

# Telementoring in gynecologic oncology training: changing lives in Mozambique

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More than 85% of cervical cancer cases occur in low and middle income countries where there are not enough medical specialists to provide prevention, screening, and treatment services. Numerous cancer patients around the world are victims of the scarcity of institutional organization structure and the lack of financial and human resources. The Republic of Mozambique is located in southeast Africa. The estimated population in 2018 was 30.5 million and life expectancy was 60 years.<sup>1,2</sup> The official language is Portuguese although many dialects are preferred by a large part of the population. Numerable barriers exist in education and health, and this is primarily due to conflicts in their fight for independence (1975) and the civil war (1992).<sup>3</sup> Poverty still impacts 54% of the population and the adult illiteracy rate is 52%.<sup>4</sup> The HIV prevalence is estimated at more than 16% of the population over 16 years of age.<sup>1,4</sup> In Mozambique, the incidence and mortality from cervical cancer ranks among the highest in the world.

In 2018, 4291 new cases and 3376 cervical cancer deaths were registered in Mozambique.<sup>4</sup> Palliative care and chemotherapy are the only treatments available for the majority of patients. Mozambique's healthcare is dependent on outside resources. Specialized surgeons from different countries, such as Portugal or Cuba, have tried to offer support. Unfortunately, the lack of well organized training programs in gynecologic oncology has resulted in significant stagnation in the treatment of cervical cancer. In 2014, on the initiative of the Mozambican First Lady, the former and current, Maria da Luz Guebuza and Isaura Nyusi, respectively,

technical support was requested from the MD Anderson Cancer Center with the aim of reducing cancer mortality in Mozambican women. Due to linguistic and cultural proximity, Brazilian physicians and researchers from different institutions were invited to participate in a telementoring program, Project Extension for Community Healthcare Outcomes (ECHO), with MD Anderson Cancer Center to assist in the training of Mozambican professionals. Since 2015, ECHO sessions are held monthly by video conference in Portuguese. A 15 min didactic lecture and clinical cases are presented by local physicians and discussed by international mentors, specialized in gynecologic oncologists, fellows, and a multidisciplinary team (radiation oncologists, pathologists, and medical oncologists).<sup>5</sup>

After a year of preparation and nine ECHO sessions, the first visit to Mozambique took place in January 2016. These visits, called 'missions' by the Mozambicans, were a group formed of a multicenter partnership between the MD Anderson Cancer Center and three MD Anderson sister institutions in Brazil (Hospital Israelita Albert Einstein, Hospital de Câncer de Barretos, and AC Camargo Cancer Center), including specialists in breast, pediatric, head and neck, gynecology surgical oncology, medical oncology, and radiation therapy. They visited Maputo Central Hospital, Maputo, Mozambique, to deliver surgical and clinical training (figure 1).<sup>6</sup>

Inadequate diagnostic tools, poor staging, and limited preoperative care were the most prevalent problems identified. Lectures were performed and focused on diagnosis, staging, anatomy, and surgical and perioperative care. Since then, the



**Figure 1** Hospital Central de Maputo, Mozambique.

team of Brazilian and US partners has traveled to Mozambique at least three times a year to supervise approximately 10 medium and high complexity surgeries. Each visit has documented improvements in perioperative care and surgical skills by the local physicians. In 2018, three physicians from Mozambique were accepted to take part in the International Gynecologic Cancer Society (IGCS) Gynecologic Oncology Global Curriculum and Mentorship Program, a comprehensive 2 year education and training program designed for regions around the world that do not currently have formal training in gynecologic oncology.



**Figure 2** Case review prior to surgery.



**Figure 3** The first radical hysterectomy.

This was possible through the added institutional support of the Health Ministry and Gynecology Department of Maputo Central Hospital, Mozambique.

Over the past 3 years, cultural, organizational, and technical barriers were broken. This led to an improvement in the knowledge of local physicians as it pertained to staging, surgical technique, and perioperative care (figure 2), thus leading to a



**Figure 4** The newest operating room and Mentorship Program

decrease in surgical complications and perioperative adverse events. The preliminary results have shown improved rates of staging accuracy, and intraoperative and postoperative complications. At the last visit, radical hysterectomies and vulvec-tomies with cutaneous flap, hypogastric arteries ligation, and ovarian cancer surgical staging were performed. (figure 3) Recently, the limited medical records information has been replaced by the well structured database via RedCap,<sup>7</sup> permitting future clinical research in medical training, cervical cancer screening, and oncological treatment in the low resource setting. Formal evaluation of the course and participant skills and knowledge is ongoing.

Despite budgetary constraints and the lack of formal training in gynecologic oncology, very positive results have been obtained with the IGCS Gynecologic Oncology Global Curriculum and Mentorship Program. (figure 4) Recently, cervical, vulvar, and endometrial cancer patients have been found to be adequately treated with surgeries of high complexity and acceptable perioperative outcomes, even with the limited resources.

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