INTRODUCTION

The global breast cancer problem cannot be solved in a single large step. It takes small incremental steps in different parts of the world at different times that allow advances to be made.

In 2002, with the co-sponsorship of the Fred Hutchinson Cancer Research Center and Susan G. Komen for the Cure®, we established the Breast Health Global Initiative (BHGI) in Seattle as an ongoing public-private global health alliance devoted to medically underserved women with a mission to develop, implement and study evidence-based, economically feasible, and culturally appropriate guidelines for low- and middle-income countries (LMCs) to improve breast health outcomes of women around the world.

BHGI Background and Significance

Over the past nine years and led by Dr. Anderson, the Breast Health Global Initiative has become a world leader in women's health initiatives through its pioneering development of the first comprehensive, resource-sensitive, evidence-based clinical Guidelines for International Breast Health and Cancer Control ("Guidelines") for breast health care delivery and cancer control in LMCs, intended to assist ministers of health, policy makers, health care institutions and others to prioritize resource allocation in breast care programs in LMCs.

The BHGI began with a basic premise of defining guidelines for “best practices with limited resources” for breast health and cancer control to improve breast cancer outcomes in LMCs, through the successful dissemination and implementation of BHGI Guidelines. The principal target is LMCs, although the same guidelines apply to underserved populations in high-income countries.

Through strategic global alliances with governmental, NGO, non-profit and for-profit health organizations (please refer to the last page of this report), the BHGI has been able to accomplish its innovative work through international collaboration and a biennial series of Global Summits.

The BHGI process of collaborative consensus guideline development created an international “hub” for organizational linkages and alliances, providing a common network for key groups to work together to advance systematic change, through interdisciplinary communication, cooperation and alliance-building via the BHGI Global Summits, the BHGI web-based portal (www.bhgi.info), and pilot research and demonstration projects between three key groups:

- Clinicians and governmental health care agencies
- Public health researchers
- Advocacy, non-governmental, non-profit and for-profit organizations.

From 2002-2008, through the BHGI biennial series of Global Summit(s) on International Breast Health (2002, 2005, 2007), the organization was able to develop a model approach for Guidelines to effectively detect, diagnose and treat breast cancer LMCs, producing three successful Global Summits on International Breast Health that produced three consecutive published editions of the Guidelines. The fourth Global Summit was held in June, 2010. Dr. Anderson was the scientific course chair for the series of Global Summits.

In 2009, and following the BHGI resource-stratified guideline approach (see below), the Asian Oncology
Summit held in April 2009 in Singapore developed 6 consensus statements on 6 different cancers commonly seen in Asia, publishing these results in The Lancet Oncology later that year. Dr. Anderson served as consultant to that international conference and served as second author on each consensus publication.

The Global Summit Series

SEATTLE, 2002 GLOBAL SUMMIT: Health Care Disparities
BETHESDA, 2005 GLOBAL SUMMIT: Resource Stratification
BUDAPEST, 2007 GLOBAL SUMMIT: Guideline Implementation
CHICAGO, 2010 GLOBAL SUMMIT: Optimizing Healthcare Delivery

GLOBAL SUMMIT 2002 (SEATTLE): HEALTH CARE DISPARITIES

GLOBAL SUMMIT 2005 (BETHESDA): RESOURCE STRATIFICATION

CONSENSUS STATEMENTS: Early Detection and Access to Care Panel; Diagnosis and Pathology Panel; Treatment and Resource Allocation Panel, Health Care Systems and Public Policy Panel, and individual articles relevant to breast health care and cancer control in LMCs.

GLOBAL SUMMIT 2007 (BUDAPEST): GUIDELINE IMPLEMENTATION

CONSENSUS STATEMENTS: Early Detection Panel; Diagnosis Panel; Treatment Panel, Health Care Systems Panel, focus group articles and individual articles relevant to breast health implementation in LMCs.

GLOBAL SUMMIT 2010 (CHICAGO): OPTIMIZING HEALTHCARE DELIVERY
The systematic analyses performed during this 3-day Summit were guided by the previously published BHGI resource-sensitive comprehensive breast care guidelines for early detection, diagnosis and treatment (The Breast, April, 2011 supplement).

