

Establishing global health cancer care partnerships across common ground: Building on nuclear security, cancer disparities, education and mentorship.

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- ICEC is a not-for-profit 501 (c) 3, NGO. No compensation.
- **Views expressed are those of the presenter !!!**
- No endorsement by NCI, NIH, ASPR, DHHS or any other U.S. Government agencies has been given or inferred

Outline & key points

- Global health receives far more words than investment
- Global burden of disease – infectious diseases and non-communicable diseases: partners not competitors
- Commonality of need – global health, global security and altruism/human service
- Gap in investment in NCD's
- Things that Gov't and NGO's can and can't do well
- ICEC- an idea into a model and into an entity
- Words into action
- Co-conspirators welcome

Defining the Problem:

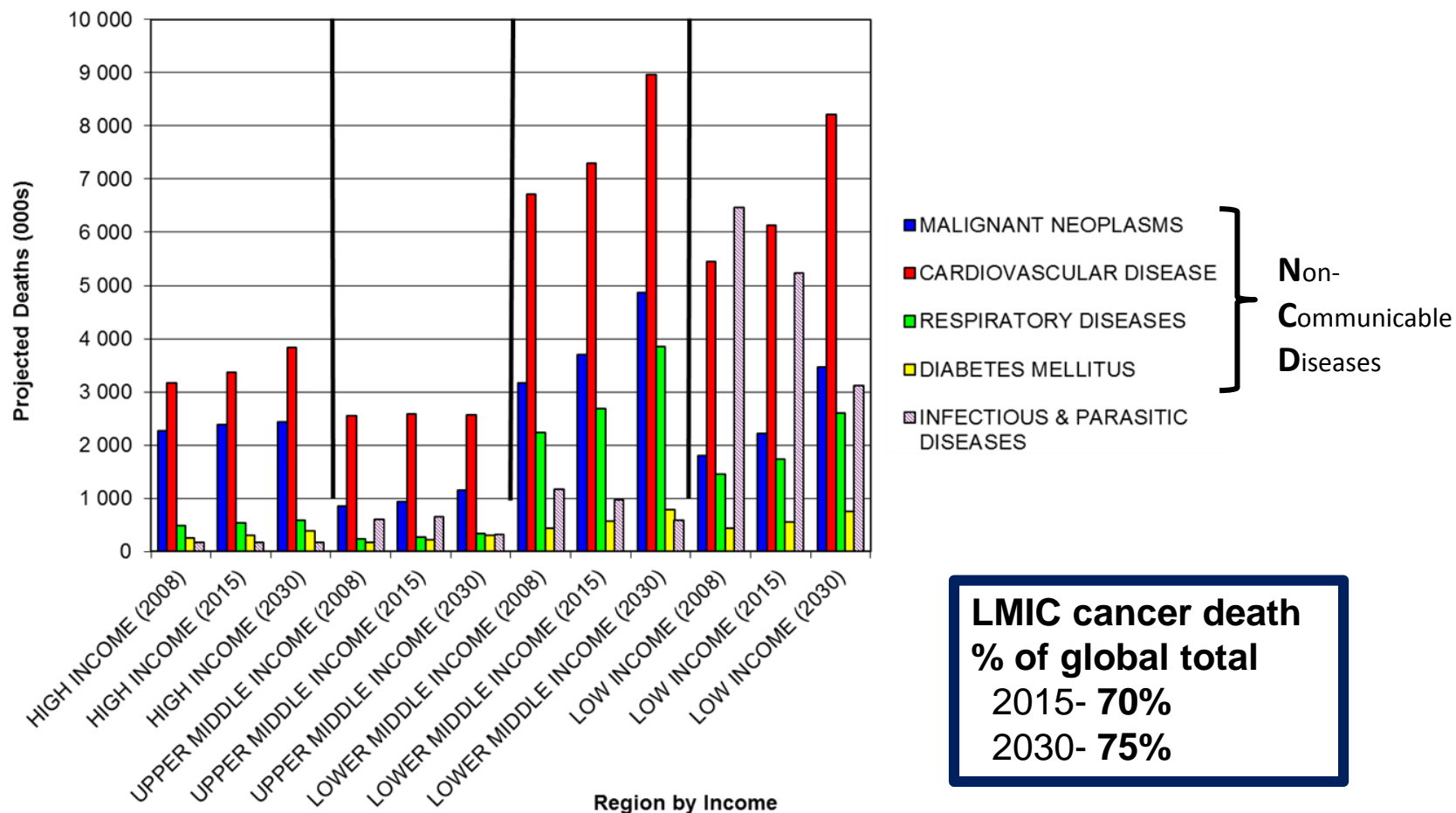


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WHO Global Burden of Disease

