Cancer diagnosis in primary care in the UK: now and for the future

Prof Jon Emery

Herman Professor of Primary Care Cancer Research, University of Melbourne

on behalf of

Dr Fiona Walter

World Cancer Congress
Kuala Lumpur, Malaysia
1—4 Oct 2018

Strengthen
Inspire
Deliver

uicc
global cancer control
WORLD CANCER CONGRESS

Track 2- Advances in screening and early detection

Disclosure of interest: None declared

Overview

- UK policies on improving cancer diagnosis, from 2008
- Cancer diagnosis in primary care in the UK in 2018
- Looking ahead…

The Telegraph

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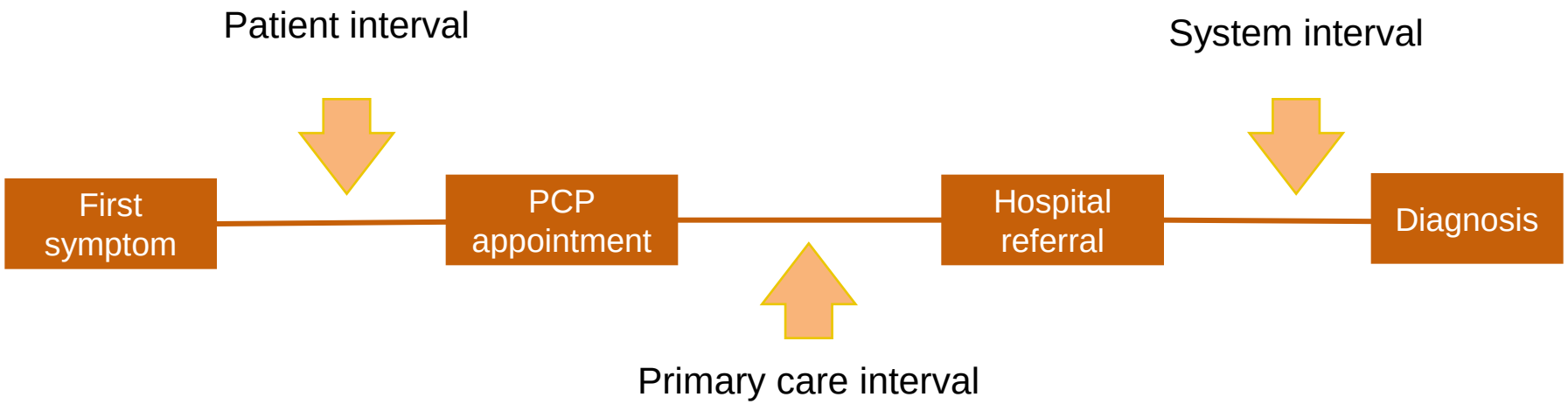
GPs to be named and shamed over cancer diagnosis

Doctors face being marked with a red flag on an NHS website if they repeatedly miss signs of cancer in patients, as Jeremy Hunt, the Health Secretary says "we need to do much better"

Health Secretary Jeremy Hunt Photo: Christopher Pledger/The Telegraph

Key early diagnosis interventions



Graphics, courtesy of Monica Khoo

Key early diagnosis interventions

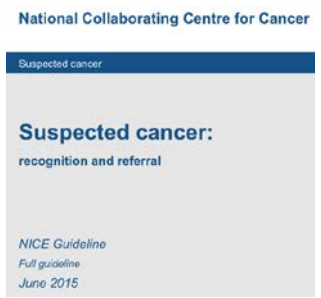
Public health education campaigns about possible cancer symptoms

Graphics, courtesy of Monica Khoo

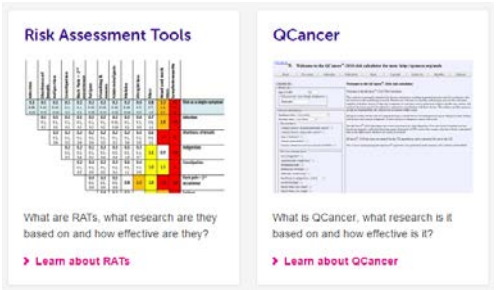
Key early diagnosis interventions

First symptom → PCP appointment → Hospital referral → Diagnosis

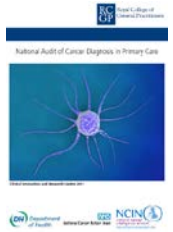
National referral guidelines



EHR-embedded decision support tools



Significant Event Audit for dx of cancer in primary care



Graphics, courtesy of Monica Khoo

Key early diagnosis interventions

Increasing capacity for specialist dx (endoscopy / imaging)

