

Gynecologic Cancer InterGroup Cervix Cancer Research Network



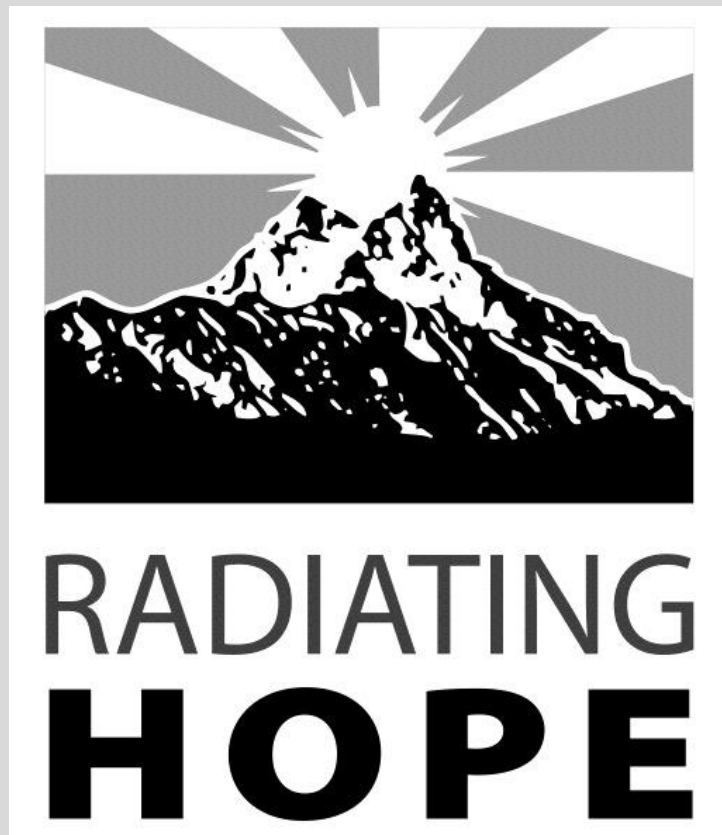
- Physician- **Dr. Brandon Fisher**
 - Born in Utah- USA
 - Radiation Oncology in Utah
- Philanthropist
 - President -RadiatingHope
 - Board of Directors - Above and Beyond Cancer
- Mountain climber
 - Weber County Search and Rescue
 - Rock and High Altitude climbing
- **Motto-** Our well-being is a product of meaning we create!



Gynecologic Cancer InterGroup Cervix Cancer Research Network



Provide and update radiation equipment in developing countries and advance cancer care in those countries.



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- Radiating **Hope** sites:



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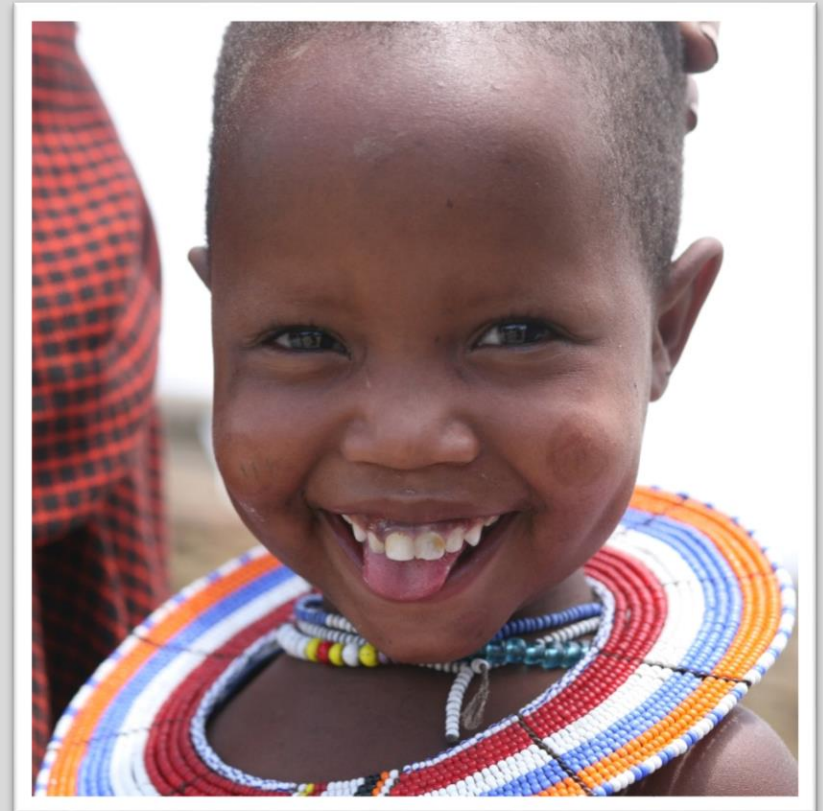


Cancers globally:

- 15+ million case in 2016
- 2/3 will occur in developing countries.

“It is not an exaggeration to say that cancer represents an imminent crisis for developing countries.”

-IAEA Director General Yukiya Amano -



Cervix Cancer Education Symposium, January 2017, Mexico

Ferlay J, Shin HR, Bray F, et al: Estimates of worldwide burden of cancer in 2008: GLOBOCAN 2008. Int J Cancer 127:2893-2917, 2010.

