

I traveled to Peru from March 25 – April 20<sup>th</sup>, 2007 with the gracious support of the Nagendran International Scholarship established by Dr. Sukumar Nagendran. My time in Peru was an individualized learning experience. I spent the majority of my rotation at the Instituto Nacional de Enfermedades Neoplasicas (INEN), the Peruvian National Cancer Institute and the largest referral center for cancer patients in the country. At INEN I worked on a research project spearheaded by Dr. Christina Khan, my twin sister who spent the past year working in Lima as an NIH Fogarty International Center Scholar, and Dr. Carlos Velarde and Dr. Oscar Galdos, both gynecologic oncologists at INEN. The project was a retrospective chart review of 1300 cervical cancer patients seen at INEN in the year 2001, in order to identify prognostic factors for morbidity and mortality. We spent much time in the medical records department of the hospital reviewing charts of patients in order to collect data on demographic and treatment-related factors such as province of origin, lifetime number of sexual partners, type of medical insurance, type of treatment (radiation, surgery, chemo, or a combination), length of follow-up, and hemoglobin levels, among other factors. We also began to analyze the data that Christina and her data entry assistant had already collected to that point. Through working on this project, I gained a genuine sense of the complexity involved with performing a large research study at an international institution. We encountered obstacles with regards to finding charts, contacting patients who had been lost to follow-up to inquire about survival, language difficulties, supervising data entry technicians, and overall adjustment to a new type of system. Later that spring after returning home from Peru, I helped Christina put together a poster with the study results, which she presented at the inaugural Surgery and Public Health Conference at Brigham and Women's Hospital in May 2007. Our next objective will be to write a manuscript and submit it for publication.

At INEN I also had the opportunity to rotate through the gynecologic oncology clinic. I spent several days in the colposcopy clinic where women lined up daily to have colposcopy, having been referred after an abnormal Papanicolaou smear. I was very impressed with the efficiency of the colposcopy clinic. The physicians used a digitized colposcope which allowed the colposcopist to capture the image on a laptop computer and use marking tools to designate the visualized lesions. There were several physicians from other countries in attendance who were doing a rotation in colposcopy to become certified. Finally, at INEN I spent several days in the operating room observing surgeries for gynecologic cancers, mainly cervical and endometrial.

While in Lima I also worked with Dr. Enrique Locate at the Hospital de la Maternidad. We spent time in the HIV Pregnancy Clinic. In Peru there is a widespread fear of HIV/AIDS, and unfortunately many health care workers including resident physicians refuse to do surgeries on HIV positive patients. Due to this situation, Dr. Locate's patients are an underserved minority who are in dire need of his services. I enjoyed visiting this clinic and also assisting on some Cesarean sections with Dr. Locate. The operating room experience was not terribly different from our own here in the United States, with the exception of fewer supplies and less packaging.

Michelle Khan, MD, MPH  
October 11, 2007

My rotation in Peru was a fulfilling experience related to obstetrics and gynecology, the field in which I will begin my residency training at the Johns Hopkins Hospital in July. Working on the cervical cancer research project at INEN was eye-opening in terms of international research, which I hope to be involved with as a faculty member one day. I am very grateful to Dr. Nagendran and the scholarship committee for their support of my endeavor, and I hope that Dr. Nagendran continues to provide this wonderful opportunity to interested medical students in their clinical years.



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