The Stanford ‘Scene’ at the 106th USCAP Annual Meeting

Stanford trainees and faculty were well represented at this year’s annual USCAP meeting held deep in the heart of Texas along the San Antonio Riverwalk at the Henry B. Gonzalez Convention Center. In addition to an excellent long course on practical issues in prostate pathology, highlights of the week included:

- 6 platform presentations and 28 poster presentations by Stanford residents and fellows as first authors, with contributions from members of the department on a number of additional abstracts.
- Dr. Adam Gomez (Gastrointestinal Pathology Fellow) received the 2017 Rodger C. Haggitt Gastrointestinal Pathology Society Abstract Award.
- Dr. Teri Longacre presented at the Arthur Purdy Stout Society of Surgical Pathologists Companion Meeting on Immunohistochemical Pitfalls in Gynecologic Pathology.
- Dr. Hannes Vogel presented at the American Association of Neuropathologists Companion Meeting on pineal region tumors.
- Dr. Dita Gratzinger presented a short course on bone marrow manifestations of systemic disease.
- Dr. Kim Allison and Dr. Kristin Jensen gave the final presentation of their highly successful short course on problematic ductal proliferations of the breast.
- Dr. Bob Ohgami presented at the Evening Hematopathology Specialty Session on indolent T-lymphoblastic proliferations.
- Alumni from near and far mingled over cocktails and hors d’oeuvres at The Annual Stanford University Reception held at the Marriott Rivercenter.
- Residents, fellows, and faculty celebrated months of preparation over dinner at Zinc Bistro (see photos).

Next year the 107th USCAP Annual Meeting will be in Vancouver, British Columbia, from March 17-23, 2018, so have your passports ready!
Critical Tips and Diagnoses (CRITDers)

AP Case

A 92 year old man with history of squamous cell carcinoma and new PET CT nodule in right colon undergoes colonoscopy with biopsy.

**Differential Diagnosis:** Infection, de novo autoimmune enteropathy, medication related colitis, early inflammatory bowel disease (unlikely in this age group).

**Final Diagnosis:** Anti-PDL-1 therapy induced colitis. Histologic sections demonstrate a mixture of acute and chronic inflammation (lymphocyte predominant), with crypt microabscesses, numerous intra-epithelial lymphocytes, and enterocyte apoptotic bodies. The lamina propria is expanded by a predominantly chronic inflammatory response, and there are foci of substantial surface epithelial injury. Given the patient’s additional (initially not provided) clinical history of anti-PDL-1 therapy for squamous cell carcinoma and chronic diarrhea, the best diagnosis for this biopsy series is anti-PDL-1 therapy induced colitis. (Reference: Chen JH, Pezhouh MK, Lauwers GY, Masia, R. Histopathologic features of colitis due to immunotherapy with anti-PD-1 antibodies. Am J Surg Pathol. 2017; 41:643-654).

**AP Critical Tip:** As anti-PD-1 agents are increasingly used in oncology, anti-PD-1 colitis should be considered in any patient with a history of disseminated malignancy, especially if there is a history of chronic diarrhea. Treatment consists of withdrawal of anti-PD-1 therapy and initiation of corticosteroids.

(Contributors: Shyam Raghavan, Teri Longacre)
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Critical Tips and Diagnoses (CRITDers)

Interference in non-competitive immunoassays

A 52-year-old homeless woman presents to the ED with abdominal pain, nausea, and vomiting. A serum hCG is ordered. Our serum hCG assay is a non-competitive sandwich ELISA which relies on mouse monoclonal detection antibody. When the sample was run, the signal was above the upper limit of the analytical measurement range, >200,000 mIU/mL. The sample was then diluted 1:2 and 1:5 which gave an instrument reading of 1232 mIU/mL and 1182 mIU/mL, respectively.

Differential Diagnosis: Heterophile antibody, other interfering substances, pregnancy, gestational trophoblastic disease.

Final Diagnosis: Heterophile antibody, confirmed by negative urine hCG test, and serum hCG instrument reading of <5 mIU/mL following incubation of the patient serum with heterophile blocking reagent (HBR) for 1 hr. We also suspected that the patient, being homeless, may have been exposed to rodents.

CP Critical Tip: Heterophile antibodies are usually low-titer, weak avidity antibodies reactive to animal immunoglobulins, and are a well-recognized cause of interference in immunoassays. In noncompetitive immunoassays, heterophile antibodies can lead to bridging of the capture and detection antibodies, causing false-positive results. Heterophile antibodies can also cause false-negative results by binding directly to the capture antibody, thus blocking the reactive site from binding the analyte of interest (see figure). Non-linear results with dilution are a clue that there may be a heterophile antibody present, which can be addressed by running the test on a different platform, or using HBRs (e.g. ScantibodiesTM).

