

Situación de la salud mamaria en el mundo y en Latinoamérica en particular

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Resumen

El cáncer de mama es el cáncer más común entre las mujeres en el mundo y es la causa más frecuente de muerte por cáncer en la mujer.

Se reportan tasas de incidencia y mortalidad de este cáncer en el continente americano.

La práctica clínica, en países con recursos limitados, con relación al cáncer de mama, puede obligar a los médicos a tomar decisiones contrarias a su conocimiento y a lo que indican las guías clínicas internacionales.

El desarrollo de los métodos de diagnóstico y de tratamiento alcanzado en los países ricos, no necesariamente se puede trasladar a los países más pobres.

En 2002 se creó la Iniciativa Global para la Salud Mamaria, que es una alianza internacional la cual ha desarrollado guías clínicas basadas en evidencia para países con recursos limitados, con el propósito de colaborar en mejorar la calidad de la atención de las enfermedades de la mama.

La última revisión de dichas guías fue publicada en 2005 y en octubre del 2007 se realizará una nueva reunión cuyos pasos estarán dirigidos a la implementación programática de éstas en los países con recursos limitados.

KEY WORDS: breast cancer, limited

resource countries, diagnosis, early detection, screening, treatment, guideline, health care systems, health planning, international health problems, pathology, public policy, recommendations, resource allocation.

Globally, breast cancer is the most common cancer among women and is the most likely reason that a woman will die of cancer. Each year, breast cancer is newly diagnosed in more than 1.1 million women, representing more than 10% of all new cancer cases. With over 410,000 deaths each year, breast cancer accounts for over 1.6% of all female deaths worldwide (1, 2). Countries with established and adequately funded health care systems have higher breast cancer diagnosis rates, but also have improved breast cancer survival (3). Breast cancer is becoming an increasingly urgent problem in low resource regions where incidence rates have been rising by up to 5% per year (4). Despite the common impression that breast cancer is a disease of wealthy countries, the majority of breast cancer deaths occur in developing countries (5). Among the Americas, breast cancer incidence is highest in North America (99 / 100,000) and lowest in Central America

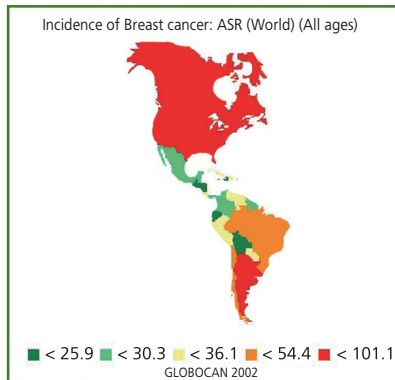


FIGURE 1a: Breast cancer incidence in the Americas, rate per 100,000 (age-standardized rate, world standard population).

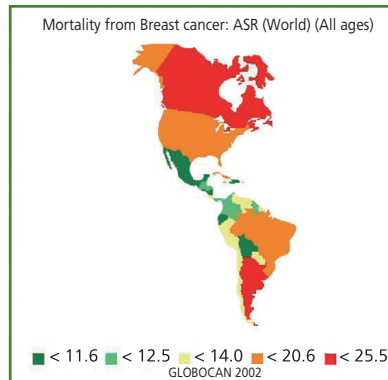


FIGURE 1b: Breast cancer mortality in the Americas, rate per 100,000 (age-standardized rate, world standard population).

(26 / 100,000), as estimated by the International Agency for Research on Cancer (IARC) (2). South America's breast cancer incidence is intermediate between the two (46 / 100,000) (Figure 1a). Breast cancer incidence varies widely among South American countries. The highest risk South American countries include Argentina (74 / 100,000) and Uruguay (83 /

100,000); the lowest include Bolivia (25 / 100,000) and Ecuador (24 / 100,000) (Table 1). In all regions, the breast cancer age incidence curves are biphasic. The steepest rise in incidence occurs in women under age 45. The likelihood of breast cancer continues to increase in women in their 50s and 60s, but at a slower rate of rise than in the premenopausal years (Fig-

ure 2a). The rise in postmenopausal breast cancer is greatest in North America.

