Stanford



Dyani Gaudilliere

Clinical Professor, Surgery - Plastic & Reconstructive Surgery

CLINICAL OFFICE (PRIMARY)

- **Stanford Adult Plastic Surgery Clinic**

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ACADEMIC CONTACT INFORMATION

- **Administrative Contact**

  Sabrina Alinejad - Dental Section Program Coordinator

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Bio

BIO

Dr. Dyani Gaudilliere specializes in Dental Surgery and Oral Oncology in a hospital setting. As a hospital dentist she performs surgical treatment of infection and trauma to the teeth and supporting alveolar bone. She also performs medically necessary dental clearance and extractions in the context of larger medical conditions, such as cardiac disease, joint replacement, or organ transplantation. As an oral oncologist, she specializes in surgical dental treatment prior to, during, and following radiation therapy and chemotherapy.

CLINICAL FOCUS

- Dentistry
- Oral Oncology
- Dental Surgery

ACADEMIC APPOINTMENTS

- Clinical Professor, Surgery - Plastic & Reconstructive Surgery

ADMINISTRATIVE APPOINTMENTS

- Chief, Section of Dentistry, Stanford University School of Medicine, (2018- present)

PROFESSIONAL EDUCATION

- Residency: University of California at San Francisco School of Medicine (2010) CA
- MPH, University of California Berkeley , Interdisciplinary Public Health (2012)
- Dental Education: Harvard School of Dental Medicine (2009) MA

Publications

PUBLICATIONS

- **Single-cell-level digital twins for preterm birth prevention strategies.** *Science advances*

Einhaus, J., Neidlinger, P., Fondeur, O., Sato, M., Anronikov, S., Miyazaki, K., Maechler, A., Amar, J. N., Ando, K., Badea, V., Gaudilliere, D. K., Sabayev, M., Feyaerts, et al

2026; 12 (43): eaed2741

- **Results of a Phase 1 Open-Label, Dose-Escalation Study of Gene Therapy With AAV2-hAQP1 for Grade 2 and 3 Radiation-Induced Late Xerostomia and Parotid Gland Hypofunction.** *International journal of radiation oncology, biology, physics*

  Brennan, M. T., Passineau, M. J., Saunders, D., Sroussi, H., Gaudilliere, D., Liu, J., Dubois, N., Fernandez, A., Zeldin, R. K.

  2026

- **Immune Modulation by Personalized vs Standard Prehabilitation Before Major Surgery: A Randomized Clinical Trial.** *JAMA surgery*

  Cambriel, A., Tsai, A., Choisy, B., Sabayev, M., Hedou, J., Shelton, E., Singh, K., Amar, J., Badea, V., Bruckman, S., Ganio, E., Einhaus, J., Feyaerts, et al

  2025

- **Single-cell-level digital twins for preterm birth prevention strategies.** *bioRxiv : the preprint server for biology*

  Einhaus, J., Neidlinger, P., Fondeur, O., Sato, M., Anronikov, A., Miyazaki, K., Amar, J. N., Ando, K., Badea, V., Gaudilliere, D. K., Sabayev, M., Feyaerts, D., Diop, et al

  2025

- **The SPRED Study: Multiomic Prediction of Surgical Site Infections after Major Abdominal Surgery**

  Bellan, G., Hedou, J., Durand, X., Waked, B., Mai'lard, A., Gaudilliere, D., Le Guen, M., Gaudiere, B., Verdonk, F.

  LIPPINCOTT WILLIAMS & WILKINS.2025: 432-433

- **Immune Modulation by Personalized vs Standard Prehabilitation Program Before Major Surgery**

  Cambriel, A., Tsai, A., Sabayev, M., Choisy, B., Hedou, J., Shelton, E., Singh, K., Amar, J., Badea, V., Bruckman, S., Ganio, E., Einhaus, J., Feyaerts, et al

  LIPPINCOTT WILLIAMS & WILKINS.2025: 959

- **Immune Profile of Palmar Cooling on Delayed Onset of Muscle Soreness**

  Tsai, A., Vinh Cao, Anronikov, S., Miyazaki, K., Liu, C., Darracott, C., Einhaus, J., Gaudilliere, D., Gaudilliere, B., Heller, H.