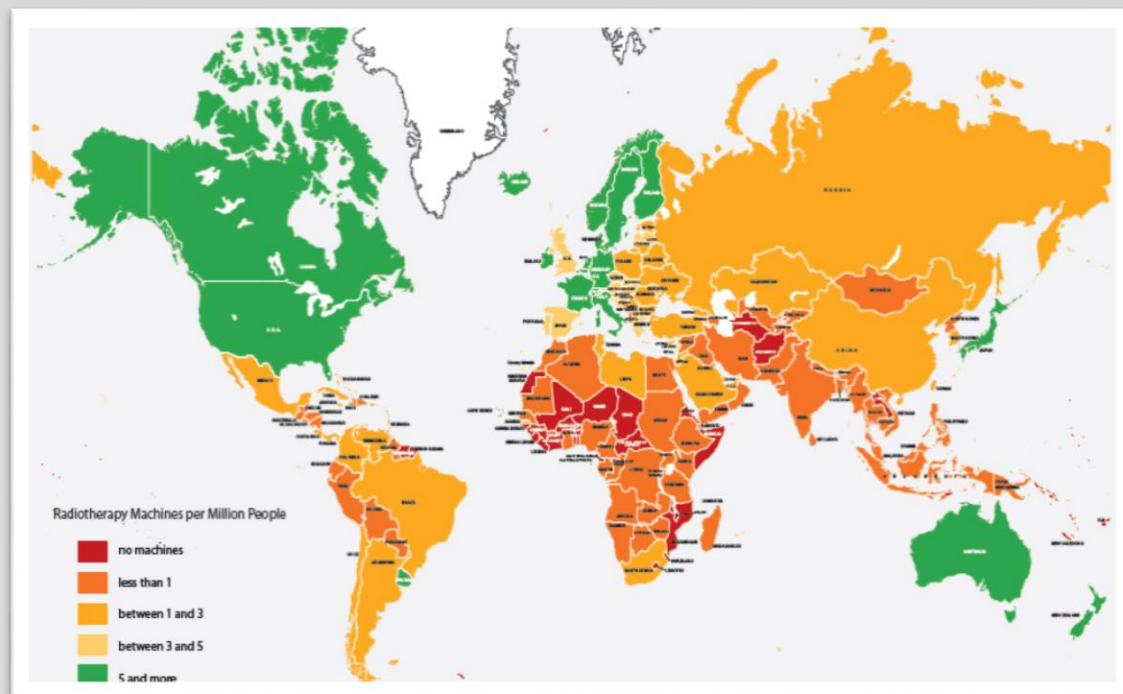
Farmer P, Frenk J, Knaul F, et al: Expansion of cancer care and control in countries of low and middle income: a call to action. Lancet 376:1186-1193, 2010.

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An Organization of International Cooperative
Groups for Clinical Trials in Gynecologic Cancers

- US:
 - Approximately 1 machine for 100,000 people
 - 2% of machines are cobalt
- Africa:
 - 1 machine for 4.8 million people
 - 48% of machines are cobalt
- South America:
 - 1 machine for 600,000 people
 - 30% of machines are cobalt
- Nepal:
 - 1 machine for 6 million people
 - 40% of machines are cobalt



—VIDEO: [Cancer care in Tanzania](#)

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RADIATING
HOPE

Cervix Cancer Education Symposium, Mexico



- **Global Oncology**
 - **Implementation of Cervical Brachytherapy in Developing Countries**
 - **Implementation of HDR brachytherapy in Senegal**





GLOBAL HEALTH

Radiation Oncology in Africa: Improving Access to Cancer Care on the African Continent

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GLOBAL HEALTH

Implementation of a High-Dose-Rate Brachytherapy Program for Carcinoma of the Cervix in Senegal: A Pragmatic Model for the Developing World

John P. Einck, MD,* Alana Hudson, MSc,[†] Adam C. Shulman, MS,[‡]
Catheryn M. Yashar, MD,* Mamadou M. Dieng, MD,[§] Magatte Diagne,
PhD,[§] Latifatou Gueye, MSc,[§] Fama Gningue, MSc,[§] Pape M. Gaye, MD,[§]
Brandon J. Fisher, DO,^{||} Arno J. Mundt, MD, FACRO, FASTRO,* and
Derek W. Brown, PhD, FCCPM[†]



HDR Brachytherapy in Senegal

- West Africa has one of the highest incidence rates of **carcinoma of the cervix** in the world.
- Senegal, a country of 13 million people, had a single 60-Cobalt teletherapy unit.
- No brachytherapy capabilities.

Goal: Radiating Hope- provide first brachytherapy machine.

- **Provide curative cervical cancer treatments.**



Institut Joliot-Curie Cancer Center in Dakar, Senegal

Implementation of HDR brachytherapy -Senegal, West Africa



The Institut Curie:

- 1 Cobalt machine
- 1 Conventional Simulator
- No HDR

Faculty:

- 2 Rad Oncs
- 3 physicists
- 3 therapists
- no nurse

The cancer center:

- treats 30-40 patients per day
- only treatment facility within a 500-km radius
- provides services to several neighboring countries.



