

BrachyNext



Working Together to Shape the Future of
Brachytherapy

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The International Cancer Expert Corps*: A Peace Corps for Oncology

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The International Cancer Expert Corps: a unique partnership to addressing cancer care for the underserved worldwide

**BrachyNext
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Disclosures

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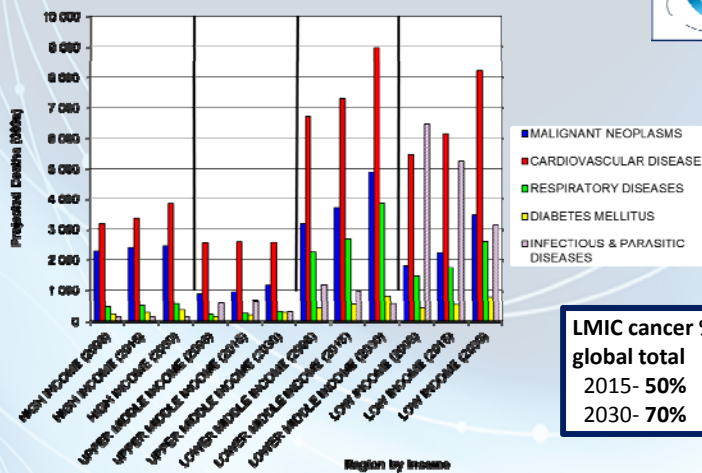
Partnering to transform global cancer care

Non-governmental organization (NGO)



WHO Global Burden of Disease

http://www.who.int/healthinfo/global_burden_disease/projections/en/index.html



LMIC cancer % of global total
2015- 50%
2030- 70%

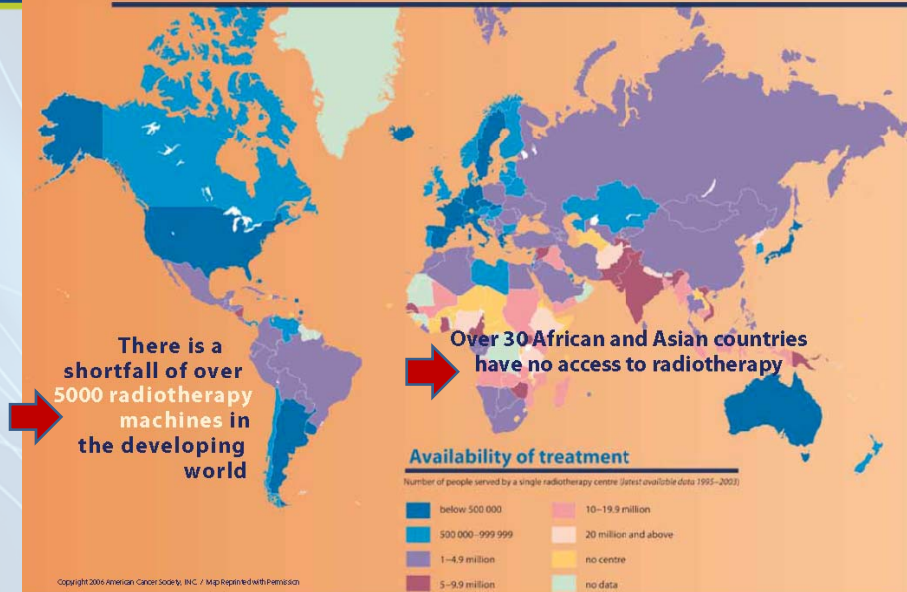
DIRAC (Directory of Radiotherapy Centres) – IAEA

<http://www-naweb.iaea.org/nahu/dirac/>

Region	Countries	RT Centers	Clinical Accel.	Co60	CT	Simul.	TPS
Central Africa	4	7	8	8	5	5	10
East Africa	4	8	4	8	3	4	9
East Asia	7	1934	2051	589	1316	1554	2105
Mexico and Central America	7	111	93	75	30	43	107
Middle East	14	188	288	102	89	87	225
North America	2	2787	4085	158	446	911	326
South Asia	5	360	212	381	59	95	285
Southeast Asia	8	129	159	82	4062	48	104
Western Europe	20	1037	2542	105	816	641	1585



ACCESS TO RADIOTHERAPY: Radiotherapy is an essential part of the treatment of cancer



The Generic Challenges in Moving to Just Health Care: “Public Health Oncology”*

- Weak underlying health systems
- Financing- for infrastructure and staff
- Transparency
- Governance (selecting right people)
- Workforce (manpower)- capacity and capability
- Incomplete knowledge about diseases, patient/host factors and cost-effective interventions
- Sustainability
- “Brain-drain” from resource-poor to resource-rich
- Top-down approaches from developed nations often not applicable to the local situation



*Love, R. Ann Oncol 23:3040- 2012



MISSION of ICEC

The mission of the International Cancer Expert Corps (ICEC) is to reduce mortality and improve the quality of life for populations with cancer in low- and middle-income countries (LMIC) and regions worldwide.