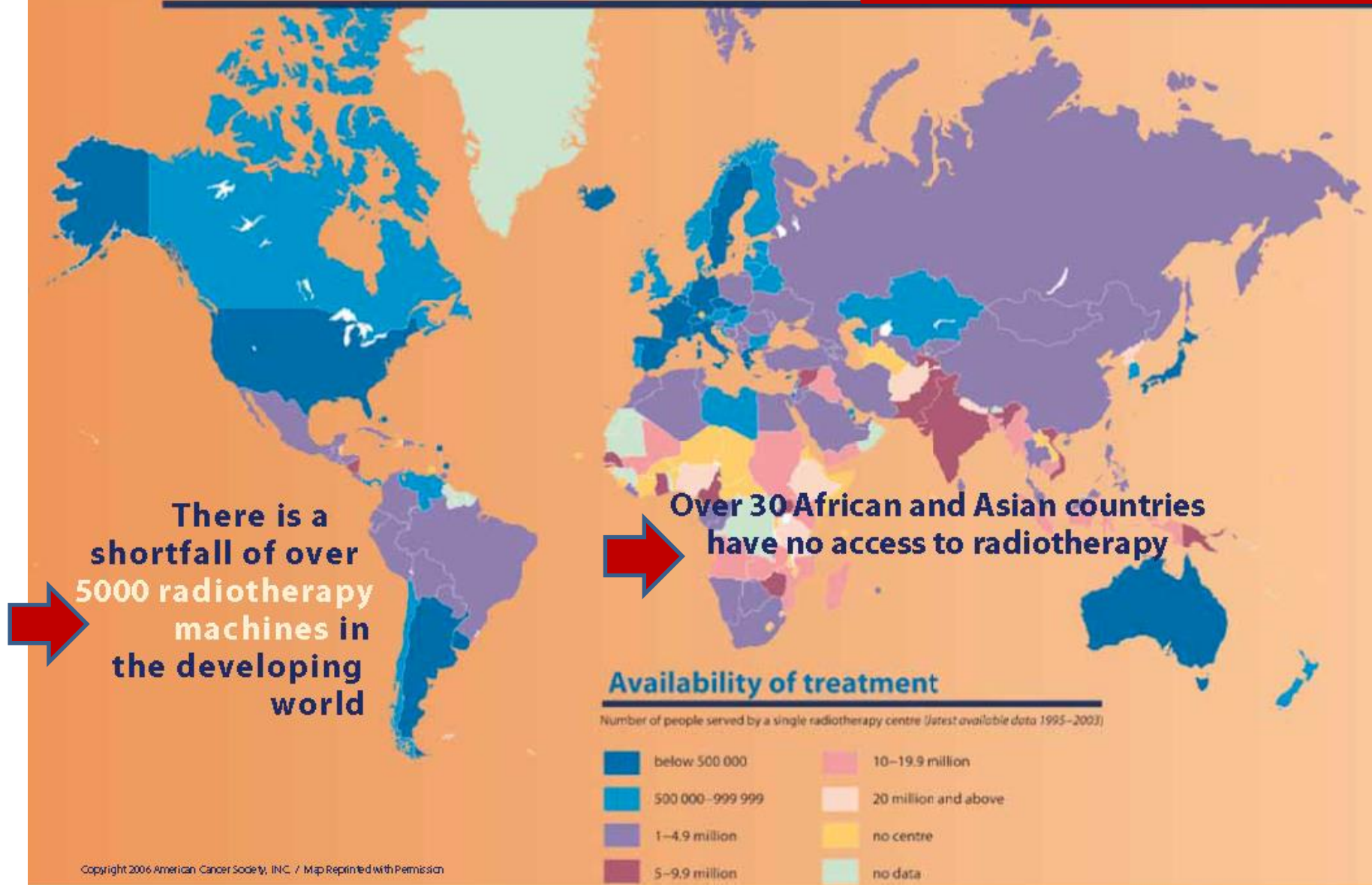
http://www.who.int/healthinfo/global_burden_disease/projections/en/index.html



