National Cancer Grid – ‘earthshots’ over moonshots

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I have no financial conflicts of interest with the content of this talk.
National Cancer Grid

- Uniform standards of cancer care
- Developing trained human resource
- Collaborative multicentric cancer research
Cancer burden and health systems in India

The growing burden of cancer in India: epidemiology and social context

Mohandas K M
Bibhuti B Borthakur
Shilin Shukla
Richard Sullivan

Cancer burden and health systems in India

Delivery of affordable and equitable cancer care in India


The delivery of affordable and equitable cancer care is one of India’s greatest public health challenges. Public expenditure on cancer in India remains below US$10 per person (compared with more than US$100 per person in high-income countries), and overall public expenditure on health care is still only slightly above 1% of gross domestic product. Out-of-pocket payments, which account for more than three-quarters of cancer expenditures in India, are one of the greatest threats to patients and families, and a cancer diagnosis is increasingly responsible for catastrophic expenditures that negatively affect not only the patient but also the welfare and education of several generations of their family. We explore the complex nature of cancer care systems across India, from state to government levels, and address the crucial issues of infrastructure, manpower shortages, and the pressing need to develop cross-state solutions to prevention and early detection of cancer, in addition to governance of the largely unregulated private sector and the cost of new technologies and drugs. We discuss the role of public insurance schemes, the need to develop new political mandates and authority to set priorities, the necessity to greatly improve the quality of care, and the drive to understand and deliver cost-effective cancer care programmes.

Delivery of affordable cancer care in India: global policy and national reality

To deliver affordable cancer control and care in emerging economies is one of the biggest global health challenges. The range of diseases that constitute cancer; the breadth of systems, pathways, and technologies involved; and the associated costs mean that cancer is a major test of the delivery of affordable and equitable cancer care. Gradually over the past 10 years, the underlying strength of each state health system as a foundation to deliver cost-effective pathways and affordable services differs greatly. In particular, the north–south divide in India, with better resources and manpower in the southern states, are a major externality driving patients from the northern states to seek care in the wealthier, better-

Lancet Oncol 2014
Published Online
April 11, 2014
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See Online/Comment
http://dx.doi.org/10.1016/S1470-2045(14)70140-8
This is the third in a Series of three papers about cancer in India
Tata Memorial Centre, Mumbai, India
(Prof C S Pramesh MS, Prof R A Badwe MS, Prof R Sarin MD); Dr B Borooah Cancer Institute, Guwahati, India (B Borthakur MS); Kamala Nehru Memorial Hospital, Allahabad, India (Prof M Chandra PhD); Cancer Institute Adyar, Chennai, India (Prof E H Raj MS, Prof T G Sagar MD).
<table>
<thead>
<tr>
<th>Header</th>
<th>Guidelines</th>
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<tbody>
<tr>
<td>Bone and soft tissue tumors</td>
<td>Chondrosarcoma, Ewing's Sarcoma, Extremity Soft Tissue Sarcoma, Osteosarcoma.</td>
</tr>
<tr>
<td>Neurological cancer</td>
<td>Brain Tumors</td>
</tr>
<tr>
<td>Breast cancers</td>
<td>Breast Cancer.</td>
</tr>
<tr>
<td>Gynecological Cancers</td>
<td>Borderline ovarian tumours, Cervical cancer, Endometrial cancer, Epithelial Ovarian Cancer, Germ Cell Tumours of Ovary</td>
</tr>
<tr>
<td>Gastrointestinal Cancers</td>
<td>Colon Cancers, Retroperitoneal Sarcoma, Stomach &amp; Gastroesophageal Junction Cancer.pdf</td>
</tr>
</tbody>
</table>
Delivery of meaningful cancer care: a retrospective cohort study assessing cost and benefit with the ASCO and ESMO frameworks

Joseph C Del Paggio, Richard Sullivan, Deborah Schrag, Wilma M Hopman, Biju Azariah, C S Pramesh, Ian F Tannock, Christopher M Booth

Summary

Background The American Society of Clinical Oncology (ASCO) and the European Society for Medical Oncology (ESMO) have developed frameworks that quantify survival gains in light of toxicity and quality of life to assess the benefits of cancer therapies. We applied these frameworks to a cohort of contemporary randomised controlled trials to explore agreement between the two approaches and to assess the relation between treatment benefit and cost.