The ICEC will address this mission through a mentoring network of cancer professionals who will work with local and regional in-country groups to develop and sustain expertise for better cancer care.



Goals (1)

- **Build capacity and capability** to reduce the burden of cancer through mentoring local champions so they can conduct stage- and region-appropriate protocols
- **Mentoring** - some on-site visiting, mostly through weekly teleconferencing using carefully crafted “bottom up/top-down” multi-year plans so Centers in LMICs could join the international community of *clinical and translational research*



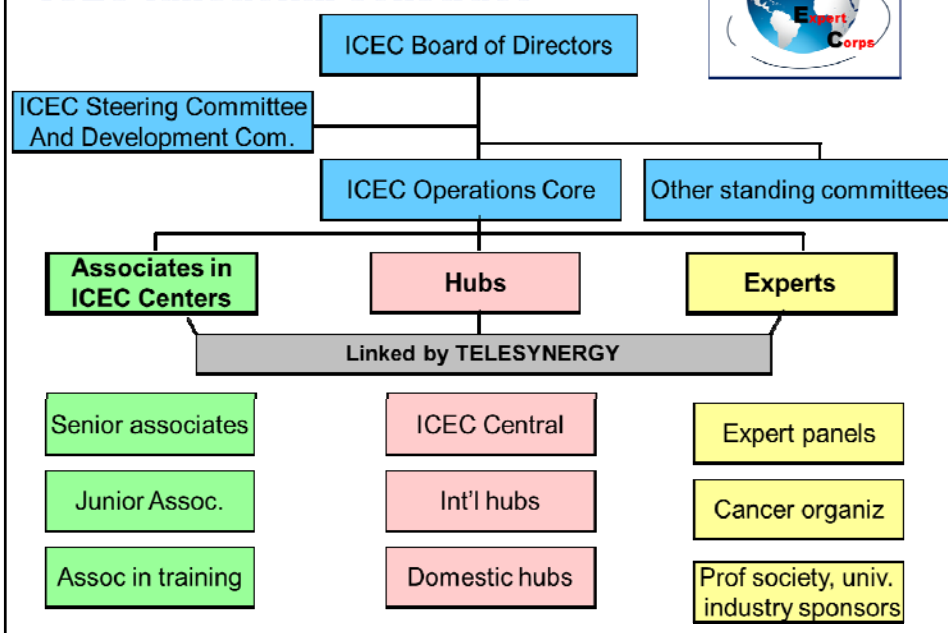


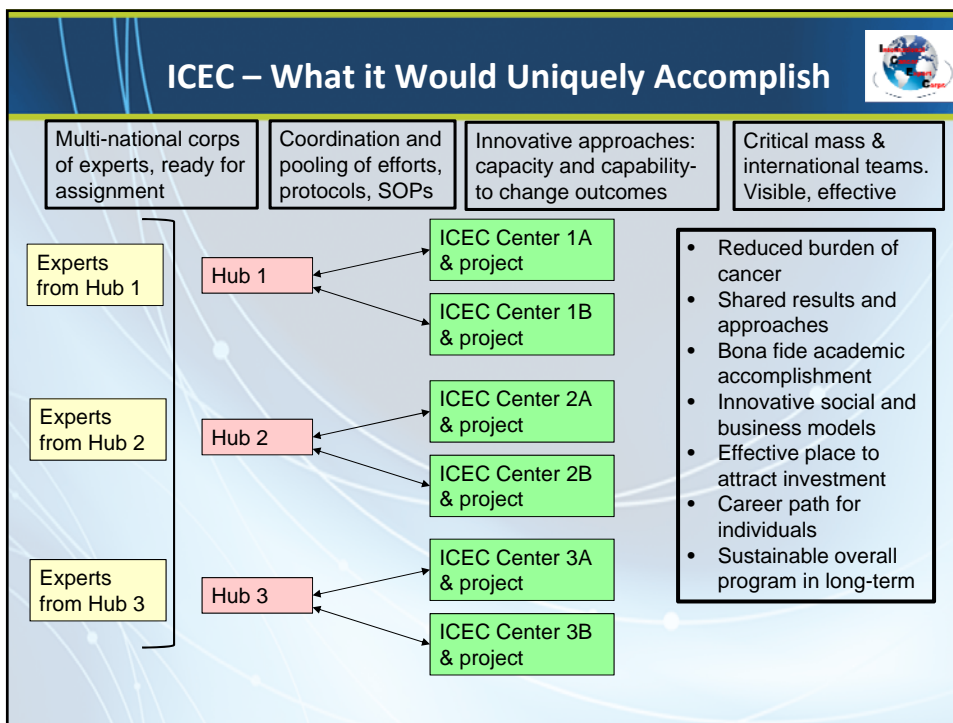
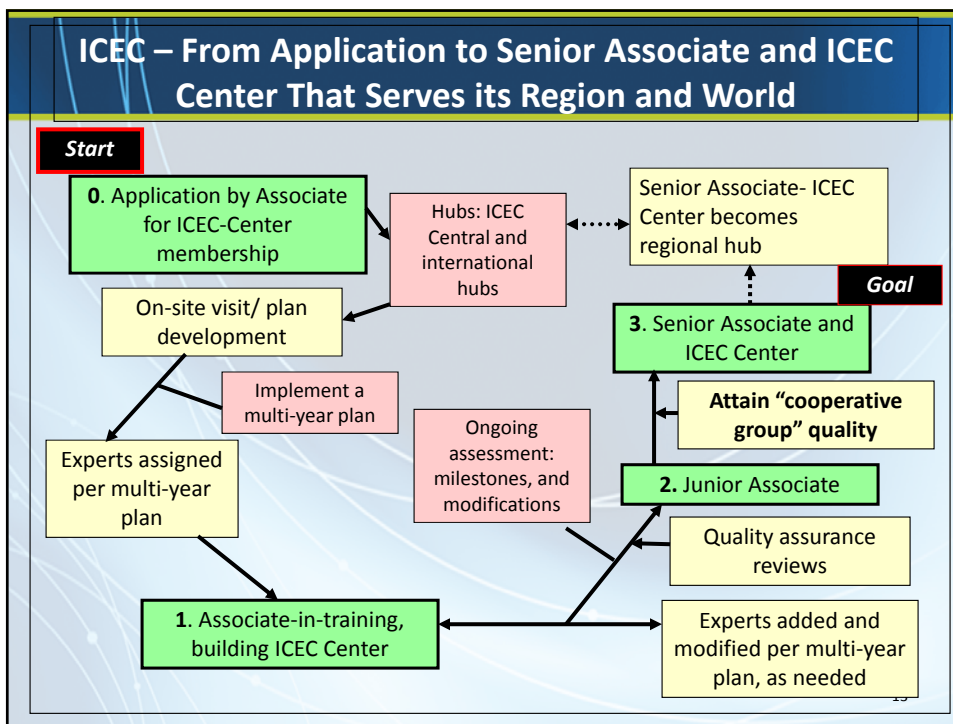
Goals (2)



- **Implementation science:** Innovative approaches to cancer health disparities built on person-to-person sustainable mentoring and shared among projects
- **Cultural change, big vision, and sustainable accomplishments:** Multinational partnership would create a *critical mass and spectrum of experts*, increase the likelihood of success, allow rapid response to opportunities, and demonstrate the value of altruistic service

ICEC functional construct







Project Evolution



- **Start with and build on ongoing projects** of initial Hubs (1-2 per hub) and *provide multi-national mentors* and some support for Associate