The 2010 summit, the fourth in the biennial series, held through the support of the BHGI strategic global alliance of organizations, co-convened in association with the Latin American and Caribbean Society of Medical Oncology SLACOM (Sociedad Latino Americana y del Caribe de Oncologia), was led by Dr. Anderson and co-chair Eduardo Cazap, SLACOM president also president of the UICC-International Union against Cancer. As a result of the 2010 Global Summit, three consensus recommendations and 11 special reports addressing key issues of Optimizing Healthcare Delivery were developed and published in a supplement in the European journal The Breast (Global Breast Health Care: Optimizing Delivery in Low- and Middle-resource Countries, A Supplement of Consensus Statements & Special Reports to The Breast), in April 2011. This anthology is an important medical tool with practical, corresponding, evidence-based information, a rare resource for LMCs.

Also, as a result of the 2010 Global Summit, an article was developed for publication in The Lancet Oncology, Optimizing Breast Cancer Management in Low and Middle Resource Countries: Executive Summary of the Breast Health Global Initiative Consensus Recommendations 2010, published in April 2011.

UNIVERSITY OF WASHINGTON FACULTY PRESENTERS AND PANELISTS AT THE GLOBAL SUMMIT:

David B. Thomas, MD, DrPH, Senior International Research Advisor, Breast Health Global Initiative, Division of Public Health Sciences, Program in Epidemiology, Fred Hutchinson Cancer Research Center; Department of Epidemiology, School of Public Health and Community Medicine, University of Washington

Gabrielle M. Kane, MB EdD FRCPC, Senior Education Advisor, Breast Health Global Initiative, Fred Hutchinson Cancer Research Center; Associate Professor, Department of Radiation Oncology, Department of Medical Education and Biomedical Informatics, University of Washington School of Medicine; Medical Director, Residency Program Director, University of Washington Medical Center

Julie R. Gralow, MD, Professor, Medical Oncology, University of Washington School of Medicine, Director, Breast Medical Oncology, Seattle Cancer Care Alliance / University of Washington School of Medicine, Associate Member, Clinical Research Division, Fred Hutchinson Cancer Research Institute

Engelbertha (Beti) Thompson, PhD, Public Health Sciences, Full Member, Cancer Prevention Research Program, Fred Hutchinson Cancer Research Center; Professor, Health Services, School of Public Health, University of Washington

Peggy Porter, MD, Member, Divisions of Human Biology and Public Health Sciences, Fred Hutchinson Cancer Research Center; Head, Women’s Cancer Research Program: Breast Section, Fred Hutchinson/University of Washington Cancer Consortium; Professor of Pathology, University of Washington
BHGI Vision for Implementation: Strategic Implementation Science Projects

In 2009, with a shifting of focus from development and expansion of the Guideline for International Breast Health and Cancer Control to address effective implementation and integration of breast health care interventions described in the Guidelines, the BHGI began its next phase of innovation with a multi-year plan for Guidelines implementation, collaborating with global, regional and local organizations to pioneer the development of Learning Laboratories (LL) to define critical in-country methodology for establishing or expanding breast cancer care programs in low- and middle-resource countries (LMCs) through a diverse portfolio of implementation science projects.

The purpose of BHGI Learning Laboratories is to establish educational and research pilot projects that will form the basis for breast health program expansion in LMCs with a clear, compelling global vision to fulfill global health needs while creating opportunities for international collaboration. The first BHGI Learning Laboratory was established in Kumasi, Ghana, West Africa in 2009 with a program focus on development and testing of education and training modules that will serve as core training curricula.

An integral component of the BHGI implementation mission is to provide transformational collaborative opportunities and innovative 'system-based' solutions, designed to address specific issues of optimizing breast health care and cancer treatment in LMCs. Thus, in 2009, BHGI developed a technical foundation for international collaboration, dialoguing and information dissemination through www.bhgi.info, an interactive web-based portal. This virtual environment includes a "Breast Health-Common Interest Group" and an 'open access' searchable Literature Library populated with thousands of citations relevant to breast cancer in LMCs. As a knowledge broker, the BHGI virtual environment is a core resource for our work, enabling international research collaborations with colleagues around the globe.