  LIPPINCOTT WILLIAMS & WILKINS.2025: 700-701

- **Immune Profiling of Post-COVID Condition in Adults Living in Mexico: A Longitudinal Analysis of Immune and Proteomic Markers**

  Anronikov, S., Meikle, C., Saavedra, S., Gallegos, A., Islas, L., Nunez, I., Chen, H., Feyaerts, D., Gillard, J., Tsai, A., Bonham, T., Genic, E., Nolan, et al

  LIPPINCOTT WILLIAMS & WILKINS.2025: 230-231

- **An immune signature of postoperative cognitive decline: A prospective cohort study.** *International journal of surgery (London, England)*

  Verdonk, F., Cambriel, A., Hedou, J., Ganio, E., Bellan, G., Gaudilliere, D., Einhaus, J., Sabayev, M., Stelzer, I. A., Feyaerts, D., Bonham, A. T., Ando, K., Choisy, et al

  2024

- **Discovery of sparse, reliable omic biomarkers with Stabl.** *Nature biotechnology*

  Hédou, J., Marić, I., Bellan, G., Einhaus, J., Gaudillière, D. K., Ladant, F. X., Verdonk, F., Stelzer, I. A., Feyaerts, D., Tsai, A. S., Ganio, E. A., Sabayev, M., Gillard, et al

  2024

- **Spatial subsetting enables integrative modeling of oral squamous cell carcinoma multiplex imaging data.** *iScience*

  Einhaus, J., Gaudilliere, D. K., Hedou, J., Feyaerts, D., Ozawa, M. G., Sato, M., Ganio, E. A., Tsai, A. S., Stelzer, I. A., Bruckman, K. C., Amar, J. N., Sabayev, M., Bonham, et al

  2023; 26 (12): 108486

- **Impact of preoperative uni- or multimodal prehabilitation on postoperative morbidity: meta-analysis.** *BJS open*

  Cambriel, A., Choisy, B., Hedou, J., Bonnet, M., Fellous, S., Lefevre, J. H., Voron, T., Gaudilliere, D., Kin, C., Gaudilliere, B., Verdonk, F.

  2023; 7 (6)

- **STABL Enables Reliable and Selective biomarker Discovery in Predictive Modeling of High Dimensional Omics Data**

  Verdonk, F., Hedou, J., Maric, I., Bellan, G., Einhaus, J., Gaudilliere, D., Ladant, F., Stelzer, I., Feyaerts, D., Tsai, A., Bonham, A., Angst, M., Aghaeepour, et al

  LIPPINCOTT WILLIAMS & WILKINS.2023: 814-821

- **An Immune Signature of Surgical Site Infections (SSI), a Retrospective Study with a Novel Machine Learning Pipeline for Biomarker Identification**
  Verdonk, F., Hedou, J., Maric, I., Bellan, G., Einhaus, J., Gaudilliere, D., Bonham, A., Angst, M., Gaudilliere, B., Cambriel, A.
  LIPPINCOTT WILLIAMS & WILKINS.2023: 773-774

- **An immune signature of postoperative cognitive dysfunction (POCD), a prospective cohort study**
  Verdonk, F., Hedou, J., Bellan, G., Ganio, E., Stelzer, I., Feyaerts, D., Sato, M., Bonham, A., Ando, K., Gaudilliere, D., Gaillard, R., Molliex, S., Sharshar, et al
  LIPPINCOTT WILLIAMS & WILKINS.2023: 466-467

- **Impact of Preoperative Uni- or Multimodal Prehabilitation on Postoperative Morbidity: A Systematic Review and Meta-Analysis**
  Verdonk, F., Choisy, B., Cambriel, A., Hedou, J., Bonnet, M., Lefevre, J., Voron, T., Gaudilliere, D., Kin, C., Gaudilliere, B.
  LIPPINCOTT WILLIAMS & WILKINS.2023: 806-807

- **Stabl: sparse and reliable biomarker discovery in predictive modeling of high-dimensional omic data.** *Research square*
  Hédou, J., Marić, I., Bellan, G., Einhaus, J., Gaudillière, D. K., Ladant, F. X., Verdonk, F., Stelzer, I. A., Feyaerts, D., Tsai, A. S., Ganio, E. A., Sabayev, M., Gillard, et al
  2023

