



Timothy C. Chang

Clinical Assistant Professor, Urology

CLINICAL OFFICE (PRIMARY)

- **Urology Clinic**

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Bio

BIO

Dr. Timothy Chang is a Clinical Assistant Professor of Urology at Stanford University. He graduated with High Honors from Princeton University and received a Master of Science from Massachusetts Institute of Technology. He then obtained his medical degree and urology residency training from Stanford University School of Medicine. Dr. Chang has experience in a broad range of adult general urologic care, with a particular focus on kidney stone treatment for which he completed specialized fellowship training at Stanford. He received multiple research awards and authored or co-authored numerous academic publications. With his experience in both the engineering and medical fields, he has particular interest in developing technological medical advancements.

CLINICAL FOCUS

- Urology

ACADEMIC APPOINTMENTS

- Clinical Assistant Professor, Urology

HONORS AND AWARDS

- First prize, Basic Science Research, Annual Fellow Essay Contest, Endourological Society (2020)
- AUA Best Video Award in Bladder Cancer and Urinary Diversion session, American Urological Association Annual Conference (2020)
- Best Basic Science Annual Research Award, Stanford Department of Urology (2018)
- AUA Best Video Award in Bladder Oncology and Diversion session, American Urological Association Annual Conference (2017)
- Winner of Miley B. Wesson Essay Contest, Western Section AUA (2017)

PROFESSIONAL EDUCATION

- Board Certification: Urology, American Board of Urology (2022)
- Residency: Stanford University Dept of General Surgery (2015) CA
- Residency: Stanford University Dept of Urology (2019) CA

- Fellowship: Stanford Hospital and Clinics - Dept of Urology (2020) CA
- Medical Education: Stanford University School of Medicine (2013) CA
- Fellowship, Stanford University Department of Urology , Endourology (2020)
- Residency, Stanford University Department of Urology (2019)
- Internship, Stanford University General Surgery (2014)
- S.M., Massachusetts Institute of Technology (2005)
- B.S.E., Princeton University (2002)

Teaching

COURSES

2025-26

- Introduction to Urology: UROL 200 (Win, Spr)

2024-25

- Introduction to Urology: UROL 200 (Win, Spr)

Publications

PUBLICATIONS

- **Evaluation of Patient Treatment Preferences for 15-20mm Kidney Stones: A Conjoint Analysis.** *Journal of endourology*
Spradling, K., Bhambhani, H. P., Chang, T. C., Pao, A. C., Liao, J. C., Leppert, J. T., Welk, B., Harris, C. R., Conti, S. L., Elliott, C. S.
2020
- **Ultra-low-dose CT: An Effective Follow-up Imaging Modality for Ureterolithiasis.** *Journal of endourology*
Cheng, R. Z., Shkolyar, E., Chang, T. C., Spradling, K., Ganesan, C., Song, S., Pao, A. C., Leppert, J. T., Elliott, C. S., To'o, K., Conti, S. L.
2019
- **Optical biopsy of penile cancer with in vivo confocal laser endomicroscopy.** *Urologic oncology*
Shkolyar, E. n., Laurie, M. A., Mach, K. E., Trivedi, D. R., Zlatev, D. V., Chang, T. C., Metzner, T. J., Leppert, J. T., Kao, C. S., Liao, J. C.
2019
- **Augmented Bladder Tumor Detection Using Deep Learning.** *European urology*
Shkolyar, E. n., Jia, X. n., Chang, T. C., Trivedi, D. n., Mach, K. E., Meng, M. Q., Xing, L. n., Liao, J. C.
2019
- **Image-Guided Transurethral Resection of Bladder Tumors - Current Practice and Future Outlooks.** *Bladder cancer (Amsterdam, Netherlands)*
Chang, T. C., Marcq, G. n., Kiss, B. n., Trivedi, D. R., Mach, K. E., Liao, J. C.
2017; 3 (3): 149–59
- **In vivo biodistribution and toxicity of intravesical administration of quantum dots for optical molecular imaging of bladder cancer.** *Scientific reports*
Pan, Y. n., Chang, T. n., Marcq, G. n., Liu, C. n., Kiss, B. n., Rouse, R. n., Mach, K. E., Cheng, Z. n., Liao, J. C.
2017; 7 (1): 9309
- **Optical Biopsy of Bladder Cancer Using Crowd-Sourced Assessment.** *JAMA surgery*
Chen, S. P., Kirsch, S., Zlatev, D. V., Chang, T., Comstock, B., Lendvay, T. S., Liao, J. C.
2016; 151 (1): 90-93
- **Endoscopic molecular imaging of human bladder cancer using a CD47 antibody.** *Science translational medicine*
Pan, Y., Volkmer, J., Mach, K. E., Rouse, R. V., Liu, J., Sahoo, D., Chang, T. C., Metzner, T. J., Kang, L., van de Rijn, M., Skinner, E. C., Gambhir, S. S., Weissman, et al
2014; 6 (260): 260ra148-?