Methods We identified all randomised controlled trials of systemic therapies in non-small-cell lung cancer, breast cancer, colorectal cancer, and pancreatic cancer published between Jan 1, 2011, and Dec 31, 2015, and assessed their abstracts and methods. Trials were eligible for inclusion in our cohort if significant differences favouring the experimental group in a prespecified primary or secondary outcome were reported (secondary outcomes were assessed only if primary outcomes were not significant). We assessed trial endpoints with the ASCO and ESMO frameworks at two timepoints 3 months apart to confirm intra-rater reliability. Cohen’s κ statistic was calculated to establish agreement between the two frameworks on the basis of the median ASCO score, which was used as an arbitrary threshold of benefit, and the framework-recommended ESMO threshold. Differences in monthly drug cost between the experimental and control groups of each randomised controlled trial (ie, incremental drug cost) were derived from 2016 average wholesale prices.

Findings 109 randomised controlled trials were eligible for inclusion, 42 (39%) in non-small-cell lung cancer, 36 (33%) in breast cancer, 25 (23%) in colorectal cancer, and six (6%) in pancreatic cancer. ASCO scores ranged from 2 to 77; median score was 25 (IQR 16–35). 41 (38%) trials met the benefit thresholds in the ESMO framework. Agreement between the two frameworks was fair (κ=0·326). Among the 100 randomised controlled trials for which drug costing data were available, ASCO benefit score and monthly incremental drug costs were negatively correlated (p=0·207; p=0·039). Treatments that met ESMO benefit thresholds had a lower median incremental drug cost than did those that did not meet benefit thresholds (US$2981 [IQR 320–9059] vs $8621 [1174–13 930]; p=0·018).
Figure 2: Distribution of ASCO-VF scores and ESMO-MCBS benefit threshold in a cost-analysis cohort of randomised controlled trials in non-small-cell lung cancer, breast cancer, colorectal cancer, and pancreatic cancer published 2011–15 and suitable for cost analysis. n=109. ASCO-VF=American Society of Clinical Oncology Value Framework. ESMO-MCBS=European Society for Medical Oncology Magnitude of Clinical Benefit Scale.
Figure 3: Scatterplot of correlation between ASCO-VF net health benefit scores and incremental monthly drug cost in a cohort of randomised controlled trials in non-small-cell lung cancer, breast cancer, colorectal cancer, and pancreatic cancer published 2011–15. n=100. Incremental monthly drug cost is the difference in cost between the experimental regimen and the control regimen. ASCO-VF = American Society of Clinical Oncology Value Framework.
Choosing Wisely India: ten low-value or harmful practices that should be avoided in cancer care


The Choosing Wisely India campaign was an initiative that was established to identify low-value or potentially harmful practices that are relevant to the Indian cancer health-care system. We undertook a multidisciplinary framework-driven consensus process to identify a list of low-value or harmful cancer practices that are frequently undertaken in India. A task force convened by the National Cancer Grid of India included Indian representatives from surgical, medical, and radiation oncology. Each specialty had representation from the private and public sectors. The task force included two representatives from national patient and patient advocacy groups. Of the ten practices that were identified, four are completely new recommendations, and six are revisions or adaptations from previous Choosing Wisely USA and Canada lists. Recommendations in the final list pertain to diagnosis and treatment (five practices), palliative care (two practices), imaging (two practices), and system-level delivery of care (two practices). Implementation of this list and reporting of concordance with its recommendations will facilitate the delivery of high-quality, value-based cancer care in India.