Through a diverse portfolio of implementation science projects, a process of effective knowledge transfer to successfully achieve improved health outcomes, BHGI is working with international partners, clinical communities, public health researchers and advocacy groups, with a clear, compelling vision of global health improvement to take theory into practice.

The BHGI strategic Global Portfolio of Implementation Science Projects is outlined in an abbreviated list format below. The projects provide opportunities for collaboration with international partners with shared interests.

For detailed information about the BHGI and BHGI Global Portfolio of Implementation Science Projects, please visit www.bhgi.info.

Breast Health Global Initiative
GLOBAL PORTFOLIO OF IMPLEMENTATION SCIENCE PROJECTS

AFRICA

EDUCATION AND TRAINING:
BHGI LEARNING LABORATORY IN GHANA

Ghana Breast Cancer Alliance (GBCA) and BHGI medical training course through HopeXchange and HopeXchange Ghana Health Project

Initial funding for this project via HopeXchange, Susan G. Komen for the Cure® sub-award

Project Director: Benjamin O. Anderson, MD

Research Advisor: David B. Thomas, MD, DrPH, BHGI Senior International Research Advisor, Breast Health Global Initiative, Division of Public Health Sciences, Program in Epidemiology, Fred Hutchinson Cancer Research Center, Department of Epidemiology, School of Public Health and Community Medicine, University of Washington

Education Advisor: Gabrielle M. Kane, MB EdD FRCP, Senior Education Advisor, Breast Health Global Initiative, Fred Hutchinson Cancer Research Center; Associate Professor, Department of Radiation Oncology, Department of Medical Education and Biomedical Informatics, University of Washington School of Medicine; Medical Director, Residency Program Director, University of Washington Medical Center — PROJECT IN PROGRESS

Guideline implementation requires targeted physician education to address key care delivery issues in their specific practice environment. To develop and test education and training modules based on the BHGI clinical breast health and cancer control Guidelines that can be adapted and used by diverse communities, and to build medical capacity to address breast health and cancer control, the BHGI endeavors to develop comprehensive, context appropriate and Guideline-based postgraduate education modules on public health and patient education, early detection, pathology, radiology, surgery, radiation oncology and medical oncology, tailored to the resources available in low- and middle-resource countries. Through an international
collaborative effort, the Ghana Breast Cancer Specialty Training Course is the first educational course of its kind developed by the BHGI through establishment of the first BHGI Learning Laboratory (LL), in Kumasi, Ghana.

**Ghana Breast Cancer Specialty Training Course**
- Initial Site assessment: Kumasi, Ghana, August 2009
- BHGI Learning Lab Delivery of Breast Cancer Course #1: Kumasi, Ghana, January 2010
- BHGI Learning Lab Delivery of Breast Cancer Course #2: Accra, Ghana, August 2010

**Virtual University for Cancer Control and Regional Training Network (VUCCnet)**
International Atomic Energy Association’s Programme of Action for Cancer Therapy and BHGI partnership announced in 2010 — **Project in Progress**

The International Atomic Energy Association’s Programme of Action for Cancer Therapy (IAEA-PACT) and the BHGI agreed to join forces in June of 2010 to advance comprehensive cancer control in low-resource and middle-resource countries, a goal shared by both organizations. Through partnership, PACT and BHGI are now working together to curb the number of breast cancer deaths occurring in Africa through collaboration on several projects, including PACT’s new Virtual University for Cancer Control and Regional Training Network (VUCCnet), developed with the aim of helping to fill the human resources gap in Africa, by means including expanding the reach, progress and outcomes of the BHGI Learning Labs through detailed training on the applications of breast cancer medicine.