- **Focus on a few diseases and expert panels-** build capacity and experience. Build in some onsite visits- and partnership building- but time will be primarily weekly QA – teaching rounds
- **Education and training-** build from ongoing programs; add sustainability concepts
- **Pilot career path** with a few universities

ICEC Expert Panels: Public Health Oncology With Broad Spectrum of Expertise



Medical

- Radiation oncologists
- Medical oncologists
- Pediatric oncologists
- Nurses
- Pathologists
- Radiologists
- Surgeons
- Surgical subspecialists
- Pharmacologists
- Psychologists
- Public health

Science, non-MD

- Prevention and screening
- Epidemiologists
- Medical physicists
- Technologists
- Basic & translational scientists
- Treatment guidelines
- Statisticians
- Social scientists
- Regulatory Affairs specialists

Support

- Educational tools
- Finance
- Clinic administration
- International policy
- Patient advocacy
- Economists
- Social workers
- Communications
- Cancer survivors
- Information tech (IT)
- Data-management
- Legal



Underpinning – Ideas



Leading people and concepts

- **Nigel Crisp** “Turning the World Upside Down”- what developed world can learn (and do)
- **Clayton Christensen**- “Innovator’s Prescription”- healthcare delivery models (“Innovator’s DNA”-disruptive innovators)
- **Health-related NGOs**- e.g., Doctor’s without Borders, Partners-in-Health, etc: ICEC can add model of sustainability

