, M. S., Hong, W. X., Januszyk, M., Walmsley, G. G., Luan, A., Maan, Z. N., Moshrefi, S., Tevlin, R., Wan, D. C., Gurtner, G. C., Longaker, M. T., Lorenz, H. P.  
2018; 7 (8): 262-275
- **Comparison of Outcomes of Total Esophageal Reconstruction With Supercharged Jejunal Flap, Colonic Interposition, and Gastric Pull-up** *ANNALS OF PLASTIC SURGERY*  
Luan, A., Hunter, C. L., Crowe, C. S., Lee, G. K.  
2018; 80: S274-S278
- **Pathway Analysis of Gene Expression in Murine Fetal and Adult Wounds** *ADVANCES IN WOUND CARE*  
Hu, M. S., Hong, W., Januszyk, M., Walmsley, G. G., Luan, A., Maan, Z. N., Moshrefi, S., Tevlin, R., Wan, D. C., Gurtner, G. C., Longaker, M. T., Lorenz, H.  
2018
- **Pathway Analysis of Gene Expression of E14 Versus E18 Fetal Fibroblasts** *ADVANCES IN WOUND CARE*  
Hu, M. S., Borrelli, M. R., Januszyk, M., Luan, A., Malhotra, S., Walmsley, G. G., Hong, W., Tevlin, R., Gurtner, G. C., Longaker, M. T., Lorenz, H. P.  
2018; 7 (1): 1–10
- **Noncoding RNAs in Wound Healing: A New and Vast Frontier** *ADVANCES IN WOUND CARE*  
Luan, A., Hu, M. S., Leavitt, T., Brett, E. A., Wang, K. C., Longaker, M. T., Wan, D. C.  
2018; 7 (1): 19–27
- **Ultrasound-assisted liposuction provides a source for functional adipose-derived stromal cells** *CYTOTHERAPY*  
Duscher, D., Maan, Z. N., Luan, A., Aitzetmueller, M. M., Brett, E. A., Atashroo, D., Whittam, A. J., Hu, M. S., Walmsley, G. G., Houschyar, K. S., Schilling, A. F., Machens, H., Gurtner, et al  
2017; 19 (12): 1491–1500
- **Delayed prosthetic breast reconstruction without the use of acellular dermal matrix** *EUROPEAN JOURNAL OF PLASTIC SURGERY*  
Mittermiller, P. A., Nazerali, R. S., Glaus, S. W., Perez, M. G., Luan, A., Kahn, D. M., Lee, G. K.  
2017; 40 (6): 533–40
- **Dynamic Rheology for the Prediction of Surgical Outcomes in Autologous Fat Grafting.** *Plastic and reconstructive surgery*  
Luan, A., Zielins, E. R., Wearda, T., Atashroo, D. A., Blackshear, C. P., Raphel, J., Brett, E. A., Flacco, J., Alyono, M. C., Momeni, A., Heilshorn, S., Longaker, M. T., Wan, et al  
2017
- **Validation of a Cognitive Task Simulation and Rehearsal Tool for Open Carpal Tunnel Release.** *Archives of plastic surgery*  
Paro, J. A., Luan, A., Lee, G. K.  
2017; 44 (3): 223-227
- **Transversus Abdominis Plane Block and Free Flap Abdominal Tissue Breast Reconstruction: Is There a True Reduction in Postoperative Narcotic Use?** *Annals of plastic surgery*  
Hunter, C., Shakir, A., Momeni, A., Luan, A., Steffel, L., Horn, J., Nguyen, D., Lee, G. K.  
2017; 78 (3): 254-259