The VUCCnet, a distance-learning apparatus developed by PACT, will now incorporate the breast cancer curriculum jointly created by BHGI, HopeXchange and the Ghana Breast Cancer Alliance for Ghana. With the BHGI incorporation into the VUCCnet, the curriculum currently in use on a pilot project basis in Ghana will soon be accessible in three additional African countries, now in pilot phase for VUCCnet: Tanzania, Uganda and Zambia.
PILOT PROJECT: PILOT INTRODUCTION OF BREAST CANCER EARLY DETECTION PROGRAMS
(oportunistic screening), in Bogotá, Colombia

Funding for this project via Komen for the Cure® sub-award;
Principal Investigator: Raul Murillo, MD, National Cancer Institute, Colombia

Research Advisors: Benjamin O. Anderson, M.D.; David B. Thomas, MD, DrPH, Senior International Research Advisor, Breast Health Global Initiative, Division of Public Health Sciences, Program in Epidemiology, Fred Hutchinson Cancer Research Center, Department of Epidemiology, School of Public Health and Community Medicine, University of Washington – PROJECT IN DEVELOPMENT

PILOT PROJECT: READINESS ASSESSMENT FOR IMPLEMENTATION OF BREAST CANCER TREATMENT GUIDELINES,
in Bogotá, Colombia

Funding for this project via grant from Puget Sound Partners for Global Health;
Principal Investigator: Benjamin O. Anderson, MD of the University of Washington, coordinated through Raul Murillo, MD, National Cancer Institute, Colombia, in Bogotá, Colombia,

Research Advisor: David B. Thomas, MD, DrPH, BHGI Senior International Research Advisor, Breast Health Global Initiative, Division of Public Health Sciences, Program in Epidemiology, Fred Hutchinson Cancer Research Center, Department of Epidemiology, School of Public Health and Community Medicine, University of Washington – PROJECT ONGOING

PILOT PROJECT: LAEDI BRACA – LATIN AMERICAN EARLY DETECTION INITIATIVE FOR BREAST CANCER

Implementation of science research programs aimed at both the public sector and medical establishment to achieve down-staging of breast cancer; initial Pilot Project in Mexico in collaboration with the Mexico National Cancer Institute and the Seattle Cancer Care Alliance.
Principal Investigator: Gabriela Torres Mejia, Directora de Diabetes Mellitus y Cáncer Dirección de Investigación en Enfermedades Cardiovasculares y Cáncer Mexico

Director of Diabetes Mellitus and Cáncer, Direction of Investigation in Cardiovascular Diseases and Cancer; Co-PI: Benjamin O. Anderson, MD – PROJECT IN DEVELOPMENT

TRANSLATION: SPANISH, PORTUGUESE DUAL
TRANSLATION: Overview Article of the “Guidelines for International Breast Health and Cancer Control” (Cancer Vol 113/8 Oct 15-08)
Developed through BHGI collaboration with PAHO-Pan American Health Organization
Translation Available www.bhgi.info

GLOBAL PROGRAMS

SCIENTIFIC GRANT REVIEWS

Co-chaired by Benjamin O. Anderson, MD and Peggy Porter, MD, Member, Divisions of Human Biology and Public Health Sciences, Fred Hutchinson Cancer Research Center; Head, Women’s Cancer Research Program: Breast Section, Fred Hutchinson/University of Washington Cancer Consortium; Professor of Pathology, University of Washington

Reviews completed and pending, to date

Grant reviews (3): January 10-11, 2009; November 15-16, 2009; October 8-9, 2010 – COMPLETED
Grant review (1): Fall 2011 – UPCOMING

Funding provided for reviews completed and pending, to date, by the Glaxo SmithKline Oncology-Ethnic Research Initiative

External scientific grant reviews provide an essential service to organizations that fund research. Consequently, it is an aim of the Breast Health Global Initiative to be part of the process that encourages funding of international research. Through the Glaxo SmithKline Oncology (GSK) Ethnic Research Initiative (ERI), BHGI has organized and managed scientific reviews of ERI grant applications to identify viable international pilot projects for funding through the GSK/ERI funding mechanism.