Breast cancer mortality rates vary similarly to incidence rates among countries in the Americas, but the numbers are more tightly clustered (Figure 1b), ranging from 19 / 100,000 in North America to 11 / 100,000 in Central America. The ratio of mortality to incidence in a country approximates case-fatality rates in that country. The mortality to incidence ratio is the most favorable in North America (19%) and least favorable in Central America (41%), suggesting that early breast cancer detection, which occurs in conjunction with screening programs, increases the known incidence of breast cancer within a country, but effectively saves lives by down-staging disease (Table 1). Breast cancer age mortality curves also show a biphasic pattern (Figure 2b). Mortality curves nearly overlap for women < 45 years in North, Central and South America. The differences in breast cancer mortality

TABLE 1 REGION / COUNTRY	BREAST CANCER INCIDENCE: ASR (World), All ages	BREAST CANCER MORTALITY: ASR (World), All ages	MORTALITY / INCIDENCE (%)
NORTHERN AMERICA	99.4	19.2	19.3%
Canada	84.3	21.1	25.0%
United States of America	101.1	19	18.8%
CENTRAL AMERICA	25.9	10.5	40.5%
Belize	29.8	11.9	39.9%
Costa Rica	30.9	13.6	44.0%
El Salvador	13.6	5.4	39.7%
Guatemala	25.9	12.1	46.7%
Honduras	25.9	12.1	46.7%
Mexico	26.4	10.5	39.8%
Nicaragua	23.9	9.4	39.3%
Panama	29	12	41.4%
SOUTH AMERICA	46	15.1	32.8%
Argentina	73.9	21.8	29.5%
Bolivia	24.7	11.6	47.0%
Brazil	46	14.1	30.7%
Chile	43.9	13.1	29.8%
Colombia	30.3	12.5	41.3%
Ecuador	23.5	9.7	41.3%
Guyana	29.5	11.9	40.3%
Paraguay	34.4	13.9	40.4%
Peru	35.1	14	39.9%
Suriname	30	12.9	43.0%
Uruguay	83.1	24.1	29.0%
Venezuela	34.3	13.4	39.1%

among the Americas are greatest among older women. Postmenopausal breast cancer appears to be a bigger problem in North America than it does in Central America, with South America midway between the two. Comparing the Americas, breast cancer appears to be the most different among postmenopausal women and the most similar among premenopausal women.

CLINICAL PRACTICE WITH LIMITED RESOURCES

Physicians working in a limited resource environment may be forced to make decisions contrary to their best medical knowledge. Despite knowing the optimal management for a given patient based on guidelines developed in wealthy countries, less-than-optimal solutions are offered to patients because diagnostic and/or treatment resources are lacking. Lack of radiotherapy facilities, for instance, prevents the use of breast conserving therapy (BCT) (6). Lack of available chemotherapy agents and infrastructure may make it impossible or unsafe to deliver cytotoxic chemotherapy in the adjuvant setting (7,8).

The constraint of limited resources generates tension for the clinician who is unable to offer “gold standard” treatments to any or all of the patients. This tension is amplified by the clinicians’ added responsibility of having to manage an inadequate, fixed amount of resources from an insufficient cancer program budget. Does

a clinician decide to treat ten patients with an older, less expensive chemotherapy regimen, or to treat two patients, with a newer, more efficacious but also more expensive regimen? For this reason, it is important to ask questions about which resources commonly applied in resource-abundant countries are actually needed in limited resource populations, where patients commonly present with more advanced disease at diagnosis.

RESOURCE ALLOCATION FOR DEVELOPING CANCER PROGRAMS IN LIMITED RESOURCE COUNTRIES

In most of the world, rational care requires rationing of resources. First attempts at establishing a cancer treatment program require treatment approaches that favor simple and highly efficacious therapies. Key treatment alternatives are discussed, considering both relative costs of the interventions, efficacy differences, and the expected availability of resources and personnel to implement programmatic policies. Flexibility in recommendations is important, because heterogeneity exists in social, economic and health system barriers to improvement among countries or even among regions of the same country, making universal recommendations impractical.

It would be easy to assume that methods of breast cancer diagnosis and treatment that have evolved in the wealth countries should directly trans-

late into application in countries with limited resources-low and middle-income countries. This assumption is not necessarily correct, and forgets the historic development of modern techniques. Some tools considered indispensable by Western standards are less useful in limited resource environments, because the more advanced stage of disease at diagnosis makes their findings less relevant. Standards of care are defined by the environment in which they are practiced. Similarly, the requirement for tools depends on the population in which the tools are being used. The degree to which specific technologies are useful depends in part on the prevalence and stage of disease at presentation.