- **Transversus Abdominis Plane Block and Free Flap Abdominal Tissue Breast Reconstruction Is There a True Reduction in Postoperative Narcotic Use?** *ANNALS OF PLASTIC SURGERY*  
Hunter, C., Shakir, A., Momeni, A., Luan, A., Steffel, L., Horn, J., Dung Nguyen, D., Lee, G. K.  
2017; 78 (3): 254-259
- **Hospital Transfer of Open Tibial Fractures Requiring Microsurgical Reconstruction Negatively Impacts Clinical Outcomes.** *Annals of plastic surgery*  
Crowe, C. S., Luan, A., Lee, G. K.  
2017
- **Magnetic Nanoparticle-Based Upregulation of B-Cell Lymphoma 2 Enhances Bone Regeneration.** *Stem cells translational medicine*  
Brett, E., Zielins, E. R., Luan, A., Ooi, C. C., Shailendra, S., Atashroo, D., Menon, S., Blackshear, C., Flacco, J., Quarto, N., Wang, S. X., Longaker, M. T., Wan, et al  
2017; 6 (1): 151-160
- **Cleft Lip Standardized Patient Examinations: The Role in Plastic Surgery Resident Education** *CLEFT PALATE-CRANIOFACIAL JOURNAL*  
Wright, E. J., Khosla, R. K., Howell, L., Luan, A., Lee, G. K.  
2016; 53 (6): 634-639
- **Magnetic Nanoparticle-Based Upregulation of B-Cell Lymphoma 2 Enhances Bone Regeneration.** *Stem cells translational medicine*  
Brett, E., Zielins, E. R., Luan, A., Ooi, C. C., Shailendra, S., Atashroo, D., Menon, S., Blackshear, C., Flacco, J., Quarto, N., Wang, S. X., Longaker, M. T., Wan, et al  
2016
- **Suction assisted liposuction does not impair the regenerative potential of adipose derived stem cells** *JOURNAL OF TRANSLATIONAL MEDICINE*  
Duscher, D., Luan, A., Rennert, R. C., Atashroo, D., Maan, Z. N., Brett, E. A., Whittam, A. J., Ho, N., Lin, M., Hu, M. S., Walmsley, G. G., Wenny, R., Schmidt, et al  
2016; 14
- **Effects of A Novel Decision Aid for Breast Reconstruction: A Randomized Prospective Trial.** *Annals of plastic surgery*  
Luan, A., Hui, K. J., Remington, A. C., Liu, X., Lee, G. K.  
2016; 76: S249-54
- **Superior Gluteal Artery Perforator Flap: The Beauty of the Buttock.** *Annals of plastic surgery*  
Hunter, C., Moody, L., Luan, A., Nazeralli, R., Lee, G. K.  
2016; 76: S191-5
- **Cell-Assisted Lipotransfer Improves Volume Retention in Irradiated Recipient Sites and Rescues Radiation-Induced Skin Changes** *STEM CELLS*  
Luan, A., Duscher, D., Whittam, A. J., Paik, K. J., Zielins, E. R., Brett, E. A., Atashroo, D. A., Hu, M. S., Lee, G. K., Gurtner, G. C., Longaker, M. T., Wan, D. C.  
2016; 34 (3): 668-673
- **Cell-Assisted Lipotransfer Improves Volume Retention in Irradiated Recipient Sites and Rescues Radiation-Induced Skin Changes.** *Stem cells*  
Luan, A., Duscher, D., Whittam, A. J., Paik, K. J., Zielins, E. R., Brett, E. A., Atashroo, D. A., Hu, M. S., Lee, G. K., Gurtner, G. C., Longaker, M. T., Wan, D. C.  
2016; 34 (3): 668-673
- **Enrichment of Adipose-Derived Stromal Cells for BMP1A Facilitates Enhanced Adipogenesis** *TISSUE ENGINEERING PART A*  
Zielins, E. R., Paik, K., Ransom, R. C., Brett, E. A., Blackshear, C. P., Luan, A., Walmsley, G. G., Atashroo, D. A., Senarath-Yapa, K., Momeni, A., Rennert, R., Sorkin, M., Seo, et al  
2016; 22 (3-4): 214-221
- **Ultrasound-Assisted Liposuction Does Not Compromise the Regenerative Potential of Adipose-Derived Stem Cells.** *Stem cells translational medicine*  
Duscher, D., Atashroo, D., Maan, Z. N., Luan, A., Brett, E. A., Barrera, J., Khong, S. M., Zielins, E. R., Whittam, A. J., Hu, M. S., Walmsley, G. G., Pollhammer, M. S., Schmidt, et al  
2016; 5 (2): 248-257