- **Towards multiomic analysis of oral mucosal pathologies.** *Seminars in immunopathology*
  Einhaus, J., Han, X., Feyaerts, D., Sunwoo, J., Gaudilliere, B., Ahmad, S. H., Aghaeepour, N., Bruckman, K., Ojcius, D., Schurch, C. M., Gaudilliere, D. K.
  2023

- **Integrated plasma proteomic and single-cell immune signaling network signatures demarcate mild, moderate, and severe COVID-19.** *Cell reports. Medicine*
  Feyaerts, D., Hédou, J., Gillard, J., Chen, H., Tsai, E. S., Peterson, L. S., Ando, K., Manohar, M., Do, E., Dhondalay, G. K., Fitzpatrick, J., Artandi, M., Chang, et al
  2022: 100680

- **Integrated single-cell and plasma proteomic modeling to predict surgical site complications, a prospective cohort study**
  Tsai, A. S., Hedou, J., Einhaus, J., Rumer, K., Verdonk, F., Stanley, N., Choisy, B., Ganio, E. A., Bonham, A., Jacobsen, D., Warrington, B., Gao, X., Tingle, et al
  LIPPINCOTT WILLIAMS & WILKINS.2022: 1204-1205

- **Multimodal, coached telehealth prehabilitation has high compliance and improves exercise and cognitive capacity prior to surgery: a pilot study**
  Choisy, B., Hedou, J., Verdonk, F., Gaudilliere, D., Tsai, A. S., Shankar, K., Sato, M., Einhaus, J., Ganio, E. A., Bonham, A., Warrington, B., Ahmad, S., Tingle, et al
  LIPPINCOTT WILLIAMS & WILKINS.2022: 415

- **An immune signature of postoperative cognitive dysfunction (POCD)**
  Verdonk, F., Tsai, A. S., Hedou, J., Heifets, B. D., Gaudilliere, D., Bellan, G., Sharshar, T., Gaillard, R., Molliex, S., Feyaerts, D., Stelzer, I., Ganio, E. A., Sato, et al
  LIPPINCOTT WILLIAMS & WILKINS.2022: 577-578

- **Integrated Single-Cell and Plasma Proteomic Modeling to Predict Surgical Site Complications: A Prospective Cohort Study.** *Annals of surgery*
  Rumer, K. K., Hedou, J., Tsai, A., Einhaus, J., Verdonk, F., Stanley, N., Choisy, B., Ganio, E., Bonham, A., Jacobsen, D., Warrington, B., Gao, X., Tingle, et al
  1800

- **Multi-Omic, Longitudinal Profile of Third-Trimester Pregnancies Identifies a Molecular Switch That Predicts the Onset of Labor.**
  Stelzer, I., Ghaemi, M., Han, X., Ando, K., Hedou, J., Feyaerts, D., Peterson, L., Ganio, E., Tsai, A., Tsai, E., Rumer, K., Stanley, N., Fallazadeh, et al
  SPRINGER HEIDELBERG.2021: 233A-234A

- **Integrated trajectories of the maternal metabolome, proteome, and immunome predict labor onset.** *Science translational medicine*
  Stelzer, I. A., Ghaemi, M. S., Han, X., Ando, K., Hedou, J. J., Feyaerts, D., Peterson, L. S., Rumer, K. K., Tsai, E. S., Ganio, E. A., Gaudilliere, D. K., Tsai, A. S., Choisy, et al
  2021; 13 (592)

- **Integrated plasma proteomic and single-cell immune signaling network signatures demarcate mild, moderate, and severe COVID-19.** *bioRxiv : the preprint server for biology*
  Feyaerts, D., Hédou, J., Gillard, J., Chen, H., Tsai, E. S., Peterson, L. S., Ando, K., Manohar, M., Do, E., Dhondalay, G. K., Fitzpatrick, J., Artandi, M., Chang, et al
  2021