Introduction
Choosing Wisely India is an initiative modelled after Choosing Wisely in the USA and Canada, which aim to identify low-value, unnecessary, or harmful cancer services that are frequently used in national health-care systems. These society-driven initiatives also intended to start the conversation between physicians, patients, their families, policy makers, and patient advocates on ensuring high-quality and affordable cancer care while avoiding the use of unnecessary tests, procedures, and treatments. Identification of low-value or harmful practices can facilitate subsequent quality improvement initiatives. This problem is compounded by the fact that the health-care delivery framework in India is highly variable, fragmented, and largely unregulated. One successful approach in avoiding unnecessary (often expensive) interventions has been the Choosing Wisely initiative, which has been embraced globally in more than 20 countries. In the USA and Canada, there are now over 800 Choosing Wisely recommendations from more than 120 national clinician societies. Although there have been some attempts made to create a Choosing Wisely list in India, there has not been a deliberate effort to develop these lists through systematic processes.
<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Origin of recommendation</th>
<th>Revisions made to original recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do not delay or avoid palliative care for a patient with metastatic cancer because they are pursuing disease-directed treatment</td>
<td>Choosing Wisely Canada</td>
<td>No</td>
</tr>
<tr>
<td>Avoid chemotherapy and instead focus on symptom relief and palliative care in patients with advanced cancer that are unlikely to benefit from chemotherapy*</td>
<td>Choosing Wisely USA</td>
<td>Yes</td>
</tr>
<tr>
<td>Do not order tests to detect recurrent cancer in asymptomatic patients if there is not a realistic expectation that early detection of recurrence can improve survival or quality of life†</td>
<td>Choosing Wisely Canada</td>
<td>Yes</td>
</tr>
<tr>
<td>Do not order PET/CT scans to monitor response to palliative chemotherapy</td>
<td>New suggestion</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Do not decide treatment for potentially curable cancers without inputs from a multidisciplinary oncology team</td>
<td>New suggestion</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Do not treat patients with advanced metastatic cancer in the intensive care unit unless there is an acutely reversible event</td>
<td>New suggestion</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Do not use advanced radiation techniques where conventional radiation can be just as effective</td>
<td>New suggestion</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Do not deliver care in a high-cost setting when it could be delivered just as effectively in a lower-cost setting</td>
<td>Choosing Wisely Canada</td>
<td>Yes</td>
</tr>
<tr>
<td>Do not initiate whole breast radiotherapy in 25 fractions as a part of breast conservation therapy in women age ≥50 years with early-stage invasive breast cancer without considering shorter treatment schedules</td>
<td>Choosing Wisely Canada</td>
<td>No</td>
</tr>
<tr>
<td>Do not use white-cell stimulating factors for primary prevention of febrile neutropenia for patients with less than 20% risk for this complication</td>
<td>Choosing Wisely USA</td>
<td>Yes</td>
</tr>
</tbody>
</table>

This list is meant to augment on the Choosing Wisely USA and Choosing Wisely Canada lists with specific Indian context. Therefore, the absence of any Choosing Wisely USA or Choosing Wisely Canada practices does not imply non-support of those practices as low-value or harmful. *Including one or more of the above: performance status 3 or 4, no benefit from previous evidence-based interventions, not suitable for a clinical trial, and no evidence supporting the clinical value of further anticancer treatment. †Including biomarkers, PET/CT and CT scans, and endoscopy and radionuclide scans.