Dr. Peggy Porter and I co-chair the BHGI Scientific Review Committee of the GSK ERI, which meets at the Fred Hutchinson Cancer Research Center in Seattle to review the grant applications. Dr. Porter is Full Member in the Divisions of Human Biology and Public Health Sciences, and Head of the Breast Cancer Research Program at the Fred Hutchinson Cancer Research Center and Professor in the Department of Pathology, University of Washington.
BHGI INFORMATICS PORTAL (WWW.BHGI.INFO):
BREAST HEALTH-COMMON INTEREST GROUP
Funding via grant from U.S. National Cancer Institute –
PROJECT ONGOING

An integral aspect of the BHGI’s implementation mission and implementation plan focusing on breast cancer early detection in low- and middle-resource countries (LMCs) is development of a virtual environment to facilitate transformational collaborative opportunities and innovative ‘system-based’ solutions to address specific issues of optimizing breast health care and cancer treatment in LMCs.

In collaboration with the National Cancer Institute (NCI), the Breast Health Global Initiative (BHGI) developed a technical foundation (www.bhgi.info), and launched the first “Breast Health – Common Interest Group” (BH-CIG), endorsed by the International Union Against Cancer (UICC). The CIG concept was introduced by the UICC Board of Directors to create a common venue for individuals and organizations dedicated to finding innovative solutions to critical cancer control issues. The aims of the BH-CIG are to support the global breast health community, facilitate collaboration on breast healthcare and cancer control in LMCs, and increase the UICC global network. Now functional and online, the BH-CIG provides a platform for information dissemination to researchers, healthcare providers, NGOs and healthcare ministries working in LMCs. The BH-CIG is a technical framework providing interactive modules:
• Member directory
• Searchable literature library
• Focus groups
• Secure member discussion
• Key links
• Information sharing areas
• Secure project workspaces.

Professionals from around the world can utilize this intuitive resource by logging onto www.bhgi.info and signing into the Common Interest Group. Registered users having an interest in breast cancer in LMCs will not only have access to resources on this topic, but will be able to interact with colleagues from around the world with similar interests.

MAKING LITERATURE ACCESSIBLE TO LOW- AND MIDDLE-INCOME COUNTRIES

The BHGI Literature Library has a free searchable literature database of articles relevant to breast healthcare and cancer control oriented to low- and middle-resource countries. The original library database of articles was assembled by the U.S. Centers for Disease Control & Prevention (CDC) through a generous grant provided by the Susan G. Komen for the Cure®. In addition to the CDC contribution, the International Network for Cancer Treatment and Research contributed articles to the literature database.

BHGI and the Office of International Affairs of the U.S. National Cancer Institute (NCI) jointly coordinate the use of the portal and the Breast Health-Common Interest Group, with oversight from the (UICC).

Currently, the BHGI is consulting with the Department of Global Health Distance Learning Unit of the I-Tech-International Training and Education Center on HIV, at the University of Washington, to develop a platform for Learning Management System (LMS) on www.bhgi.info.
FINANCIAL BENEFACTOR ORGANIZATIONS OF THE BHGI
Breast Health Global Initiative, 2010, 2011 strategic global alliance of governmental, NGO, non-profit and for-profit health organizations

FOUNDING ORGANIZATIONS
Fred Hutchinson Cancer Research Center / Susan G. Komen for the Cure®

2010 GLOBAL SUMMIT ON INTERNATIONAL BREAST HEALTH
“Optimizing Healthcare Delivery” was convened in association with the Latin American and Carribbean Society of Medical Oncology-SLACOM

SUSTAINING SCIENTIFIC ORGANIZATION PARTNER
U.S. National Cancer Institute, Office of International Affairs / Scientific Partners / American Society of Clinical Oncology / European School of Oncology / Pan American Health Organization / Sheikh Mohammed Hussein Al-Amoudi Center of Excellence in Breast Cancer / The Lancet Oncology, Elsevier / Corporate Partners / GE Healthcare / Sanofi Aventis

COLLABORATING ORGANIZATIONS
LiveSTRONG / U.S. Centers for Disease Control and Prevention / U.S. Department of Health and Human Services, Office on Women’s Health / U.S. National Cancer Institute, Office of Science Planning and Assessment / U.S. National Institutes of Health, Office of Research on Women’s Health

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