- **Measuring the human immune response to surgery: multiomics for the prediction of postoperative outcomes.** *Current opinion in critical care*
  Verdonk, F., Einhaus, J., Tsai, A. S., Hedou, J., Choisy, B., Gaudilliere, D., Kin, C., Aghaeepour, N., Angst, M. S., Gaudilliere, B.
  2021

- **Integration of mechanistic immunological knowledge into a machine learning pipeline improves predictions** *NATURE MACHINE INTELLIGENCE*
  Culos, A., Tsai, A. S., Stanley, N., Becker, M., Ghaemi, M. S., McIlwain, D. R., Fallahzadeh, R., Tanada, A., Nassar, H., Espinosa, C., Xenochristou, M., Ganio, E., Peterson, et al
  2020

- **Integration of mechanistic immunological knowledge into a machine learning pipeline improves predictions.** *Nature machine intelligence*
  Culos, A., Tsai, A. S., Stanley, N., Becker, M., Ghaemi, M. S., McIlwain, D. R., Fallahzadeh, R., Tanada, A., Nassar, H., Espinosa, C., Xenochristou, M., Ganio, E., Peterson, et al
  2020; 2 (10): 619-628

- **Multi-Omic, Longitudinal Profile of Third-Trimester Pregnancies Identifies a Molecular Switch That Predicts the Onset of Labor.**
  Stelzer, I., Ghaemi, M., Han, X., Ando, K., Peterson, L., Contrepois, K., Ganio, E., Tsai, A., Tsai, E., Rumer, K., Stanley, N., Fallazadeh, R., Becker, et al
  SPRINGER HEIDELBERG.2020: 89A

- **Surgical Treatment of Osteonecrosis of the Jaw: An Emerging Problem in the Era of Bisphosphonates.** *Journal of oral and maxillofacial surgery : official journal of the American Association of Oral and Maxillofacial Surgeons*
  Hung, K. S., Sheckter, C. C., Gaudilliere, D. n., Suarez, P. n., Curtin, C. n.
  2020

- **Multiomics Characterization of Preterm Birth in Low- and Middle-Income Countries.** *JAMA network open*
  Jehan, F. n., Sazawal, S. n., Baqui, A. H., Nisar, M. I., Dhingra, U. n., Khanam, R. n., Ilyas, M. n., Dutta, A. n., Mitra, D. K., Mehmood, U. n., Deb, S. n., Mahmud, A. n., Hotwani, et al
  2020; 3 (12): e2029655

- **Author Correction: Preferential inhibition of adaptive immune system dynamics by glucocorticoids in patients after acute surgical trauma.** *Nature communications*
  Ganio, E. A., Stanley, N. n., Lindberg-Larsen, V. n., Einhaus, J. n., Tsai, A. S., Verdonk, F. n., Culos, A. n., Ghaemi, S. n., Rumer, K. K., Stelzer, I. A., Gaudilliere, D. n., Tsai, E. n., Fallahzadeh, et al
  2020; 11 (1): 4495

- **Preferential inhibition of adaptive immune system dynamics by glucocorticoids in patients after acute surgical trauma.** *Nature communications*
  Ganio, E. A., Stanley, N. n., Lindberg-Larsen, V. n., Einhaus, J. n., Tsai, A. S., Verdonk, F. n., Culos, A. n., Gahemi, S. n., Rumer, K. K., Stelzer, I. A., Gaudilliere, D. n., Tsai, E. n., Fallahzadeh, et al
  2020; 11 (1): 3737

- **VoPo leverages cellular heterogeneity for predictive modeling of single-cell data.** *Nature communications*
  Stanley, N. n., Stelzer, I. A., Tsai, A. S., Fallahzadeh, R. n., Ganio, E. n., Becker, M. n., Phongpreecha, T. n., Nassar, H. n., Ghaemi, S. n., Maric, I. n., Culos, A. n., Chang, A. L., Xenochristou, et al
  2020; 11 (1): 3738

- **Differential Dynamics of the Maternal Immune System in Healthy Pregnancy and Preeclampsia.** *Frontiers in immunology*
  Han, X., Ghaemi, M. S., Ando, K., Peterson, L. S., Ganio, E. A., Tsai, A. S., Gaudilliere, D. K., Stelzer, I. A., Einhaus, J., Bertrand, B., Stanley, N., Culos, A., Tanada, et al
  2019; 10: 1305