Addressing challenges

- Can you treat cancer for a dollar a day? (NEJM, 2010 D. Kerr)
- An international service corps for health (NEJM, 2010, Farmer)
- Public health oncology (Ann Oncol, 2013, Love)
- Non-communicable diseases (NEJM, D. Hunter, 2013)
- Health care systems in LMICs (NEJM, A. Mills, 2014)

Creating a Novel Approach to a Problem That Is Often Considered “Too Hard”



- It is about people - many want to do this but can’t due to institutional priorities and values
- Critical mass- more efficient, effective and visible-service, shared efforts
- Broad range of experts working together
- Sum is greater than parts- bring world together for some common good against a common enemy
- *So successful no one would want it to fail!*
- **It can be lead by radiation oncology**



The Benefits to *Science and Scientists & Clinicians*

- **Implementation science** - *no one has solved this problem*. Complex system- collaboration among countries and disciplines
- **Translational research**- studying unique tissue sets that benefit people and science
- **Economics**- develop sustainable solution through new models and large network
- **Alpha, Omega and Psi (sustain) of careers**- inspire and sustain newcomers (α), utilize expertise of retirees as mentors and teachers (Ω) and create sustainable career path (ψ)



ICEC: Current Steps

ICEC- Non Gov't Organization, not-for-profit [IRS 501 (c) 3]

- Each country would work within its financial and tax structure

NCI & NIH and US academia

- Working with Center for Global Health (in-kind help, no USG \$)
- Working with Consortium of Universities for Global Health

Partnerships and funding

- Seeking \$1-2M per year (including committed in-kind time): infrastructure ~\$2M= 600k; \$1.4 M for ~5 FTEs of Experts (using maximum NIH FTE rate, and individual experts 20% time commitment.)
- Begin with ~6 pilot projects and 6-8 Expert panels across ICEC
- Approximate cost per mentored ICEC Center- ~\$500k/year (but much will likely be in-kind and "matching 10% for 10%")

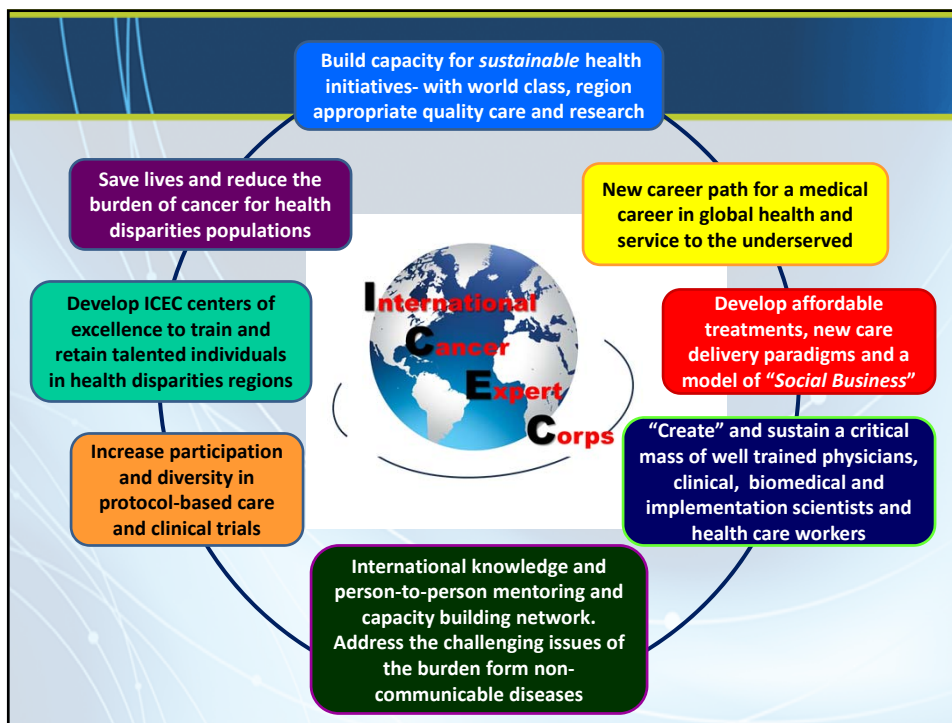




Project Evolution



- **Hub committee**
- **Expert panels**
 - Focus on a few diseases
 - Career path & metrics
- **ICEC Centers and Associates**
- **Education and training**
- **Development and outreach**
- **Information tech and info management**
- **Industry-technology**



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Purposing to transform global cancer care

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*Non-governmental organization (NGO)