THE NEED FOR CANCER CARE GUIDELINES ADDRESSING ISSUES IN LIMITED RESOURCE COUNTRIES

Early detection and comprehensive cancer treatment play synergistic roles in creating improved breast cancer outcomes. In economically developed countries, guidelines outlining optimal approaches to early detection, diagnosis and treatment of breast cancer are defined and have been disseminated (9-11). However, in 2002 the World Health Organization (WHO) pointed out that these guidelines have limited utility in resource-constrained countries (12). They fail to include implementation costs and provide no guidance as to how an existing

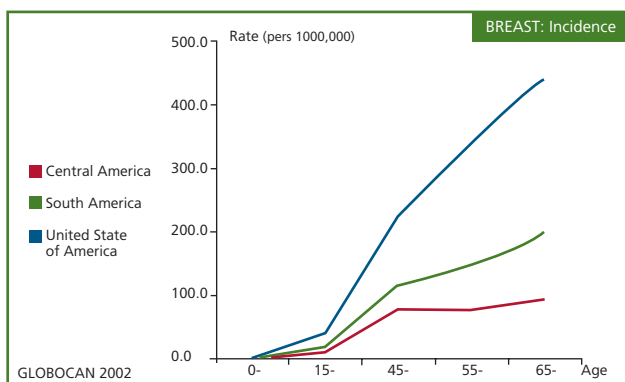


FIGURE 2a: Age-specific breast cancer incidence in the Americas, rate per 100,000 (age-standardized rate, world standard population).

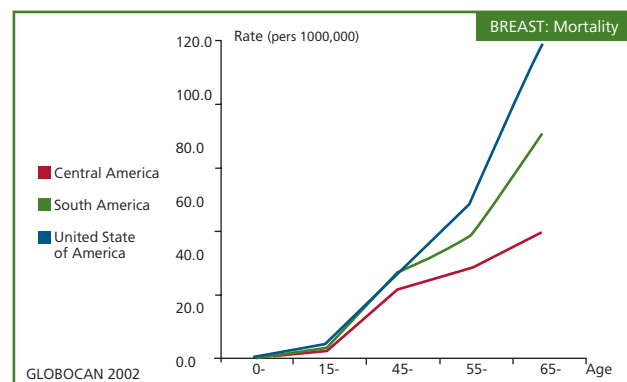


FIGURE 2b: Age-specific breast cancer mortality in the Americas, rate per 100,000 (age-standardized rate, world standard population).

system could be improved incrementally toward an ideal delivery system based on available resources.

The guidelines development process for countries with limited resources tries to offer a practical solution to the implausibility of applying breast cancer guidelines developed for high resource-countries to countries with limited resources. Guidelines from high-resource countries may be inappropriate for a number of reasons, including inadequate numbers of trained health care providers; inadequate diagnostic and treatment infrastructure such as pathology, pharmacy, infusion centers, and microbiology laboratories; lack of drugs; lack of radiographic film; and inadequate transportation systems. Thus, in a country with limited resources, many barriers lie between the average patient and the level of care dictated by guidelines applicable to high-resource settings.

THE BREAST HEALTH GLOBAL INITIATIVE

Established in 2002, the Breast Health Global Initiative (BHGI) created an international health alliance to develop evidence-based guidelines for countries with limited resources-low- and middle-income countries-to improve breast health outcomes. The BHGI serves as a program for international guideline development, and as a hub for linkage and alliance among clinicians and governmental health agencies and advocacy groups to translate guidelines into policy and practice. BHGI cosponsors, The Fred Hutchinson Cancer Research Center and the Susan G. Komen Breast Cancer Foundation, collaborated with 12 national and international health organizations, cancer societies and non-governmental organizations (NGOs) to hold two BHGI international summits in 2002 and 2005.

Based upon the consensus guideline model developed by the National Comprehensive Cancer Network (NCCN) (13), the first evidence-based guidelines were developed at the 2002 BHGI Global

Summit, "International Breast Health Care Guidelines for Countries with Limited Healthcare Resources" to define approaches by which countries of low and mid-level income can foster programmatic improvement in early detection, diagnosis and treatment of breast cancer. These guidelines, which were published in 2003, outline principles for programmatic improvement in breast health services as applied to low and middle income countries (7, 14-16).

