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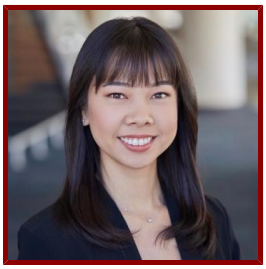

Chloe Nobuhara

Masters Student in Epidemiology and Clinical Research, admitted Autumn 2025

Bio

BIO

Dr. Nobuhara is a general surgery resident at Stanford, currently pursuing a postdoctoral research fellowship in Surgical Artificial Intelligence (AI) at Deutsches Krebsforschungszentrum (DKFZ, German Cancer Research Center) in Heidelberg, Germany. She has currently completed three years of general surgery residency and is completing her two-year professional development track, before returning to residency in June 2027. Her research explores where AI can be successfully implemented into surgical practice. She has used computer vision and vision-language models for surgical performance assessment with Stanford's Medical AI and Computer Vision Lab (MARVL), worked with Aimbient on OR artificial intelligence and automated documentation, and now helps lead ORena, a MICCAI challenge on identifying surgical foreign bodies from long-context video.

Originally from Honolulu, Hawaii, she holds an MD from Duke University and an undergraduate degree from Northeastern University. She is dedicated to upholding patient safety standards while pursuing aggresive surgical innovation.

HONORS AND AWARDS

- Resident Travel Scholarship, American Association for the Surgery of Trauma (October 2025)
- Consult Resident of the Year, General Surgery, Stanford Hospital (June 2024)
- First Place Poster: Basic Science, Duke Surgery Research Day (June 2021)
- Presidential Student Mentor Grant, American Society for Transplant Surgeons (ASTS) (2020)
- Randall R. Bollinger Surgical Scholarship, Duke University School of Medicine (2020)
- Effat Charitable Fund Scholarship, Duke University School of Medicine (2018)
- Alexander Skavenski Award for Behavioral Neuroscience, Northeastern University (2017)
- Husky Innovation Award, Northeastern University (2017)

Publications

PUBLICATIONS

- **Current Landscape and Pathways to Robotic Surgery Adoption in Acute Care Surgery**
  Anderson, M., Lee, A., Nobuhara, C. K., Suh, E. J., Shin, J. Y., Nassar, A., Hameed, S.
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- **Consensus operational definitions of surgical meta-competencies for computer vision-driven performance assessment: a multi-institutional Delphi study.** *Surgical endoscopy*
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- **Ambient intelligence platforms and new frontiers in surgical safety.** *Surgery*
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- **Comparative outcomes of post-operative delirium after video-assisted thoracoscopic, robotic, and open thoracic surgery: a narrative review** *VIDEO-ASSISTED THORACIC SURGERY*
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- **Enhancing Reality in the Multidisciplinary World.** *JAMA surgery*
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- **The Future of Surgical Decision-Making in Critical Care** *CURRENT EMERGENCY AND HOSPITAL MEDICINE REPORTS*
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  Burke, E. G., Nobuhara, C., Lee, A. H., Villarreal, J. A., Fitzgerald, C. A., Dumas, R. P.
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- **Chlorhexidine Gluconate vs. Povidone-Iodine for Surgical Site Infection Prevention: A Systematic Review and Meta-Analysis Stratified by Surgery Type, Wound Classification, Antiseptic Formulation, and Country Income, with Meta-Regression.** *The Journal of hospital infection*
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- **The Surgical Residency of Tomorrow: A Case for Authenticity.** *Journal of the American College of Surgeons*
  Klaris, G. E., Branch, R., Wang, L., Nobuhara, C. K., Spain, D. A.
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- **Surgical stabilization of flail sternum and bilateral chest wall injury in an octogenarian after horse trampling injury.** *Trauma surgery & acute care open*
  Tai, J. W., Ko, B., Adams, M. E., Nobuhara, C. K., Knight, A. W., Forrester, J. D.
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- **The Role of Sleep Apnea in Postoperative Neurocognitive Disorders Among Older Noncardiac Surgery Patients: A Prospective Cohort Study.** *Anesthesia and analgesia*
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- **Resident-Applicant Buddy Program Increases Applicant Interest and Program Transparency.** *Journal of surgical education*
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- **Initial Multivisceral Resection for Retroperitoneal Liposarcoma Does Not Predict Improved Outcomes After Recurrence**
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- **Regional vs General Anesthesia and Incidence of Postoperative Delirium in Older Patients Undergoing Hip Fracture Surgery** *JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*
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- **Postoperative changes in cognition and cerebrospinal fluid neurodegenerative disease biomarkers** *ANNALS OF CLINICAL AND TRANSLATIONAL NEUROLOGY*
  Berger, M., Browndyke, J. N., Wright, M., Nobuhara, C., Reese, M., Acker, L., Bullock, W., Colin, B. J., Devinney, M. J., Moretti, E. W., Moul, J. W., Ohlendorf, B., Laskowitz, et al
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- **Immune Thrombocytopenia Associated with Hepatitis B Virus and Autoimmune Hepatitis and Recovery of Platelet Count following Liver Transplantation.** *Case reports in transplantation*
  Nobuhara, C., Cardona, D. M., Arcasoy, M. O., Berg, C. L., Barbas, A. S.
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- **Cellular Therapies in Solid Organ Allotransplantation: Promise and Pitfalls.** *Frontiers in immunology*
  Shaw, B. I., Ord, J. R., Nobuhara, C., Luo, X.
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- **Plasma and cerebrospinal fluid inflammation and the blood-brain barrier in older surgical patients: the Role of Inflammation after Surgery for Elders (RISE) study.** *Journal of neuroinflammation*
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- **Risk of Spinal Hematoma After Lumbar Puncture** *JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*
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- **Machine Learning to Develop and Internally Validate a Predictive Model for Post-operative Delirium in a Prospective, Observational Clinical Cohort Study of Older Surgical Patients.** *Journal of general internal medicine*
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- **The Role of Inflammation after Surgery for Elders (RISE) study: Study design, procedures, and cohort profile.** *Alzheimer's & dementia (Amsterdam, Netherlands)*
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- **Biomarkers in Alzheimer's, Frontotemporal, Lewy Body, and Vascular Dementias.** *Focus (American Psychiatric Publishing)*

  Koenig, A. M., Nobuhara, C. K., Williams, V. J., Arnold, S. E.

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