Cervical Cancer in Senegal



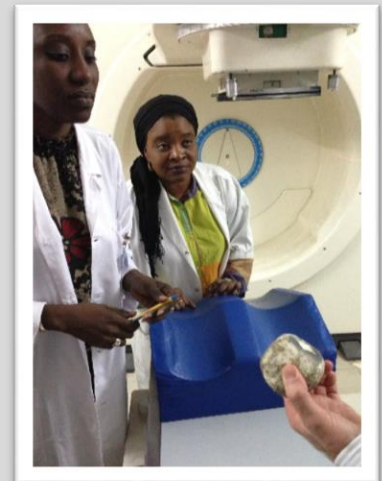
Waiting room in Senegal- 40% Cervical Cancer

**Most common cancer:
-40% cervical**

-Cervical cancer treatment in Senegal prior to HDR:
1) External beam, 45 Gy
2) Boost gross disease with external beam
3) Surgery

Outcomes:
• **Mostly Palliative**

Need HDR brachytherapy



Arrival of HDR machine



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- **End Result: Advancing Cancer Care Globally**
 - **Equipment donation**
 - Shipping
 - Installation
 - Training
 - Maintenance
 - **Symposium**
 - Training



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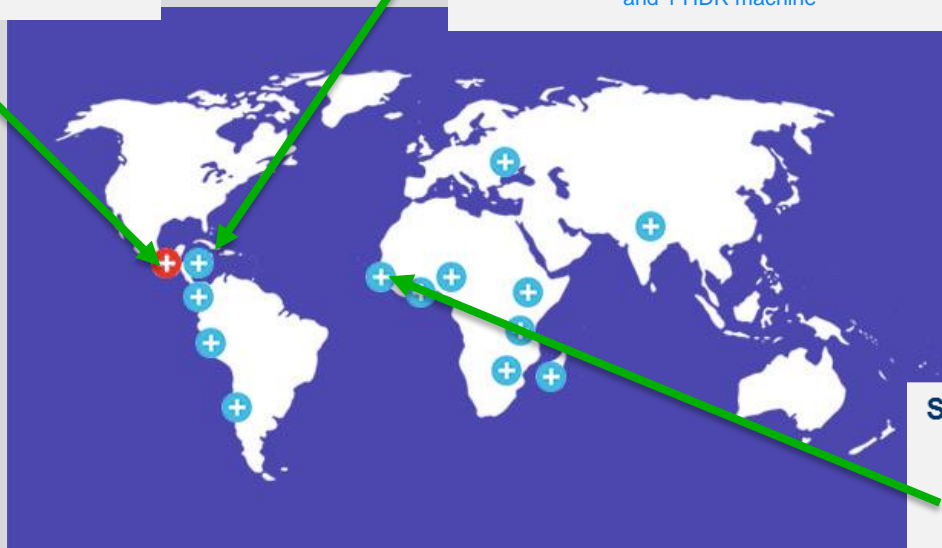
• Radiating Hope sites:

Guatemala—Instituto de Cancerologia (INCAN) in Guatemala City

- 16 million people
- Radiation Centers: 6
- Radiation Machines: 11
external beam machines (10
linacs and 1 cobalt)
- Brachytherapy: Mainly Cesium
and 4 HDR machines

Honduras- Centro Oncologico Hondureno SEDIMA in Tegucigalpa

- Population 8.2 million
- Radiation Centers: 5
- Radiation machines: 7 external
beam radiation machines
- Brachytherapy- Mainly Cesium
and 1 HDR machine



Senegal—Institut Curie, Dakar

- 13 million people
- Radiation Centers: 1
- Radiation Machines: 1
(1 cobalt)
- Brachytherapy: 1 HDR
machine

Gynecologic Cancer InterGroup Cervix Cancer Research Network



- Guatemala – Instituto de Cancerologia (INCAN) in Guatemala City
 - » 16 million people
 - » Radiation Centers: 6
 - » Radiation Machines: 11 external beam machines (10 linacs and 1 cobalt)
 - » Brachytherapy: Mainly Cesium and 4 HDR machines
- Site visit in 2016
 - » We initially met with Dr. Carlos Mauricio (Medical Director), Dr. Lily Ureta (Radiotherapy Department Head) and Kirk Najera (physicist)



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- **Site visit: Goals**
 - Improved/additional imaging equipment (Mammography, MR, CT)
 - Training for technologists (therapists) nurses (oncology specialty) and residents; stated desire for protocols
 - Removal of multiple defunct Co-60 sources
 - Additional Cs-137 applicators
 - Cerrobend (now); MLCs (future)
- **Liga Nacional contra el Cáncer**
 - Met with Vice President of, Vicky De Falla -Reiterated the need for additional mammography units.



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• How to get involved:

- Join the **Radiating Hope Society**
- Become a Radiating Hope 'Center of Excellence'
 - Rotation site
 - Equipment donation
 - Shipping
 - Installation
 - Training
 - Maintenance
- **Symposium**
 - Be a symposium site
 - Join our symposiums
 - Training



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Gracias



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