Waiting times (publicly reported, often covered by media / discussed in parliament)

Graphics, courtesy of Monica Khoo

Key early diagnosis interventions

Public health education campaigns about possible cancer symptoms

BE CLEAR ON CANCER

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First symptom → PCP appointment → Hospital referral → Diagnosis

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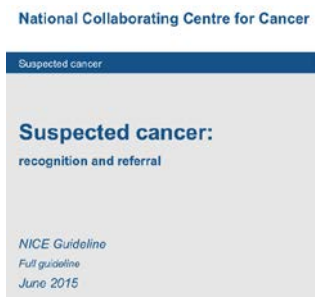
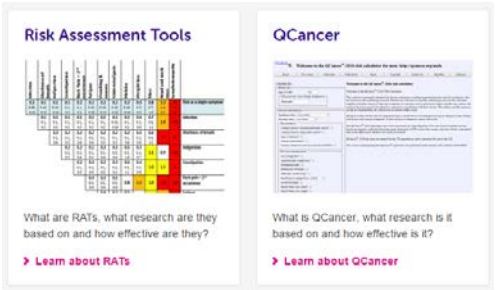
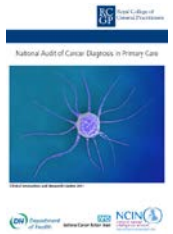


EHR-embedded decision support tools



Audit / Significant Event Audit for dx of cancer in primary care



Graphics, courtesy of Monica Khoo

Cancer diagnosis in UK primary care- looking ahead..