Defining the problem for example

ACCESS TO RADIOTHERAPY:

Radiotherapy is an essential part of the treatment of cancer





World Health
Organization

Health and human rights

Fact sheet N°323

December 2015

Key facts

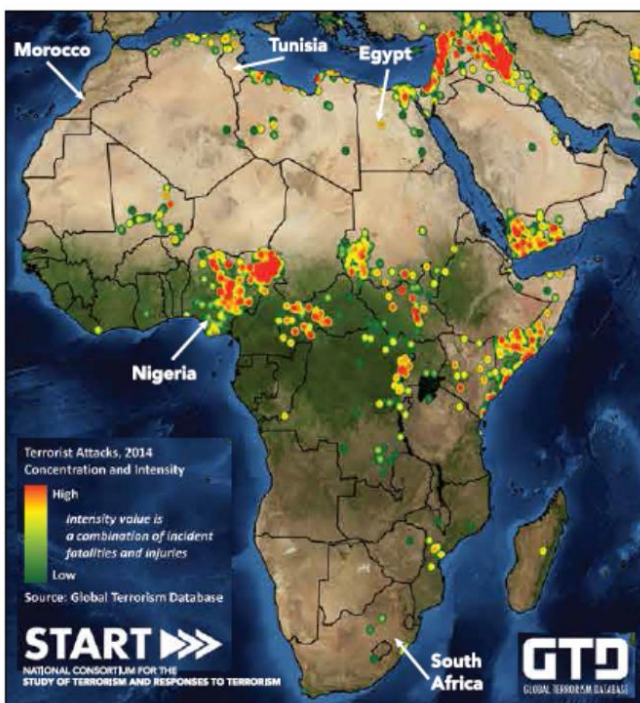
- The WHO Constitution enshrines “...the highest attainable standard of health as a fundamental right of every human being.”
- The right to health includes access to timely, acceptable, and affordable health care of appropriate quality.
- Yet, about 100 million people globally are pushed below the poverty line as a result of health care expenditure ever year.
- Vulnerable and marginalized groups in societies tend to bear an undue proportion of health problems.
- Universal health coverage is a means to promote the right to health.



	LINAC	Teletherapy Cobalt-60	Brachytherapy Equipment					TOTAL
			Cobalt-60	Cs-137	Ir-192	I-125	Sr-90	
South Africa	70	10	5	0	13	4	1	103
Egypt	43	21	0	5	7	0	0	76
Morocco	30	2	4	0	2	0	0	38
Algeria	9	10	0	7	0	0	0	26
Tunisia	7	10	0	4	1	0	0	22
Nigeria	8	5	1	4	1	0	0	19
Sudan	2	6	2	1	0	0	0	11
Kenya	6	2	0	0	3	0	0	11
Ghana	1	3	0	3	0	0	0	7
Libya	1	4	0	1	0	0	0	6
Zimbabwe	4	0	0	1	0	0	1	6
Tanzania	0	2	2	0	0	0	0	4
Namibia	0	2	0	1	1	0	0	4
Mauritius	1	2	0	1	0	0	0	4
Uganda	0	1	2	0	0	0	1	4
Madagascar	2	1	0	1	0	0	0	4
Angola	4	0	0	0	0	0	0	4
Cameroon	0	1	0	2	0	0	0	3
Ethiopia	0	2	0	0	0	0	0	2
Mauritania	1	0	0	0	1	0	0	2
Zambia	1	1	0	0	0	0	0	2
Senegal	0	1	0	0	1	0	0	2
Botswana	1	0	0	0	1	0	0	2
Mali	1	0	0	0	0	0	0	1
TOTAL	192	86	16	31	31	4	3	363