- **Endoscopic molecular imaging of human bladder cancer using a CD47 antibody** *SCIENCE TRANSLATIONAL MEDICINE*
Pan, Y., Volkmer, J., Mach, K. E., Rouse, R. V., Liu, J., Sahoo, D., Chang, T. C., Metzner, T. J., Kang, L., van de Rijn, M., Skinner, E. C., Gambhir, S. S., Weissman, et al
2014; 6 (260)
- **A small molecule p75(NTR) ligand prevents cognitive deficits and neurite degeneration in an Alzheimer's mouse model.** *Neurobiology of aging*
Knowles, J. K., Simmons, D. A., Nguyen, T. V., Vander Griend, L., Xie, Y., Zhang, H., Yang, T., Pollak, J., Chang, T., Arancio, O., Buckwalter, M. S., Wyss-Coray, T., Massa, et al
2013; 34 (8): 2052-2063
- **Interobserver agreement of confocal laser endomicroscopy for bladder cancer.** *Journal of endourology*
Chang, T. C., Liu, J., Hsiao, S. T., Pan, Y., Mach, K. E., Leppert, J. T., McKenney, J. K., Rouse, R. V., Liao, J. C.
2013; 27 (5): 598-603
- **Probe-based confocal laser endomicroscopy of the urinary tract: the technique.** *Journal of visualized experiments : JoVE*
Chang, T. C., Liu, J., Liao, J. C.
2013: e4409-?
- **Probe-based Confocal Laser Endomicroscopy of the Urinary Tract: The Technique** *JOVE-JOURNAL OF VISUALIZED EXPERIMENTS*
Chang, T. C., Liu, J., Liao, J. C.
2013
- **Molecular imaging of urothelial cancer using EGFR-binding peptides**
Pan, Y., Liu, J., Chang, T. C., Hsiao, S., Mach, K. E., Liao, J. C.
AMER ASSOC CANCER RESEARCH.2012
- **INTEROBSERVER AGREEMENT AND ACCURACY OF CONFOCAL LASER ENDOMICROSCOPY FOR IN VIVO DIAGNOSIS OF BLADDER CANCER**
Chang, T., Liu, J., Hsiao, S., Pan, Y., McKenney, J., Liao, J.
ELSEVIER SCIENCE INC.2012: E716
- **Next generation of optical diagnostics for bladder cancer using probe-based confocal laser endomicroscopy** *Conference on Photonic Therapeutics and Diagnostics VIII*
Liu, J., Chang, T. C., Pan, Y., Hsiao, S. T., Mach, K. E., Jensen, K. C., Liao, J. C.
SPIE-INT SOC OPTICAL ENGINEERING.2012
- **Small Molecule, Non-Peptide p75(NTR) Ligands Inhibit A beta-Induced Neurodegeneration and Synaptic Impairment** *PLOS ONE*
Yang, T., Knowles, J. K., Lu, Q., Zhang, H., Arancio, O., Moore, L. A., Chang, T., Wang, Q., Andreasson, K., Rajadas, J., Fuller, G. G., Xie, Y., Massa, et al
2008; 3 (11)