- **Differential Dynamics of the Maternal Immune System in Healthy Pregnancy and Preeclampsia** *FRONTIERS IN IMMUNOLOGY*
  Han, X., Ghaemi, M. S., Ando, K., Peterson, L. S., Ganio, E. A., Tsai, A. S., Gaudilliere, D. K., Stelzer, I. A., Einhaus, J., Bertrand, B., Stanley, N., Culos, A., Tanada, et al

2019; 10

- **A YEAR-LONG IMMUNE PROFILE OF THE SYSTEMIC RESPONSE IN ACUTE STROKE SURVIVORS**
  Tsai, A., Berry, K., Beneyto, M. M., Gaudilliere, D., Ganio, E. A., Culos, A., Ghaemi, M. S., Choisy, B., Djebali, K., Einhaus, J. F., Bertrand, B., Tanada, A., Stanley, et al
  LIPPINCOTT WILLIAMS & WILKINS.2019: 155

- **A year-long immune profile of the systemic response in acute stroke survivors.** *Brain : a journal of neurology*
  Tsai, A. S., Berry, K., Beneyto, M. M., Gaudilliere, D., Ganio, E. A., Culos, A., Ghaemi, M. S., Choisy, B., Djebali, K., Einhaus, J. F., Bertrand, B., Tanada, A., Stanley, et al
  2019

- **Differential Dynamics of the Maternal Immune System in Healthy Pregnancy and Preeclampsia.**
  Han, X., Ghaemi, M. S., Ando, K., Peterson, L., Ganio, E. A., Tsai, A. S., Gaudilliere, D., Einhaus, J., Tsai, E. S., Stanley, N. M., Culos, A., Taneda, A. H., Fallahzadeh, et al
  SAGE PUBLICATIONS INC.2019: 271A

- **Deep Immune Profiling of the Post-Stroke Peripheral Immune Response Reveals Tri-phasic Response and Correlations With Long-Term Cognitive Outcomes**
  Tsai, A. S., Berry, K., Beneyto, M. M., Gaudilliere, D., Ganio, E. A., Choisy, B., Djebali, K., Baca, Q., Quach, L., Drag, L., Lansberg, M. G., Angst, M. S., Gaudilliere, et al
  LIPPINCOTT WILLIAMS & WILKINS.2019

- **Multiomics modeling of the immunome, transcriptome, microbiome, proteome and metabolome adaptations during human pregnancy.** *Bioinformatics (Oxford, England)*
  Ghaemi, M. S., DiGiulio, D. B., Contrepois, K., Callahan, B., Ngo, T. T., Lee-McMullen, B., Lehallier, B., Robaczewska, A., Mcilwain, D., Rosenberg-Hasson, Y., Wong, R. J., Quaintance, C., Culos, et al
  2019; 35 (1): 95–103

- **Multiomics modeling of the immunome, transcriptome, microbiome, proteome and metabolome adaptations during human pregnancy** *BIOINFORMATICS*
  Ghaemi, M., DiGiulio, D. B., Contrepois, K., Callahan, B., Ngo, T. T. M., Lee-McMullen, B., Lehallier, B., Robaczewska, A., Mcilwain, D., Rosenberg-Hasson, Y., Wong, R. J., Quaintance, C., Culos, et al
  2019; 35 (1): 95–103

- **Mass Cytometry and Proteomic Based Prediction of the Onset of Labor.**
  Ando, K., Han, X., Ghaemi, S., Tsai, A., Ganio, E., Gaudilliere, D., Culos, T., Shaw, G., Wong, R., Stevenson, D., Carvalho, B., Tingle, M., Angst, et al
  SAGE PUBLICATIONS INC.2018: 153A

- **An immune clock of human pregnancy** *SCIENCE IMMUNOLOGY*
  Aghaeepour, N., Ganio, E. A., Mcilwain, D., Tsai, A. S., Tingle, M., Van Gassen, S., Gaudilliere, D. K., Baca, Q., McNeil, L., Okada, R., Ghaemi, M. S., Furman, D., Wong, et al
  2017; 2 (15)