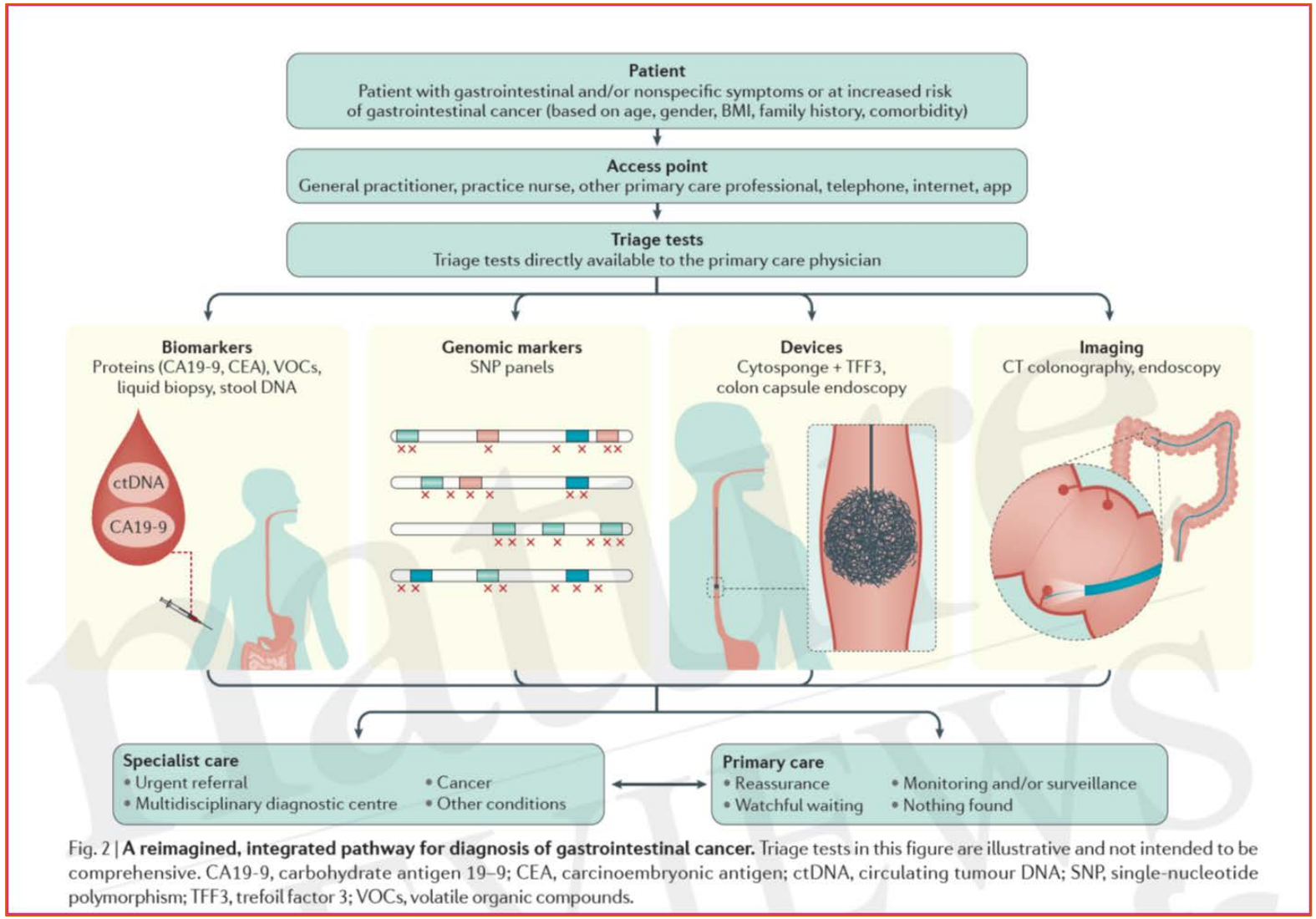


Fig. 2 | **A reimagined, integrated pathway for diagnosis of gastrointestinal cancer.** Triage tests in this figure are illustrative and not intended to be comprehensive. CA19-9, carbohydrate antigen 19–9; CEA, carcinoembryonic antigen; ctDNA, circulating tumour DNA; SNP, single-nucleotide polymorphism; TFF3, trefoil factor 3; VOCs, volatile organic compounds.

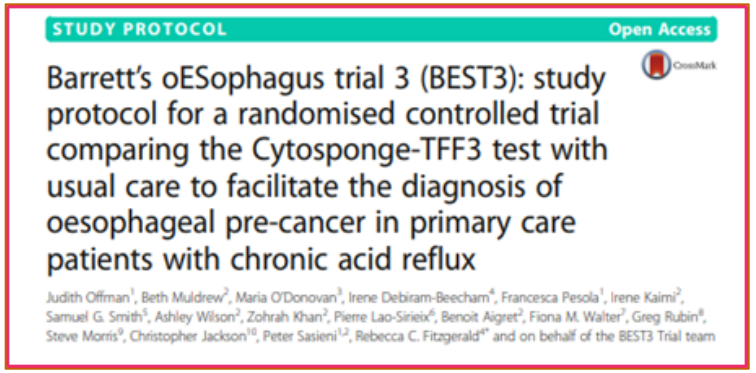
Rubin, Walter, Emery, de Wit, *Nature reviews GE & H* 2018

Diagnostic devices

EXAMPLE:

- Barrett's oesophagus (BE): Pre-cancerous stage of oesphageal adenocarcinoma (OAC)
- Although OAC is rare in the general population, 1%–5% of people with BE develop
- BE commonly undiagnosed
- Detection and treatment at earlier disease stages can lead to improved survival
- Diagnosed currently via Upper GI endoscopy
- Cytosponge™ test- biomarker TFF3
- Large RCT in progress, in primary care setting

BEST3



STUDY PROTOCOL Open Access

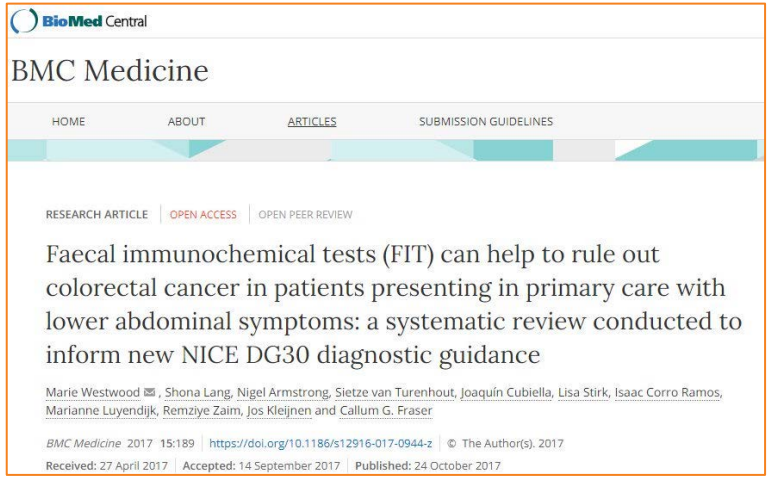
Barrett's oESophagus trial 3 (BEST3): study protocol for a randomised controlled trial comparing the Cytosponge-TFF3 test with usual care to facilitate the diagnosis of oesophageal pre-cancer in primary care patients with chronic acid reflux