Global terrorism--

co- location of medical
radiation sources



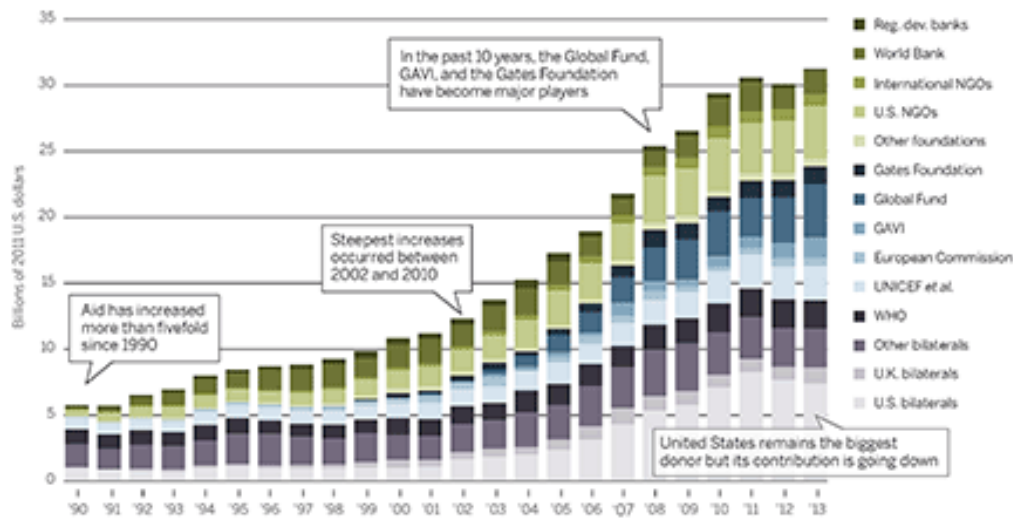
After the windfall:

Plateauing budgets for global health sharpen the focus on what really works

M. Enserink, Science 354:1258, 2014

The end of the surge

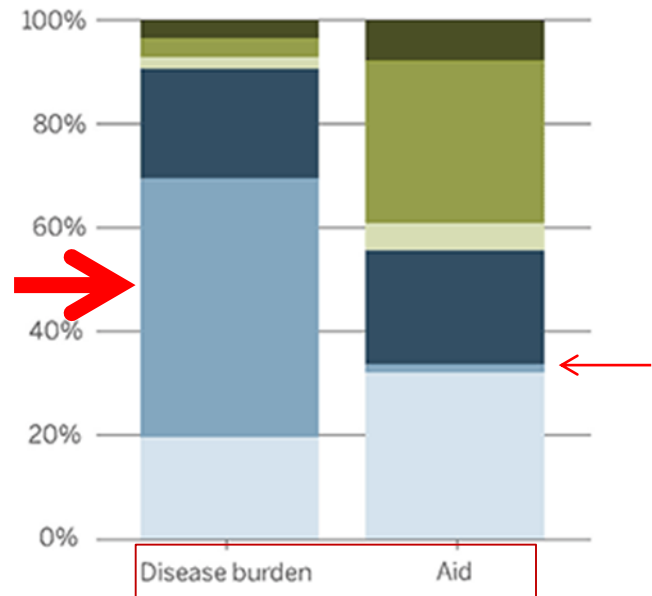
Aid for global health, by channel



Source: Institute for Health Metrics and Evaluation

Skewed funding For NCDs

The diseases that cause the highest burden—expressed in disability-adjusted life years, or DALYs—don't get most of the international largesse. In 2010, HIV/AIDS



Source: Institute for Health Metrics and Evaluation

Government

There are things
each can and
cannot do (well)

Non-Government Organizations (NGO)