At the 2002 Global Summit, two axioms were adopted as principles for guideline development. First, it was assumed that all women have the right to access to health care, but that considerable challenges exist in implementing breast health care programs when resources are limited. Second, it was assumed that all women have the right to education about breast cancer, but that it must be culturally appropriate, and targeted and tailored to the specific population. While some countries of the world may not fully accept these axioms, the panelists felt that adoption of these principles represented a key starting point in guideline development.

In countries with limited resources, most women have advanced or metastatic breast cancer at the time of diagnosis. Based upon evidence-based review and consensus discussion, four core observations were made in 2002:

- Because advanced breast cancer has the poorest survival and is the most resource-intensive to treat, efforts aimed at early detection can reduce the stage at diagnosis, potentially improving the odds of survival and cure, and enabling simpler and more cost-effective treatment.
- There is a need to build programs that are specific to each country's unique situation;
- The development of cancer centers can be a cost-effective way to deliver breast cancer care to some women when it is not yet possible to deliver such care to women nationwide;
- Collecting data on breast cancer is imperative for deciding how best to apply resources and for measuring progress.

2005 BHGI GLOBAL SUMMIT - SUMMARY OF UPDATED RESULTS

At the 2005 BHGI Global Summit, the guidelines were updated and expanded into a fully comprehensive framework to guide step-by-step improvement in care. The 2005 BHGI Guidelines provide a flexible framework for quality improvement in health care delivery based upon outcomes, cost, cost-effectiveness and use of health care services. Held from January 12-15, 2005, and hosted by the Office of International Affairs of the National Cancer Institute in Bethesda, Maryland, the 2005 BHGI Global Summit convened 67 international experts representing 33 countries and five continents to define specific "best practices with limited resources". The 2005 Guidelines addressed 1) Early Detection and Access to Care (17), 2) Diagnosis and Pathology (18), 3) Cancer Treatment and Allocation of Resources (8), and 4) Health Care Systems and Public Policy (19). The 2005 Guidelines define a comprehensive pathway for step-by-step quality improvement in health care delivery based upon outcomes, cost, cost-effectiveness and use of health care services.

To update and expand on the BHGI guidelines published in 2003, the 2005 BHGI panels outlined a stepwise, systematic approach to health care improvement. A tiered system of resource allotment was defined using four levels-basic, limited, enhanced, and maximal-based on the contribution of each resource toward improving clinical outcomes. During this analysis, a number of key points were identified and/or demonstrated:

- Early breast cancer detection improves outcome in a cost effective fashion assuming treatment is available;
- The effectiveness of early detection programs require public education to foster active patient participation in diagnosis and treatment;
- Clinical breast examination combined with diagnostic breast imaging (breast ultrasound with or without diagnostic

mammography) can facilitate cost-effective tissue sampling techniques for cytological or histological diagnosis;

- Breast conserving therapy with partial mastectomy and radiation requires more health care resources and infrastructure than mastectomy, but can be provided in a thoughtfully designed limited resource setting;
- The availability and administration of systemic therapy are critical to improving breast cancer survival;
- Estrogen receptor testing allows patient selection for hormonal treatments (tamoxifen, oophorectomy) which is both better for patient care and allows proper distribution of services;
- Chemotherapy, which requires some allocation of resources and infrastructure, is needed to treat node-positive, locally advanced breast cancers, which represent the most common clinical presentation of disease in low-resource countries;
- When chemotherapy is unavailable, patients presenting with locally advanced, hormone receptor negative cancers can only receive palliative therapy.

The 2005 BHGI Guidelines can be used to communicate programmatic needs to hospital administrations, government officials and/or health care ministries. It is the thesis of the BHGI that these works create a framework for change, by defining practical pathways through which breast cancer care can be improved in an incremental and cost-effective fashion (20). However, guidelines do not in-and-of themselves improve outcome for women. Implementation is the critical step by which the value of the guidelines may be measured. The results of pilot research projects and demonstration projects need to be studied and reported, both to determine the effectiveness of the guidelines, and to create evidence that will allow guideline implementation in other places. The next BHGI Global Summit, which will be held in Budapest, Hungary in October 2007, will be directed at defining next steps for programmatic implementation of BHGI Guidelines in limited re-

source countries. In this way, the BHGI endeavors to help women cope with and survive the ravages of the most common cancer and most common cancer killer among women.

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