Judith Offman[1], Beth Muldrew[2], Maria O'Donovan[3], Irene Debiram-Beecham[4], Francesca Pesola[1], Irene Kaimi[2], Samuel G. Smith[5], Ashley Wilson[2], Zohrah Khan[2], Pierre Lao-Sirieix[6], Benoit Aigret[2], Fiona M. Walter[7], Greg Rubin[8], Steve Morris[9], Christopher Jackson[10], Peter Sasieni[1,2], Rebecca C. Fitzgerald[4*] and on behalf of the BEST3 Trial team

Biomarkers

EXAMPLES:

- Faecal immunochemical test (FIT) for symptomatic patients (NICE DG30)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RESEARCH ARTICLE | OPEN ACCESS | OPEN PEER REVIEW

Faecal immunochemical tests (FIT) can help to rule out colorectal cancer in patients presenting in primary care with lower abdominal symptoms: a systematic review conducted to inform new NICE DG30 diagnostic guidance

Marie Westwood, Shona Lang, Nigel Armstrong, Sietze van Turenhout, Joaquín Cubiella, Lisa Stirk, Isaac Corro Ramos, Marianne Luyendijk, Remziye Zaim, Jos Kleijnen and Callum G. Fraser

BMC Medicine 2017 15:189 https://doi.org/10.1186/s12916-017-0944-z © The Author(s). 2017

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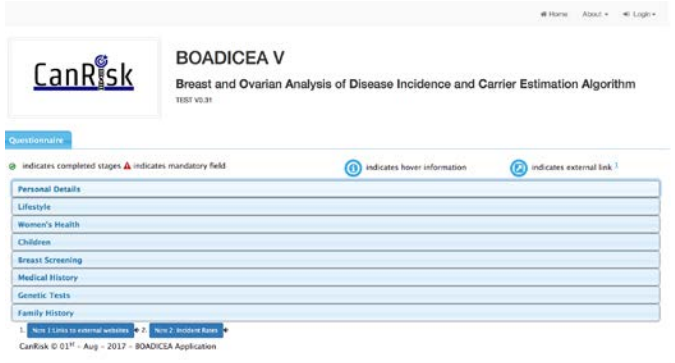
- Breath biopsy

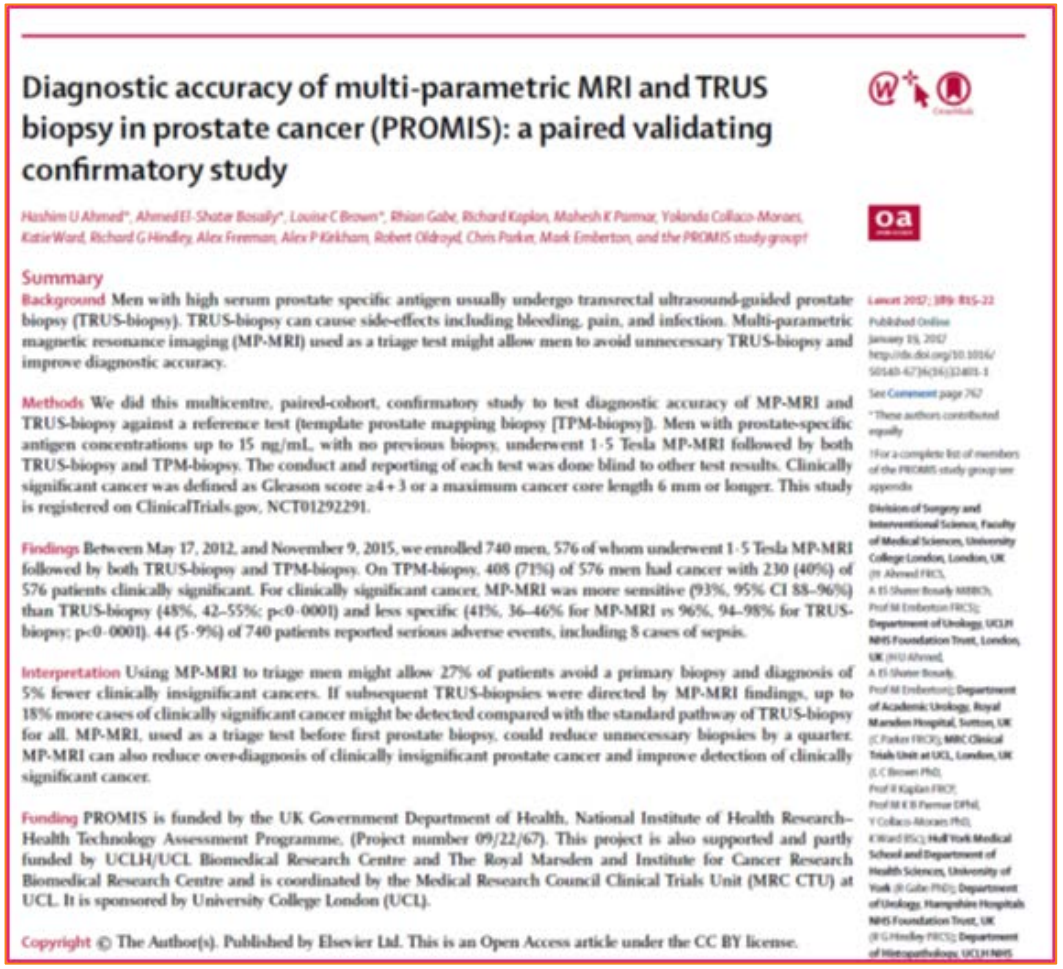
- Genomic markers- e.g. BOADICEA breast cancer risk prediction algorithm extended to include:
  - rare mutations in known breast cancer susceptibility genes
  - combined effects of the common genetic variants (Polygenic Risk Scores)
  - Lifestyle & hormonal risk factors
  - mammographic density