Firewall - outside
activity



National Institutes
of Health



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Partnerships forming



U.S. DEPARTMENT OF
ENERGY



IAEA

International Atomic Energy Agency

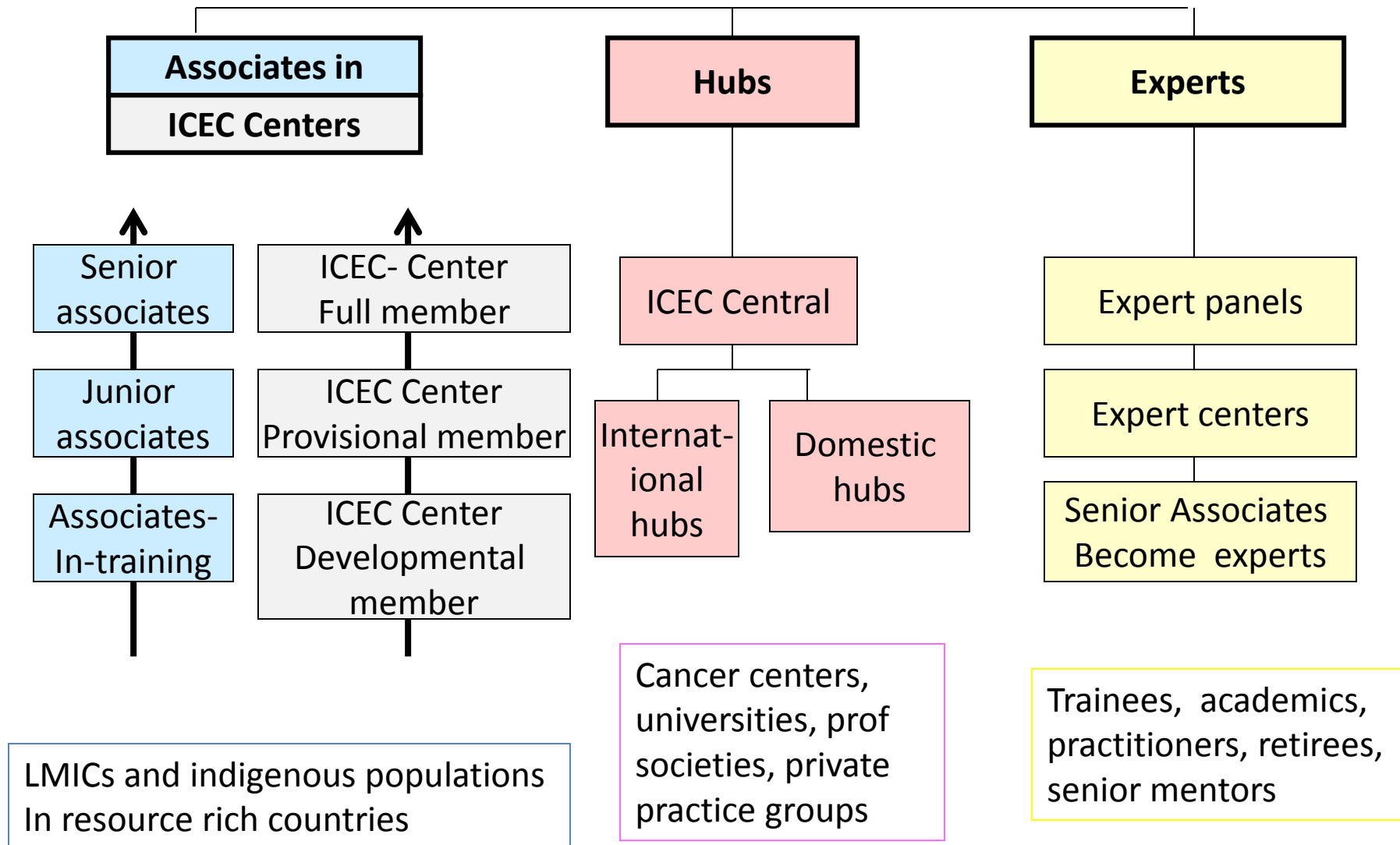


Partnership

Professional Societies
Universities
World peace foundations



ICEC functional components





ICEC Expert Panels:

Broad spectrum of expertise for complex systems solution

Medical

- Radiation oncologists
- Medical oncologists
- Pediatric oncologists
- Surgical oncologists
- Nurses
- Pathologists
- Radiologists
- Surgeons - general
- 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
- Pharmacists

Support

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

Translating intention into action.

