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Variations in gynecologic oncology training in low (LIC) and middle income (MIC) countries (LMICs): Common efforts and challenges

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ABSTRACT

Gynecologic cancer, cervical cancer in particular, is disproportionately represented in the developing world where mortality is also high. Screening programs, increased availability of chemotherapy, and an awareness of HIV-related cancers have in part accelerated a need for physicians who can treat these cancers, yet the infrastructure for such training is often lacking. In this paper, we address the variations in gynecology oncology training in LMICs as well as the ubiquitous challenges, in an effort to guide future agendas.

Contents

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1. Introduction

It is well established that outcomes of gynecologic cancer patients are better when treated by appropriately trained subspecialist gynecologic oncologists (Dahm-Kähler et al., 2016). The infrastructure, environment, facilities and opportunities for training in gynecologic oncology vary widely across different countries. These training programs are better developed and well established in higher income countries, predominantly in the Western world. Are and his colleagues (Are et al., 2016) also reported significant variations in the surgical oncology training requirements associated with geographic region and economic status. Furthermore the lack of adequately trained surgical oncologists was found to be another significant barrier to cancer care (Sullivan et al., 2015). Investment in health infrastructure and training is also a function of a country's income. The world-bank separates countries into four income categories on the basis of gross national income (GNI) per capita, in U.S. dollars: low income (LIC: ≤$1025), lower-middle income (LMIC: $1026–$4035), upper-middle income (UMIC: $4036–$12,475), and high income (HIC: ≥$12,476). Global cancer incidence is expected to increase by 75% over the next 20 years (Bray et al., 2012). Most of this increase will occur in LIC and MIC. For the purposes of this paper, MIC includes both upper and lower MIC. Gynecologic malignancies including cervical, uterine and ovarian cancers are second to breast cancer in incidence and represent 16.3% and 19.2% of all cancers in women from all economies and less developed countries, respectively (Anon, 2013). Growing and expanding a properly trained workforce in these countries is crucial for fulfilling the future needs and improving outcomes of women with gynecologic cancer. In this article we examine the current state of training in gynecologic oncology in LMICs (see Table 1) and make recommendations for a way forward. Information regarding the programmatic content was obtained from the US named affiliates or from the respective authors who have been directly involved in training or assessment of training in these regions: CJ (Africa), JN (Asia), RM (Europe), AS and LC (So and Central America).

2. Training in Africa

The gynecologic oncology training programs in Africa are mostly new since 2012, 2–3 years in duration, and have a range of training emphasis from comprehensive, similar to those in the United States, Canada and parts of the EU, to a primary concentration on cervical cancer care. Three common themes are an association with a teaching university and medical school, lack of internal funding and a reliance on outside mentorship.

2.1. South Africa

The certificate subspecialty program began in 2008 and is a comprehensive program with requirements for an exit exam, research project and a case log book. Presently, the program uniquely does not require external mentors; in fact other trainees can rotate there.

2.2. Zambia

The Gynecologic Oncology Consultation Service, a part of The African Centre of Excellence in Zambia, is based at the University Teaching Hospital in Lusaka, and was established in January 2010. The Divisions of Gynecologic Oncology at the University of North Carolina and University of California, Irvine support the service via faculty exchange visits. They also have a strong research component led by

Table 1
Gynecologic oncology training programs in LMICs.

Region	Country	Type of training in gynecologic oncology	Length of training	Scope of practice after completion of training
Africa				
	Ethiopia	Gynecologic oncology	2–3	Radical pelvic surgery and chemotherapy
	Ghana	Gynecologic oncology	2	Radical pelvic surgery and chemotherapy
	Kenya	Gynecologic oncology	2	Radical pelvic surgery and chemotherapy
	Uganda	Gynecologic oncology		Anticipated start 2017
	Zambia	Gynecologic oncology		Pelvic surgery
Asia				
	Indonesia	Gynecologic oncology	2	Pelvic surgery
	Malaysia	Gynecologic oncology	2	Pelvic surgery and chemotherapy
	Myanmar	Gynecologic oncology	3	Pelvic surgery and chemotherapy
	Thailand	Gynecologic oncology	2	Pelvic surgery and chemotherapy
Europe				
	Bulgaria	General Oncology	4	Gynecological oncology is not a separate subspecialty. Gynecologists undergoing this training can subsequently perform radical gynecological oncology surgery.
	Romania	Gynecologic oncology	2	All gynecological oncological surgeries. Pelvic, intestinal and urologic surgeries
	Serbia	Gynecologic oncology	1	Training is not comprehensive and continues post fellowship under the process of mentorship. Pelvic and intestinal surgeries
Latin America				
	Argentina	Gynecologic oncology	3	Pelvic, intestinal, urologic, breast surgeries, and chemotherapy
	Brazil	Surgical oncology	3	Pelvic, intestinal, urologic, breast surgeries
	Chile	Gynecologic oncology	2	Pelvic, intestinal and urologic surgeries
	Colombia	Gynecologic oncology	2	Pelvic and intestinal surgeries
	Costa Rica	Gynecologic oncology	2	Pelvic, intestinal and urologic surgeries
	Honduras	Surgical oncology	4	Pelvic, intestinal, urologic and breast surgeries
	Mexico	Gynecologic oncology	3	Pelvic, intestinal, urologic and breast surgeries
	Panama	Gynecologic oncology	2	Pelvic, intestinal and urologic surgeries