

Pacific Partnership:



**A U.S. Navy resident's experience
on the USNS *Mercy* in Southeast Asia**

by LCDR Matthew D. Tadlock, MD, MC, USN



A 44-year-old woman from Papua New Guinea (PNG) was referred to the USNS *Mercy* for evaluation of a left breast mass. During my assessment, I was surprised by the size and appearance of the ulcerated fungating tumor that had engulfed her breast (see Figure 1, page 18). She was weak and anemic, but the remainder of her physical exam was unremarkable, and the mass did not involve the chest wall. Due to the size (about 17 cm in diameter) and weight of the tumor, it was necessary for her to carry it within her left antecubital fossa when standing upright. She would fashion scarves and pieces of cloth to hide the disfigurement. She reported that the mass had slowly grown over a five-year period, but she had never sought help due to limited family resources and poor access to health care.

Upper left: LCDR Tadlock (right) operating with Dr. Kapfer. Main photo: The USNS *Mercy* off the coast of PNG.

My differential diagnosis included primary breast sarcoma or phyllodes tumor. I assisted Project Hope surgeon Ivan Shulman, MD, FACS (see article, page 15), and LCDR Amitabh Mohan, MD (of the Indian Navy), in performing a simple mastectomy. The final pathologic diagnosis was benign phyllodes tumor. Her postoperative recovery was unremarkable, and upon discharge, the woman and her husband expressed relief and gratefulness.

The ultimate away rotation: USNS Mercy

As a third-year general surgery resident from the Naval Medical Center San Diego (NMCS), I had the unique opportunity to participate in the Pacific Partnership 2008 program on board the hospital ship USNS *Mercy* (T-AH 19). Over a four-month period during the summer of 2008, the *Mercy*, along with several partner nations, including some nongovernmental organizations, provided humanitarian and civic assistance in five host countries throughout Southeast Asia, including the Republic of the Philippines, the Socialist Republic of Vietnam, the Democratic State of Timor-Leste, the Independent State of Papua New Guinea, and the Federated States of Micronesia. During a six-week period, I assisted surgeons from the U.S. Navy, Indian Navy, Royal New Zealand Navy, and the volunteer organization Project Hope in treating surgical diseases in PNG and Micronesia.

The USNS *Mercy*, one of two hospital ships in the U.S. Navy, homeports in San Diego, CA. Originally converted from an oil tanker and then commissioned in 1986, the *Mercy* has 12 operating rooms, a 1,000-bed capacity, and an 80-bed intensive care unit, as well as radiology, endoscopy, pharmacy, laboratory, and pathology capabilities. In addition to the three general surgeons on board, I worked with specialty surgeons from pediatric and plastic surgery, otolaryngology, urology, and orthopaedic surgery. Gynecologic, oral-maxillofacial, and ophthalmologic specialists were on board, as well.

While I was involved in an international humanitarian assistance mission, it was also a structured educational experience. Under the guidance of CAPT Eric Kuncir, MD, FACS, a trauma and acute care surgeon from NMCS who was my faculty mentor, I assisted in the surgical screening clinics, performed history and physicals on all admitted general surgery patients, and was intimately involved in all aspects of patient care.



Figure 1. Phyllodes tumor of the left breast.

Formal rounds were performed daily with attending general surgeons.

Ples Bilong Katim Man: Bread and butter general surgery in PNG

Approximately the size of California, the island of New Guinea is second in size only to its southern neighbor, Australia.¹ Currently, the western portion of the island is a province of Indonesia. PNG is on the eastern portion of the island, and has been an independent state since 1975. The estimated 6 million people of PNG speak more than 800 different dialects,¹ but the official language is the lingua franca Tok Pisin (also known as Talk Pidgin or New Guinea Pidgin), which is composed of mostly English and German words.

Our first two days in PNG were filled evaluating hundreds of potential surgical patients at Port Moresby General Hospital in the nation's capital. Our clinic space was labeled "Ples Bilong Katim Man" ("place belong cutting man"), which means "general surgeon" in Tok Pisin. The more complex cases were scheduled earlier in the mission to allow for appropriate recovery time. Unfortunately, we had to turn some patients away, since we would not be in port long enough for the necessary recovery.

Many of the people we evaluated had poor dentition, with the brilliantly red-orange stained teeth, gums, and lips that are associated with the chewing of betel nut—or what the locals call *buai* ("boo-eye"). These seeds of Areca palm trees are commonly mixed with lime or mustard powder to improve the bitter taste. When chewed, they act as

a mild stimulant, giving the user a sense of euphoria. Betel nut use is a part of the everyday culture in PNG and is also a source of many informal jobs; however, it is associated with oral leukoplakia and oral cancer.² The geographic region of Melanesia, which includes PNG, has the highest incidence of oral cancer in the world.³ Recently, it was reported that the chewing of betel nut in the streets of Port Moresby was banned because the spittle is associated with the spread of tuberculosis.⁴ Given how prevalent betel nut use is, this may be a difficult law to enforce.