Capacity, capability, credibility- sustainable system

Opportunity for a broad range of sectors to contribute and benefit

Sector	Goals	The health care system	Tools and methods	Accomplishments
Expertise Resource-poor (LMICs) and resource-rich	Capability capacity; sustainable "in-country" cancer program	Underserved community — Mentor corps	Mentorship; New career path; Tap into wisdom of retirees	Transform health care value system; Catalytic innovation
Implementation science	Effective use of knowledge; New systems-solutions to hard problems	New health care models	Quality data bases; Appropriate metrics; Shared learning	Improvements are data driven; Shared solutions; New economic models
Technology	Best use of personnel; Remote outreach and improved access to care	At cancer center Outreach, remote sites — Regional hospital as needed	Novel IT technology; Cell phone for remote outreach	Better health; New jobs; New markets
Research	Understand diseases; Targeted therapeutics and prevention	Research and continual improvement	Clinical epidemiology, translational and basic mechanistic research	New knowledge; Better prevention and treatment agents and strategies
Cancer and health (applicable to NCDs)	Expandable; Exportable models; Shared resources	Ultimate goal: Reduced cancer burden	Shared knowledge; Economic models that support more investment	Common ground; Diplomacy; Shared accomplishments

The Lancet Oncology Commission

Lancet Oncol, 2015, 16: 1153

Expanding global access to radiotherapy

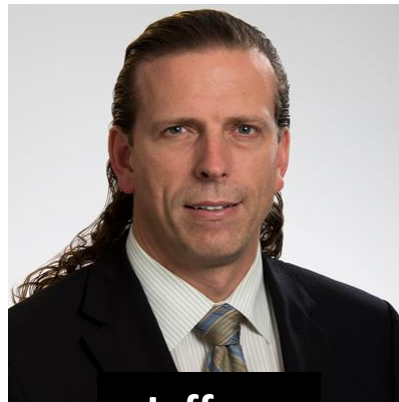
Rifat Atun, David A Jaffray, Michael B Barton, Freddie Bray, Michael Baumann, Bhadrasain Vikram, Timothy P Hanna, Felicia M Knaul, Yolande Lievens, Tracey Y M Lui, Michael Milosevic, Brian O'Sullivan, Danielle L Rodin, Eduardo Rosenblatt, Jacob Van Dyk, Mei Ling Yap, Eduardo Zubizarreta, Mary Gospodarowicz



Our results provide compelling evidence that investment in radiotherapy not only enables treatment of large numbers of cancer cases to save lives, but also brings positive economic benefits.



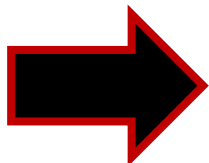
Atun



Jaffray



Gospodarowicz



The verdict is in: the time for effective solutions to the global cancer burden is now