Table: Choosing Wisely India final list of low-value or harmful practices that should be avoided in cancer care*
Welcome to Pathology EQAS

Welcome to the NCG EQAS program in surgical pathology

Quality pathology is an important stepping stone in efficient management of cancer and patients. Since two decades there is burning realization of one standard across the globe for diagnosing and treating patients or evidence based management. The international community has realized it long time ago and several EQAS programs have been in place in every country. India is a country where variability is our essence and hence to run a program across the states in the country is a challenging task. Pathology services cover a range of services from biochemistry to histopathology. While to run a quality assurance program for biochemical parameters is relatively uncomplicated, quality assurance in histopathology is likely to be far more complex. Pathology practices in India vary from individuals, institutes and a spate of upcoming industry owned laboratories. While a large proportion of these practices do have quality systems in place, it is driven by economics. The common international guidelines for reporting are carried out without international quality standards. The worst affected are the pre-analytical variables like fixation and monitoring fixation which is almost impossible in most centers which are dependent on outside sources to provide them with these details. There is presently no forum...
Tata Memorial Centre and National Cancer Grid and Navya bring you evidence based expert treatment decisions.

Get an expert opinion in 1 to 3 days from Asia’s largest leading expert cancer centers.

Navya has accurately made over 5000 expert treatment decisions in oncology.
National Virtual Tumor Board
E-resources

The following resources are brought to you through NCG library. Request your institution for username and password.

Few of our resources are listed here:

**OVID**

Search here for full text articles

Enter your search terms...

OVID: Publisher - Wolters Kluwer (LWW) - covers ten titles, these are -

<table>
<thead>
<tr>
<th>Title</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Journal of Surgical Pathology</td>
<td>1996 +</td>
</tr>
<tr>
<td>Anesthesiology</td>
<td>1995 +</td>
</tr>
<tr>
<td>Annals of Surgery</td>
<td>1996 +</td>
</tr>
<tr>
<td>Anesthesia &amp; Analgesia</td>
<td>1995 +</td>
</tr>
</tbody>
</table>
Digital nerve centre
Traveling school of pathology
Research projects

• Multicentric collaborations
• Common / unique cancers
• Cost effective treatment options
• Commitment for data sharing
• Systematic effort at identifying pressing problems and answer them

• “National Cancer research Initiative”
Effect of VIA Screening by Primary Health Workers: Randomized Controlled Study in Mumbai, India

Surendra S. Shastri, Indraneel Mitra, Gauravi A. Mishra, Subhadra Gupta, Rajesh Dikshit, Shalini Singh, Rajendra A. Badwe

Manuscript received August 13, 2013; revised December 20, 2013; accepted December 21, 2013.

Correspondence to: Surendra S. Shastri, MD, Rm No. 305, Service Block, Tata Memorial Centre, Parel, Mumbai 400012, India (e-mail: surendrashastri@gmail.com).

Background  Cervical cancer is the leading cause of cancer mortality among women in India. Because Pap smear screening is not feasible in India, we need to develop effective alternatives.

Methods  A cluster-randomized controlled study was initiated in 1998 in Mumbai, India, to investigate the efficacy of visual inspection with acetic acid (VIA) performed by primary health workers in reducing cervical cancer mortality. Four rounds of cancer education and VIA screening were conducted at 24-month intervals in the screening group, whereas cancer education was offered once at entry to the control group. The study was planned for 16 years to include four screening rounds followed by four monitoring rounds. We present results after 12 years of follow-up. Poisson regression method was used to calculate the rate ratios (RRs); two-sided $\chi^2$ was used to calculate the probability.

Results  We recruited 75,360 women from 10 clusters in the screening group and 76,178 women from 10 comparable clusters in the control group. In the screening group, we achieved 89% participation for screening and 79.4% compliance for diagnosis confirmation. The incidence of invasive cervical cancer was 26.74 per 100,000 (95% confidence interval [CI] = 23.41 to 30.74) in the screening group and 27.49 per 100,000 (95% CI = 23.66 to 32.09) in the control group. Compliance to treatment for invasive cancer was 86.3% in the screening group and 72.3% in the control group. The screening group showed a statistically significant 31% reduction in cervical cancer mortality (RR = 0.69; 95% CI = 0.54 to 0.88; $P = .003$).

