The International Cancer Expert Corps (ICEC): mission, progress, challenges

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- No financial conflict of interest
- ICEC is a not-for-profit 501 (c) 3, NGO. I serve as Senior Scientific Advisor. No compensation
- **Views expressed are those of the presenter.**
- No endorsement by NCI, NIH, ASPR, DHHS. No endorsement by any U.S. Government agencies has been given or inferred
Problem we are addressing:
Global shortage of cancer care as an approach to NCDs
Spectrum of cancer care with the need/metric for radiation therapy

1. Big and growing LMIC burden of cancer →
2. Huge gap in care, including essential radiotherapy →
3. Inadequate investment in NCDs
Cancer care continuum: Taking care of cancer also addresses NCDs and Infectious diseases

1. Prevention, screening, diagnosis (pathology, diagnostic imaging)

2. Treatment- surgery, radiation, chemotherapy: Multi-modality expertise

3. Sustainable care- access, public health; Centers of Excellence

Trained workforce- capacity, capability

Quality assurance- technology and technique

Cost, affordability Healthcare system

Strengthened healthcare infrastructure
Vision

ICEC envisions a world in which everyone has access to interventions to prevent and treat cancer and its symptoms using high-quality best practices for the local circumstances.
ICEC Paths

ICEC Mentoring Model

- **Establish Hubs of expertise**
  - Academic medical centers/universities
  - Private practices
  - ICEC Central Hub

- **Populate them with Expert Mentors**
  - Affiliated with a university/practice or ICEC Central hub
  - Individual physicians and other necessary allied healthcare workers
  - Global Health track practitioners
  - Retirees: bringing altruism back to medicine

- **Identify Centers and Associates**
  - Centers: Clinics/hospitals/ and other care delivery sites in underserved areas
  - Associates: Physicians/allied health care workers seeking mentoring/education to guide cancer care to global standards

ICEC Innovation: New Equipment Design

- **Radiation therapy poses unique challenges in LMICs**
  - Radioactive Cobalt-60 machines present possible environmental and security risks and lack sophistication needed for modern radiotherapy
  - Need for **practical, accessible and affordable technology resources** (including radiation equipment) exist to deliver necessary and high quality cancer care

- **ICEC**
  - **Serve as a convener** to engage stakeholders to promote innovation in new technologies, such as the design of a novel linear accelerator for challenging environments
ICEC: sustainable mentorship model
Career path **essential**: **breadth of expertise** for cancer care

1. Multiple sectors, including academia →
2. Bona fide metrics and accomplishments →
3. Sustainable improvements in healthcare

**ICEC Expert Panels:**
Broad spectrum of expertise for complex systems solution

<table>
<thead>
<tr>
<th>Medical</th>
<th>Science, non-MD</th>
<th>Support</th>
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<tr>
<td>Radiation oncologists</td>
<td>Prevention and screening</td>
<td>Educational tools</td>
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<td>Medical oncologists</td>
<td>Epidemiologists</td>
<td>Finance</td>
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<td>Pediatric oncologists</td>
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<td>Surgical oncologists</td>
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<td>Nurses</td>
<td>Basic &amp; translational scientists</td>
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<td>Pathologists</td>
<td>Treatment guidelines</td>
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<td>Radiologists</td>
<td>Statisticians</td>
<td>Social workers</td>
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<td>Surgeons - general</td>
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<td>Surgical subspecialists</td>
<td>Regulatory Affairs specialists</td>
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<td>Pharmacologists</td>
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<td>Psychologists</td>
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Twinning Projects

Developing global health expertise

Program support
Supporting “Twinning projects” and the draft 5-Step Plan

1. Need formality, SOPs and metrics for assessing progress and for funders/reviewers.

2. This is step toward LMICs being part of global oncology- work with IAEA, ASTRO, ESTRO, etc

3. Build together with interested partners, minimize duplication of efforts and try to avoid “donor dilution” (Opinion: Big solution can be lost by too many small (very nice but separate) projects.

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
<th>Step 4</th>
<th>Step 5</th>
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<tbody>
<tr>
<td>Associates and Centers Establish ICEC Relationship</td>
<td>Finalize ICEC Expert Commitments and Initiate Mentoring</td>
<td>Demonstrate Protocol-based Patient Care; Join Global Oncology Activities</td>
<td>Becoming a Recognized Regional Cancer Center</td>
<td>Approaching Independence; Progress to Become an ICEC Hub</td>
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Initial pilot projects, interested experts, early career leaders are at work and committed....
Global partnerships: **interdisciplinary**
Gov’t, NGO, industry, healthcare, economics, societies, individuals

Collaborators, partners, investors, supporters welcome:
www.iceccancer.org

Think globally, mentor locally.