**C Norman Coleman, Bruce D Minsky*

Lancet Oncol, 2015, 16: 1146

CANCER HEALTH DISPARITIES

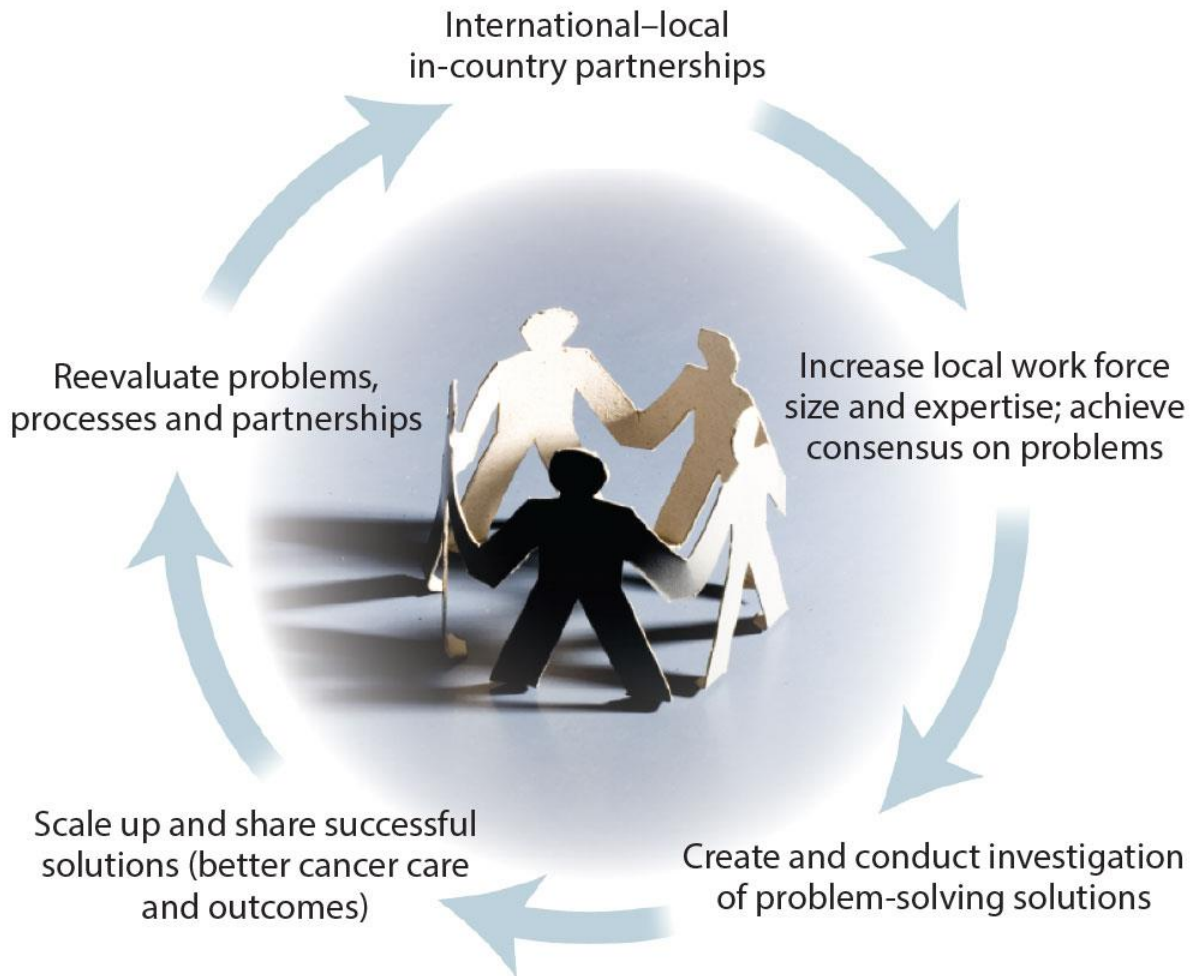
Transforming Science, Service, and Society



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Partnering to transform global cancer care

Think globally, mentor locally.



CN Coleman and RR Love.
Sci Transl Med 2014;6:259

New partnerships with common goals

Outcome: Bringing together ongoing efforts is critical and is best done with

- **formal collaborations** among existing programs, allowing for
- **individual recognition** and a
- **range of approaches (i.e. research & implementation science) while**
- **minimizing potentially detrimental competition that can dissuade investment.**

Co-conspirators welcome (iceccancer.org)

New partnerships with common goals

Partnerships are developing and needed among

- 1. Early stage career cancer experts** committed to global health,
 - 2. Retirees** seeking opportunities to use their skills to help the underserved; and **Senior mentors** looking for new challenges
 - 3. Experts in the private practice** sector,
 - 4. Organizations** interested in supplying refurbished **equipment** or inventing new **equipment**, Linear accelerator manufacturers
 - 5. Healthcare workers and agencies** addressing **health disparities among indigenous populations** in resource-rich countries,
 - 6. Government agencies and foundations** working to eliminate **dangerous nuclear material**, especially in unstable countries.
 - 7. VI\$IONARIE\$** to transform the value system and capturing lost value-
 - 8. INNOVATORS- disruptive and catalytic innovation-**
- Co-conspirators welcome (iceccancer.org)**



**“It always seems impossible
until it's done.”**

Nelson Mandela