• Physician- **Dr. Brandon Fisher**
  • Born in Utah- USA
  • Radiation Oncology in Utah
• Philanthropist
  • President -Radiating *Hope*
  • 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:
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 -

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- **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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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
Brandon J. Fisher, DO, * Larry C. Daugherty, MD, † John P. Einck, MD, ‡ Gita Suneja, MD, § Mira M. Shah, MD, † Luqman K. Dad, MD, ¶ Robert W. Mutter, MD, # J. Ben Wilkinson, MD,** and Arno J. Mundt, MD†

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. Yaslar, 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.
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

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

Waiting room in Senegal - 40% Cervical Cancer

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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 Cancerología
(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 (cobalt)
  – Brachytherapy: 1 HDR machine
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- **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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- End Result: Advancing Cancer Care Globally
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    - Maintenance
  - Symposium
    - Training

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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