Whether patients with early-stage oral cancers should be treated with elective neck dissection at the time of the primary surgery or with therapeutic neck dissection after nodal relapse has been a matter of debate. The authors’ affiliations are as follows: Head Neck Services (A.K.D., R.V., N.K., M.D., G.P., D.C., A.D., P.C., P.P., S.N., D.N.), Department of Medical Oncology
Research - facilitation

International Collaboration for Research methods Development in Oncology (CReDO) workshop
5th to 10th February 2017
Mumbai, India

The Tata Memorial Centre, Mumbai and the National Cancer Grid of India announce the second International Collaboration for Research methods Development in Oncology (CReDO) workshop: a six-day residential workshop on clinical research protocol development—to be held at Lonavla near Mumbai between 5th and 10th February 2017.

Supported by
National Cancer Institute, USA

TATA TRUSTS

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MRC
UCL
KING’S COLLEGE LONDON
CANCER RESEARCH UK
Ayushman Bharat

INFORMING THE BENEFICIARY
- Family Letter Identified Families
- Hospitals More than 10,000
- Common Service Centre 200,000
- 14555 Call Centre
- Website & App
- Panchayat

PACKAGE RATES
- Over 1300 packages and 24+ specialities covered

KEY FEATURES
- 01 Service Coverage
- 02 Speciality
- 03 Pre-Authorization Check
- 04 Outcome Based Incentives

SPECIALITIES COVERED:
- Cardiology, Cardiothoracic Surgery, Neurosurgery, Renal Dialysis, Oncology, Urology & More
- NABH Entry Level - 10%
- NABH Full Accreditation - 10%
- Aspirational Districts - 10%
- PS/DNB In the Hospital - 10%
- Around 50% packages require pre-authorization & some reserved for public hospitals

COLLABORATION FOR CANCER CARE
NATIONAL CANCER GRID
Future steps

• Integrated data collection & aggregation
• NCG – Centre for Global Health
• NCG “state chapters”
• Health promotion and awareness
• Palliative care augmentation
• Group negotiation for equipment, drugs
• Health technology assessment
The realities…

- Multiplayer healthcare delivery system
- Unregulated quality standards
- No national management guidelines
- Outcomes data not mandatory
- Skewed human resources
- Non-existent systematic research strategy
Projected cancer burden in India

Current incidence: 1 million
Incidence in 2035: 1.7 million

Mallath et al. Lancet Oncol 2014
Geographic inequities in access

Mallath et al. Lancet Oncol 2014
Economic inequities in access

<table>
<thead>
<tr>
<th>Fund Source</th>
<th>Expenditure (rupees)</th>
<th>Percentage of total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public funds</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central government</td>
<td>111,552,195</td>
<td>8.34%</td>
</tr>
<tr>
<td>State government</td>
<td>183,444,520</td>
<td>12.21%</td>
</tr>
<tr>
<td>Local bodies</td>
<td>12,292,886</td>
<td>0.92%</td>
</tr>
<tr>
<td><strong>Total public funds</strong></td>
<td>307,289,601</td>
<td>21.47%</td>
</tr>
<tr>
<td><strong>Private funds</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Households</td>
<td>951,538,903</td>
<td>71.13%</td>
</tr>
<tr>
<td>Social insurance funds</td>
<td>15,073,973</td>
<td>1.13%</td>
</tr>
<tr>
<td>Firms</td>
<td>76,643,295</td>
<td>5.73%</td>
</tr>
<tr>
<td>Non-governmental organisations</td>
<td>72,174,344</td>
<td>0.54%</td>
</tr>
<tr>
<td><strong>Total private funds</strong></td>
<td>1,050,473,605</td>
<td>78.53%</td>
</tr>
<tr>
<td><strong>Overall total expenditure</strong></td>
<td>1,357,763,206</td>
<td>100%</td>
</tr>
</tbody>
</table>

Data are from reference 44.