(Contributors: Jenny Hoffmann, Raffick Bowen)
### Alumni

**Brent Harris MD, PhD (1999)** After completing AP/NP training and post-doctoral training, Brent headed back to the East Coast to embark on an academic career at Dartmouth. He migrated south a few years ago to take the position of Director of Neuropathology at Georgetown in Washington DC where he is a tenured Associate Professor in Pathology and Neurology. He splits his time pretty evenly between clinical, teaching, and research fun and serves as the DC Medical Examiner’s neuropathologist and consultant for the Department of Justice and National Institute of Mental Health. His kids are out of his hair, out of college, and getting married. So with biological duties done, he now commutes into work on a very fast red Ducati. Brent will ever be indebted to the faculty at Stanford and especially his mentors Dikran Horoupian, Ray Sobel, and Ben Barres.

**Matthew Burtelow MD, PhD (2008).** After completing AP/CP training and a surgical pathology fellowship at Stanford, Matthew traveled to Seattle, WA where he finished a 1 year GI/hepatic pathology fellowship at the University of Washington. In 2009, he joined Boise Pathology Group, an independent practice of 10 pathologist serving St. Luke’s Health System and in 2015 was appointed as President of Boise Pathology Group and the Executive Medical Director for the St. Luke’s Health System Laboratories. Matthew lives in Boise with his wife Lisa and 2 stepchildren, Brooke and Samuel. Chloe and Bruno, both labrador retrievers, are beloved members of the Burtelow family. Matt spends his free time mountain biking, hiking, trail running, and boating the lakes of the intermountain west.

### Trainees

**Sydney Card MD** is completing her fellowship in our ACGME accredited Gynecologic Pathology Fellowship and will be taking a position at Surrey Memorial Hospital in British Columbia, Canada in September 2017. She previously completed her residency training in AP at the University of Toronto.

**Adam Gomez MD** is completing his fellowship in our ACGME accredited Gastrointestinal Pathology Fellowship and will be taking a position at Scripps Memorial Hospital in La Jolla, California in July 2017. He previously completed his ACGME accredited residency training in AP/CP at Stanford.
**Alumni, Trainee, & Faculty Developments**

### Faculty

**Christian Kunder MD, PhD** (GU, soft tissue, and molecular genetic pathology) joined the Department in July 2015. He completed AP residency as well as molecular pathology, surgical pathology, and hematopathology fellowships at Stanford University. He has specific research interests in prostate and bladder cancer as well as emerging molecular testing modalities. He also dedicates much of his recreational time to the study of ancient history.

**Jason Kurzer MD, PhD** *(Hematopathology)* joined the Department in July 2016. He completed AP residency and hematopathology fellowship at Stanford University and is the Director of the Clinical Hematology Laboratory. He has specific research interests in leukemias and lymphomas and also dedicates much of his time to teaching residents and fellows.

### Notable Pathology Events Featuring Stanford Pathologists

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<td><strong>USCAP Interactive Learning Center, A Journey through Diagnostically Challenging Areas in Gynecologic Pathology</strong></td>
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**NEW TESTS AVAILABLE**

Myeloid next generation sequencing assay blood test...

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NEW TESTS AVAILABLE

Stanford’s Molecular Pathology division now offers a genetic test for comprehensively evaluating myeloid malignancy gene mutations. The test uses next generation sequencing in conjunction with additional methodologies to provide a comprehensive assessment of mutations in driver genes associated with myeloid malignancies.

The Myeloid Malignancies Mutation Panel with next-generation DNA sequencing profiles 53 genes frequently mutated in myeloid malignancies such as:

► Acute myeloid leukemia (AML)
► Chronic myeloid leukemia (CML)
► Chronic myelomonocytic leukemia (CMML)
► Juvenile myelomonocytic leukemia (JMML)
► Myelodysplastic syndrome (MDS)
► Myeloproliferative neoplasms (MPN)

For specific details see: http://www.stanfordlab.com/esoteric/test-myeloid-next-generation-sequencing-assay-blood.html

Lab test contact: labmarketing@stanfordhealthcare.org

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Resident Editor: Jenny Hoffmann
Production: Norm Cyr

Any suggestions, news items, job postings, or other possible newsworthy bits are welcome and should be directed to one or both of the faculty editors (see below). Also, please contact us if you wish to be removed from the list or better yet, if you know of an alumnus who would like to be added to the list (with the appropriate contact info).

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