Productive Research Collaborations with Global Partners to Address Challenges in Low-Resource Clinics

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Disclosure

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Equipment and technical support provided by:

- Varian Medical Systems
- Mobius Medical Systems

Radiotherapy Resources in LMICs

Data from Datta NR, Samiei M, Bodis S. Radiation Therapy Infrastructure and Human Resources in Low- and Middle-Income Countries: Present Status and Projections for 2020. UR01RR160358-07.
Our Project

Create a fully automatic radiation therapy planning system that will be especially targeted for use in LMICs (low and middle income countries)

Goal of delivering high quality radiation therapy to a maximum number of patients with minimal training and expenditure

Sites: head and neck, breast (chest wall), cervix

Two Project Phases

Funded by an NCI UH2/UH3 grant

Phase 1 (UH2): Exploratory Phase
- 2 years
- System development
- Local, non-clinical testing at partner sites

Phase 2 (UH3): Validation Phase
- 3 years
- Full patient testing
- Expansion to other LMIC centers

PIs:
- Laurence Court, PhD
- Beth Beadle, MD, PhD

Our Collaborators

Manila, Philippines: Santo Tomas Hospital

Cape Town, South Africa: Tygerberg Hospital Groote Schuur Hospital
Importance of Partnership

- Insight into the ‘target audience’
- Avoid imposing our outsider ideas
- Understand their clinical challenges
- Start partnership early and continue through to end

Different Technologies


Huge variation in equipment and approaches

Slide courtesy of Laurence Court
Cancer Incidence

Sub-Saharan Africa

More Developed Regions

http://globocan.iarc.fr


Stage of initial diagnosis of breast cancer

<table>
<thead>
<tr>
<th>Region</th>
<th>Country – Population</th>
<th>Stage I or localized</th>
<th>Stage III/IV or regional–metastatic</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>United States</td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td>Africa</td>
<td>South Africa – Blacks</td>
<td>5%</td>
<td>95%</td>
</tr>
<tr>
<td></td>
<td>South Africa – Whites</td>
<td>31%</td>
<td>69%</td>
</tr>
<tr>
<td>Asia</td>
<td>India – Mumbai</td>
<td>8%</td>
<td>92%</td>
</tr>
<tr>
<td></td>
<td>India – Trivandrum</td>
<td>4%</td>
<td>96%</td>
</tr>
<tr>
<td>Latin America</td>
<td>Mexico</td>
<td>14%</td>
<td>86%</td>
</tr>
</tbody>
</table>

Finding and Establishing Partnerships

- Participate in global health activities
- Use your institution’s network
- Cold call or e-mail
- Talk to colleagues
- Visit prospective partners
- Get funding

Get Funding

- Our grant: UH2/UH3: Cancer Detection, Diagnosis, and Treatment Technologies for Global Health
- Open now: PAR-18-602 (R41/42): Cancer Prevention, Diagnosis and Treatment Technologies for low-resource settings (STTR = Small Business grant)
- Due soon: PAR-18-242 R21 - Mobile health: Technologies and outcomes in LMICs
- Grants.gov, Industry grants, and more

Communication

- Key to success/Potential pitfall
- Ease of communicating is important
- Regular meetings at 1st, then as needed
- Video meetings are best
In-Person Visits

Focused attention
Team building
Reinforces commitment
Nature of the visits progress along with the projects

IRB Protocols and Data Transfer Agreements

Start early!
Inquire early on about human research policies of a particular country
• Could be very strict, even a deal-breaker
Institutions within a country can vary
Great task for in-person visits

Be Respectful and Aware

DO:
• Treat your partners as equals
• Respect their expertise
• Have a long-term commitment
• Read the literature
• Respect their culture

DON'T
• Have a know-it-all attitude
• Be a "medical tourist"
• Assume you are the first
In summary...

Do global health research!
Establish global partnerships
Share your experience
Think about scaling up
Make it sustainable

If you want to go fast
go alone.
If you want to go far
go together.

African Proverb

Special thanks to all our collaborators!

Thank you

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Contact