Imaging

EXAMPLE:

- Can mpMRI can be used in primary care to improve the accuracy of prostate cancer diagnosis?
- Is mpMRI as a diagnostic test for prostate cancer acceptable to healthcare professionals and patients, and cost-effective?



Diagnostic accuracy of multi-parametric MRI and TRUS biopsy in prostate cancer (PROMIS): a paired validating confirmatory study

Hashim U Ahmed*, Ahmed El-Shater Bosaily*, Louise C Brown*, Rhian Gabe, Richard Kaplan, Mahesh K Parmar, Yolanda Collaco-Moraes, Katie Ward, Richard G Hindley, Alex Freeman, Alex P Kirkham, Robert Oldroyd, Chris Parker, Mark Emberton, and the PROMIS study group†

Summary

Background Men with high serum prostate specific antigen usually undergo transrectal ultrasound-guided prostate biopsy (TRUS-biopsy). TRUS-biopsy can cause side-effects including bleeding, pain, and infection. Multi-parametric magnetic resonance imaging (MP-MRI) used as a triage test might allow men to avoid unnecessary TRUS-biopsy and improve diagnostic accuracy.

Methods We did this multicentre, paired-cohort, confirmatory study to test diagnostic accuracy of MP-MRI and TRUS-biopsy against a reference test (template prostate mapping biopsy [TPM-biopsy]). Men with prostate-specific antigen concentrations up to 15 ng/mL, with no previous biopsy, underwent 1·5 Tesla MP-MRI followed by both TRUS-biopsy and TPM-biopsy. The conduct and reporting of each test was done blind to other test results. Clinically significant cancer was defined as Gleason score ≥4+3 or a maximum cancer core length 6 mm or longer. This study is registered on ClinicalTrials.gov, NCT01292291.

Findings Between May 17, 2012, and November 9, 2015, we enrolled 740 men, 576 of whom underwent 1·5 Tesla MP-MRI followed by both TRUS-biopsy and TPM-biopsy. On TPM-biopsy, 408 (71%) of 576 men had cancer with 230 (40%) of 576 patients clinically significant. For clinically significant cancer, MP-MRI was more sensitive (93%, 95% CI 88–96%) than TRUS-biopsy (48%, 42–55%; p<0·0001) and less specific (41%, 36–46% for MP-MRI vs 96%, 94–98% for TRUS-biopsy; p<0·0001). 44 (5·9%) of 740 patients reported serious adverse events, including 8 cases of sepsis.

Interpretation Using MP-MRI to triage men might allow 27% of patients avoid a primary biopsy and diagnosis of 5% fewer clinically insignificant cancers. If subsequent TRUS-biopsies were directed by MP-MRI findings, up to 18% more cases of clinically significant cancer might be detected compared with the standard pathway of TRUS-biopsy for all. MP-MRI, used as a triage test before first prostate biopsy, could reduce unnecessary biopsies by a quarter. MP-MRI can also reduce over-diagnosis of clinically insignificant prostate cancer and improve detection of clinically significant cancer.