- **Freehand Versus Guided Surgery: Factors Influencing Accuracy of Dental Implant Placement.** *Implant dentistry*
  Choi, W., Nguyen, B. C., Doan, A., Girod, S., Gaudilliere, B., Gaudilliere, D.
  2017; 26 (4): 500-509

- **An immune clock of human pregnancy.** *Science immunology*
  Aghaeepour, N. n., Ganio, E. A., Mcilwain, D. n., Tsai, A. S., Tingle, M. n., Van Gassen, S. n., Gaudilliere, D. K., Baca, Q. n., McNeil, L. n., Okada, R. n., Ghaemi, M. S., Furman, D. n., Wong, et al
  2017; 2 (15)

- **A Comparative Assessment of Implant Site Viability in Humans and Rats.** *Journal of dental research*
  Chen, C. H., Pei, X. n., Tulu, U. S., Aghvami, M. n., Chen, C. T., Gaudillière, D. n., Arioka, M. n., Maghazeh Moghim, M. n., Bahat, O. n., Kolinski, M. n., Crosby, T. R., Felderhoff, A. n., Brunski, et al
  2017: 22034517742631

- **Freehand Versus Guided Surgery: Factors Influencing Accuracy of Dental Implant Placement.** *Implant dentistry*
  Choi, W. n., Nguyen, B. C., Doan, A. n., Girod, S. n., Gaudilliere, B. n., Gaudilliere, D. n.
  2017

- **Deep Immune Profiling of an Arginine-Enriched Nutritional Intervention in Patients Undergoing Surgery.** *Journal of immunology (Baltimore, Md. : 1950)*
  Aghaeepour, N. n., Kin, C. n., Ganio, E. A., Jensen, K. P., Gaudilliere, D. K., Tingle, M. n., Tsai, A. n., Lancero, H. L., Choisy, B. n., McNeil, L. S., Okada, R. n., Shelton, A. A., Nolan, et al
  2017
- **Mapping the Fetomaternal Peripheral Immune System at Term Pregnancy.** *Journal of immunology*
  Fragiadakis, G. K., Baca, Q. J., Gherardini, P. F., Ganio, E. A., Gaudilliere, D. K., Tingle, M., Lancero, H. L., McNeil, L. S., Spitzer, M. H., Wong, R. J., Shaw, G. M., Darmstadt, G. L., Sylvester, et al
  2016
- **Gender disparities in scholarly productivity of US academic surgeons** *JOURNAL OF SURGICAL RESEARCH*
  Mueller, C. M., Gaudilliere, D. K., Kin, C., Menorca, R., Girod, S.
  2016; 203 (1): 28-33
- **Haptic feedback improves surgeons' user experience and fracture reduction in facial trauma simulation** *JOURNAL OF REHABILITATION RESEARCH AND DEVELOPMENT*
  Girod, S., Schvartzman, S. C., Gaudilliere, D., Salisbury, K., Silva, R.
  2016; 53 (5): 561-569
- **Caries Management By Risk Assessment in a Cleft and Craniofacial Center** *JOURNAL OF CRANIOFACIAL SURGERY*
  Gaudilliere, D., Thakur, Y., Ku, M., Kaur, A., Shrestha, P., Girod, S. C.
  2014; 25 (6): E529-E536
- **Computer-Aided Trauma Simulation System With Haptic Feedback Is Easy and Fast for Oral-Maxillofacial Surgeons to Learn and Use** *JOURNAL OF ORAL AND MAXILLOFACIAL SURGERY*
  Schvartzman, S. C., Silva, R., Salisbury, K., Gaudilliere, D., Girod, S.
  2014; 72 (10): 1984-1993
- **Body dysmorphic disorder and psychological distress in orthognathic surgery patients.** *Journal of oral and maxillofacial surgery*
  Collins, B., Gonzalez, D., Gaudilliere, D. K., Shrestha, P., Girod, S.
  2014; 72 (8): 1553-1558

PRESENTATIONS

- Free-hand versus guided surgery: Factors influencing accuracy of implant placement - BIT's 3rd Annual World Congress of Oral & Dental Medicine-2016 (11/18/2016 - 11/20/2016)