Our next 10 operative days were very busy. I assisted with a variety of operations, including the repair of massive inguinal hernias, treatment of anorectal disease, laparoscopic cholecystectomies, and an urgent incarcerated incisional abdominal wall hernia repair. Moreover, we treated patients with advanced tumors, such as the patient with the phyllodes tumor. I assisted NMCSO plastic surgeon, CDR Trent Douglas, MD, FACS, with the excision of a 9 cm anterior right shoulder mass, and subsequent coverage with a split thickness skin graft (see Figures 2 and 3, this page). The superficial mass was enclosed by a pseudocapsule and easily separated from the underlying muscle. The final diagnosis was poorly differentiated (grade 3) spindle cell sarcoma. Upon the patient's discharge from the *Mercy*, the Royal Australian Air Force arranged for the appropriate adjuvant therapy in Australia. With NMCSO otolaryngologist CDR Kevin Bach, I also had exposure to several head and neck cases (including a left superficial parotidectomy for a salivary duct cyst), and gained some experience in the evaluation and management of solitary neck masses.

The people of PNG were warm, generous, and very appreciative. After being treated on the ship or in one of the many mobile clinics that were dispersed to local villages, patients would travel several hours or more to Port Moresby to give handmade gifts to the providers who treated them.

Trauma in paradise

The Federated States of Micronesia are a lush tropical paradise composed of four states/island groups, with a total population of approximately 100,000 people spread over 607 different islands.¹ We anchored in Truk Lagoon, famous for its shipwreck diving sites and naval history. In 1944, dur-



Figure 2: Soft tissue sarcoma of the right anterior shoulder in a 56-year-old woman.

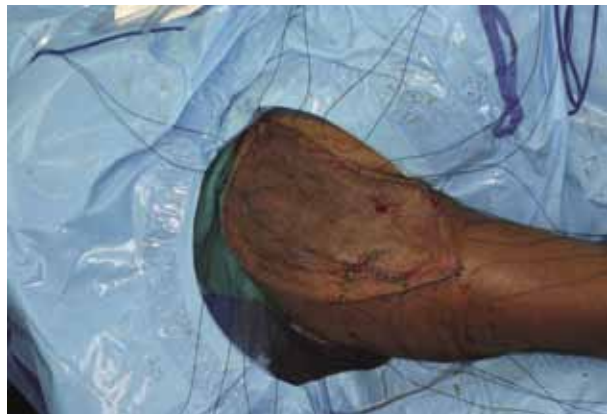


Figure 3: Coverage with a split thickness skin graft.



Figure 4. Phillipin slingshot metal darts. (Photo provided by Dr. Arsenal.)



Figure 5. Dr. Tadlock with happy patients.


ing World War II, a large portion of the Imperial Japanese Navy fleet was destroyed in this area.

The people of Micronesia were exceptionally welcoming. The surgical screening clinics took place at Chuuk State Hospital, a small 30-bed facility on Weno Island. The hospital has limited resources, but it does have an operating room and a general surgeon, Julius Caesar Arsenal, MD. Originally from the Philippines, where he trained, Dr. Arsenal is truly a rural surgeon, as he practices in a remote part of the world. While I was there, a 14-year-old boy presented to the emergency room with penetrating trauma to his left posterior thigh. Embedded in his thigh were two long, metal darts. These Filipino darts (see Figure 4, page 19) are made from 6 to 8 inch nails and fired with slingshots by local gangs. The name Filipino is derived from the Filipino carpenters who taught locals how to make them.⁵ In a well-received presentation, Dr. Arsenal discussed his experiences managing hundreds of injuries from these darts, including penetrating cardiac trauma, to the crew of the *Mercy*.

We were not as busy in Micronesia, but the cases were interesting. I performed several pediatric hernia and hydrocele repairs with pediatric surgeon CDR Stephanie Kapfer, MD. Other cases included a terminal duct excision for an intraductal papilloma, two thyroid lobectomies, several adult hernia repairs, and a right-hand scar contracture release in an eight-year-old girl.

While in Micronesia and PNG, 550 operations were performed on board the USNS *Mercy*; I assisted with 46 of these cases, in a unique and rewarding international experience. (See Figure 5, this page.)

While the diverse caseload contributed greatly to my surgical education, working with surgeons from different countries and interacting with the people of PNG and Micronesia was, personally and culturally, enriching. I would like to thank all of the surgeons who allowed me to participate in the care of their patients.

For more information about the USNS *Mercy* and the Pacific Partnership, visit <http://www.mercy.navy.mil>. 

The views expressed in this article are those of the author and do not reflect the official policy or position of the Department of the Navy, Department of Defense, or the U.S. government.

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