*Table 2: Health sector expenditure by the public and private sectors in India, 2010–11*

Pramesh CS et al, Lancet Onco 2014
Socioeconomic inequities in access

<table>
<thead>
<tr>
<th></th>
<th>Illiterate</th>
<th>Primary school</th>
<th>Secondary school</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer deaths (Men)</td>
<td>106.6</td>
<td>93.4</td>
<td>45.7</td>
</tr>
<tr>
<td>Cancer deaths (Women)</td>
<td>106.7</td>
<td>64.2</td>
<td>43.4</td>
</tr>
<tr>
<td>Tobacco cancers (Men)</td>
<td>39.3</td>
<td>37.5</td>
<td>18.2</td>
</tr>
<tr>
<td>Tobacco cancers (Women)</td>
<td>19.5</td>
<td>10.1</td>
<td>7.2</td>
</tr>
<tr>
<td>Infection related cancer (Men)</td>
<td>24.3</td>
<td>17.8</td>
<td>7.6</td>
</tr>
<tr>
<td>Infection related cancer (Women)</td>
<td>41.2</td>
<td>21.7</td>
<td>10.3</td>
</tr>
<tr>
<td>Mortality burden in,000s (Men)</td>
<td>79.2</td>
<td>34.3</td>
<td>16.2</td>
</tr>
<tr>
<td>Mortality burden in,000s (Women)</td>
<td>140.2</td>
<td>15.3</td>
<td>5.4</td>
</tr>
</tbody>
</table>

*Dikshit et al. Million Death Study; Lancet 2012; 379: 1807-16*
The gap...

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Current estimated numbers</th>
<th>Estimated requirement in 2020</th>
<th>Theoretical requirement (in absence of constraints of affordability and access)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linac (No. of installations)</td>
<td>350</td>
<td>750 - 900</td>
<td>2,000</td>
</tr>
<tr>
<td>Dedicated cancer beds</td>
<td>5000-6000</td>
<td>12000-13000</td>
<td>32,000-37,000</td>
</tr>
<tr>
<td>Comprehensive cancer centers</td>
<td>200-250</td>
<td>450-550</td>
<td>1,500-1,600</td>
</tr>
<tr>
<td>Oncologists</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>▶ Medical</td>
<td>750</td>
<td>2800-3000</td>
<td>4,500</td>
</tr>
<tr>
<td>▶ Surgical</td>
<td>500</td>
<td>1900-2000</td>
<td>2,500</td>
</tr>
</tbody>
</table>

_Ernst and Young report, 2015_
Delivery of Global Cancer Care: An International Study of Medical Oncology Workload

**Background** To our knowledge, there is no literature that has described medical oncology (MO) workload in the global context. Here, we report results of an international study of global MO workload.

**Methods** An online survey was distributed through a snowball method via national oncology societies to chemotherapy-prescribing physicians in 65 countries. Countries were classified into low- or low-middle-income countries (LMICs), upper-middle-income countries (UMICs), and high-income countries (HICs) on the basis of World Bank criteria. Workload was measured as the annual number of new consultations provided to patients with cancer per oncologist.

**Results** A total of 1,115 physicians completed the survey: 13% (147 of 1,115) from LMICs, 17% (186 of 1,115) from UMICs, and 70% (782 of 1,115) from HICs. Eighty percent (897 of 1,115) of respondents were medical oncologists, 10% (109 of 1,115) were clinical oncologists, and 10% (109 of 1,115) were other. The median number of annual consults per oncologist was 175 (interquartile range, 75 to 275); 13% (140 of 1,103) saw ≥ 500 new patients in a year. Annual case volume in LMICs (median consults, 425; 40% of respondents seeing > 500 consults) was substantially higher than in UMICs (median consults, 175; 14% > 500) and HICs (median consults, 175; 7% > 500; *P* < .001). Among LMICs, UMICs, and HICs, median working days per week were 6, 5, and 5, respectively (*P* < .001). The highest annual case volumes per oncologist were in...
Top Five Reported Barriers to Patient Care