- **Flow-through omental flap to free anterolateral thigh flap for complex chest wall reconstruction: Case report and review of the literature.** *Microsurgery*  
Luan, A., Galvez, M. G., Lee, G. K.  
2016; 36 (1): 70-76
- **RNA Sequencing for Identification of Differentially Expressed Noncoding Transcripts during Adipogenic Differentiation of Adipose-Derived Stromal Cells.** *Plastic and reconstructive surgery*  
Luan, A., Paik, K. J., Li, J., Zielins, E. R., Atashroo, D. A., Spencley, A., Momeni, A., Longaker, M. T., Wang, K. C., Wan, D. C.  
2015; 136 (4): 752-763
- **Microfluidic single cell transcriptional analysis reveals subpopulations of adipose derived stromal cells with enhanced angiogenic potential**  
Zielins, E. R., Januszyk, M., Luan, A., Brett, E. A., Paik, K., Walmsley, G. G., Gurtner, G. C., Longaker, M. T., Wan, D. C.  
ELSEVIER SCIENCE INC.2015: E26
- **What Makes a Plastic Surgery Residency Program Attractive? An Applicant's Perspective** *PLASTIC AND RECONSTRUCTIVE SURGERY*  
Atashroo, D. A., Luan, A., Vyas, K. S., Zielins, E. R., Maan, Z., Duscher, D., Walmsley, G. G., Lynch, M. P., Davenport, D. L., Wan, D. C., Longaker, M. T., Vasconez, H. C.  
2015; 136 (1): 189-196
- **Studies in Fat Grafting: Part V. Cell-Assisted Lipotransfer to Enhance Fat Graft Retention Is Dose Dependent** *PLASTIC AND RECONSTRUCTIVE SURGERY*  
Paik, K. J., Zielins, E. R., Atashroo, D. A., Maan, Z. N., Duscher, D., Luan, A., Walmsley, G. G., Momeni, A., Vistnes, S., Gurtner, G. C., Longaker, M. T., Wan, D. C.  
2015; 136 (1): 67-75
- **Emerging drugs for the treatment of wound healing** *EXPERT OPINION ON EMERGING DRUGS*  
Zielins, E. R., Brett, E. A., Luan, A., Hu, M. S., Walmsley, G. G., Paik, K., Senarath-Yapa, K., Atashroo, D. A., Wearda, T., Lorenz, H. P., Wan, D. C., Longaker, M. T.  
2015; 20 (2): 235-246
- **Therapeutic Applications of Human Adipose-Derived Stromal Cells for Soft Tissue Reconstruction** *DISCOVERY MEDICINE*  
Zielins, E. R., Luan, A., Brett, E. A., Longaker, M. T., Wan, D. C.  
2015; 105: 245-253
- **Therapeutic applications of human adipose-derived stromal cells for soft tissue reconstruction.** *Discovery medicine*  
Zielins, E. R., Luan, A., Brett, E. A., Longaker, M. T., Wan, D. C.  
2015; 19 (105): 245-253
- **Isolation and Enrichment of Human Adipose-derived Stromal Cells for Enhanced Osteogenesis.** *Journal of visualized experiments : JoVE*  
Zielins, E. R., Tevlin, R., Hu, M. S., Chung, M. T., McArdle, A., Paik, K. J., Atashroo, D., Duldulao, C. R., Luan, A., Senarath-Yapa, K., Walmsley, G. G., Wearda, T., Longaker, et al  
2015
- **Isolation and enrichment of human adipose-derived stromal cells for enhanced osteogenesis.** *Journal of visualized experiments : JoVE*  
Zielins, E. R., Tevlin, R., Hu, M. S., Chung, M. T., McArdle, A., Paik, K. J., Atashroo, D., Duldulao, C. R., Luan, A., Senarath-Yapa, K., Walmsley, G. G., Wearda, T., Longaker, et al  
2015: 52181-?
- **Cloud-Based Applications for Organizing and Reviewing Plastic Surgery Content.** *Eplasty*  
Luan, A., Momeni, A., Lee, G. K., Galvez, M. G.  
2015; 15
- **Design and Focus Test of a Preconsultation Decision Aid for Breast Cancer Reconstruction Patients: A Quality Improvement Initiative.** *Eplasty*  
Hui, K. J., Liu, X. X., Luan, A., Lee, G. K.  
2015; 15
- **Cost-effectiveness of preoperative imaging for appendicitis after indeterminate ultrasonography in the second or third trimester of pregnancy.** *Obstetrics and gynecology*  
Kastenber, Z. J., Hurley, M. P., Luan, A., Vasu-Devan, V., Spain, D. A., Owens, D. K., Goldhaber-Fiebert, J. D.

2013; 122 (4): 821-829

- **Small Increases To Employer Premiums Could Shift Millions Of People To The Exchanges And Add Billions To Federal Outlays** *HEALTH AFFAIRS*

Austin, D. R., Luan, A., Wang, L. L., Bhattacharya, J.

2013; 32 (9): 1531-1537