<table>
<thead>
<tr>
<th>Low-Middle Income (n = 147)</th>
<th>High Income (n = 782)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients unable to pay: 91 (62)</td>
<td>High clinical volumes: 495 (63)</td>
</tr>
<tr>
<td>Limited access to newer treatments: 60 (41)</td>
<td>Insufficient time for reading: 338 (43)</td>
</tr>
<tr>
<td>High clinical volumes: 58 (40)</td>
<td>Shortage of oncologists: 274 (35)</td>
</tr>
<tr>
<td>Insufficient time for reading: 36 (25)</td>
<td>Shortage of nurses: 225 (29)</td>
</tr>
<tr>
<td>Shortage of oncologists: 28 (19)</td>
<td>Limited access to newer treatments: 202 (26)</td>
</tr>
</tbody>
</table>

Fundytus, Sengar, Booth et al, J Glob Oncol 2017
Human resource crunch

MD Anderson CC
42,000 patients annually
1700 physicians

Tata Memorial Centre
46,000 patients annually
188 physicians
How could we have eliminated these disparities?
Achieving the Achievable

“Getting the right treatment to the right patient at the right time.”

Future of Radiation Oncology
Dr. Mackillop: In the long term, the biological and technological advances of today will have an influence on the practice of oncology and on the practice of radiation oncology, but the pace of change is such that I doubt if it will be possible to achieve more for patients with cancer in 2010 than can be achieved with the best of care available in 1994. We fall so far short of achieving now what is achievable that there is scope for us to improve the outcome of cancer in the short term by making better use of available knowledge and technology. Many Canadians who need radiotherapy today either do not get treated, or they experience dangerous delays before they are treated. There are also variations in the way that radiotherapy is used to treat similar conditions at different centres, and there are still some areas where we are not even in agreement about the indications for radiotherapy. That is why our discipline must work hard to ensure that, by the year 2010, every patient who would benefit from radiotherapy will get suitable radiotherapy when he or she needs it.
Look beyond technology in cancer care

Treating cancer with the latest drugs and techniques is costly and will not improve survival globally, warn Richard Sullivan, C. S. Pramesh and Christopher M. Booth.

In Nigeria, Malaysia, India and many other low- and middle-income countries, it is common to see hundreds of people queuing in the street to see a cancer doctor. It’s also common in those regions to see people with curable cancer having chemotherapy, but not radiotherapy or surgery. In fact, 90% of people in low-income countries lack access to basic radiotherapy.

In wealthy countries, the push to develop new drugs, surgery and radiation techniques to treat cancer is at best unsustainable. Of 277 cancer-drug therapies for which clinical trials were published in 2011–15, only 15% identified treatments that led to meaningful improvements in patient survival or quality of life⁴. Indeed, studies reveal that the more expensive the drug, the less clinical benefit it seems to give⁵ (see ‘A world of difference’, panel a).

In middle- and low-income countries the technology-centric approach to cancer threatens to do more harm than good.

For the past 15 years, we have worked as clinical researchers in some 40 countries and conducted more than a dozen studies on national cancer-control planning. Our experiences — along with epidemiological and other data collected over 20 years — indicate that the countries that rate relatively poorly on measures of cancer survival and mortality do so largely because of deficits at the political, economic and social level.

To improve the survival and well-being of the roughly 16 million people who have cancer worldwide, researchers, physicians, policymakers and patient organizations must focus on education, stigma, training and staffing to ensure that the right care
I have no financial conflicts of interest with the content of this talk

But....

“I believe that investment in health services and implementation science can achieve far more in global cancer control than the most cutting-edge advances in medicine”
National Cancer Grid

• 177 cancer centres, research institutes, patient groups, professional societies and charities across the country
• 700,000 new cancer patients annually

• Uniform standards of cancer care
• Developing trained human resource
• Collaborative multicentric cancer research
The National Cancer Grid

Eliminating disparities in cancer care