Funding PROMIS is funded by the UK Government Department of Health, National Institute of Health Research–Health Technology Assessment Programme, (Project number 09/22/67). This project is also supported and partly funded by UCLH/UCL Biomedical Research Centre and The Royal Marsden and Institute for Cancer Research Biomedical Research Centre and is coordinated by the Medical Research Council Clinical Trials Unit (MRC CTU) at UCL. It is sponsored by University College London (UCL).

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Lancet 2017; 389: 815–22

Published Online January 19, 2017 http://dx.doi.org/10.1016/S0140-6736(16)32401-1

See Comment page 767

* These authors contributed equally

† For a complete list of members of the PROMIS study group see appendix

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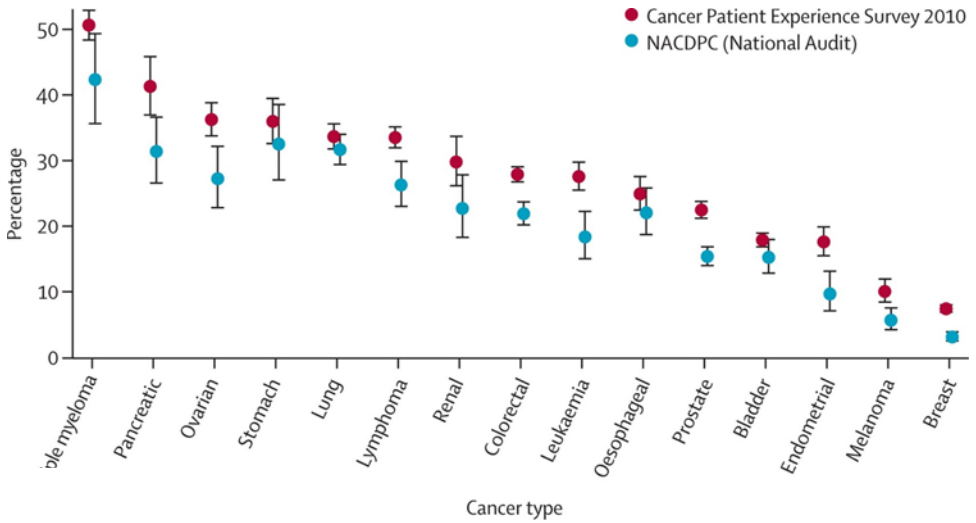
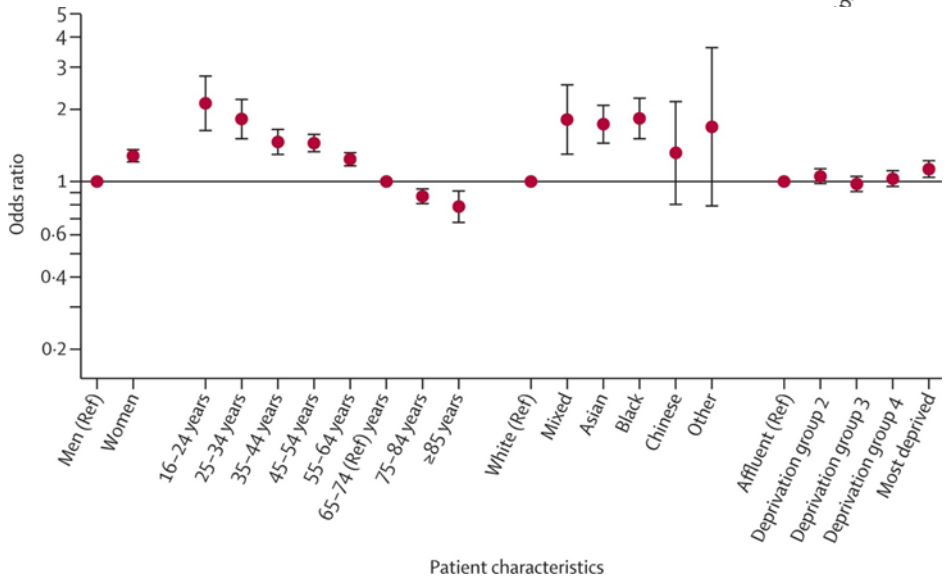
Risk stratification

Understanding ‘harder’ and ‘easier’ to diagnose patient groups-

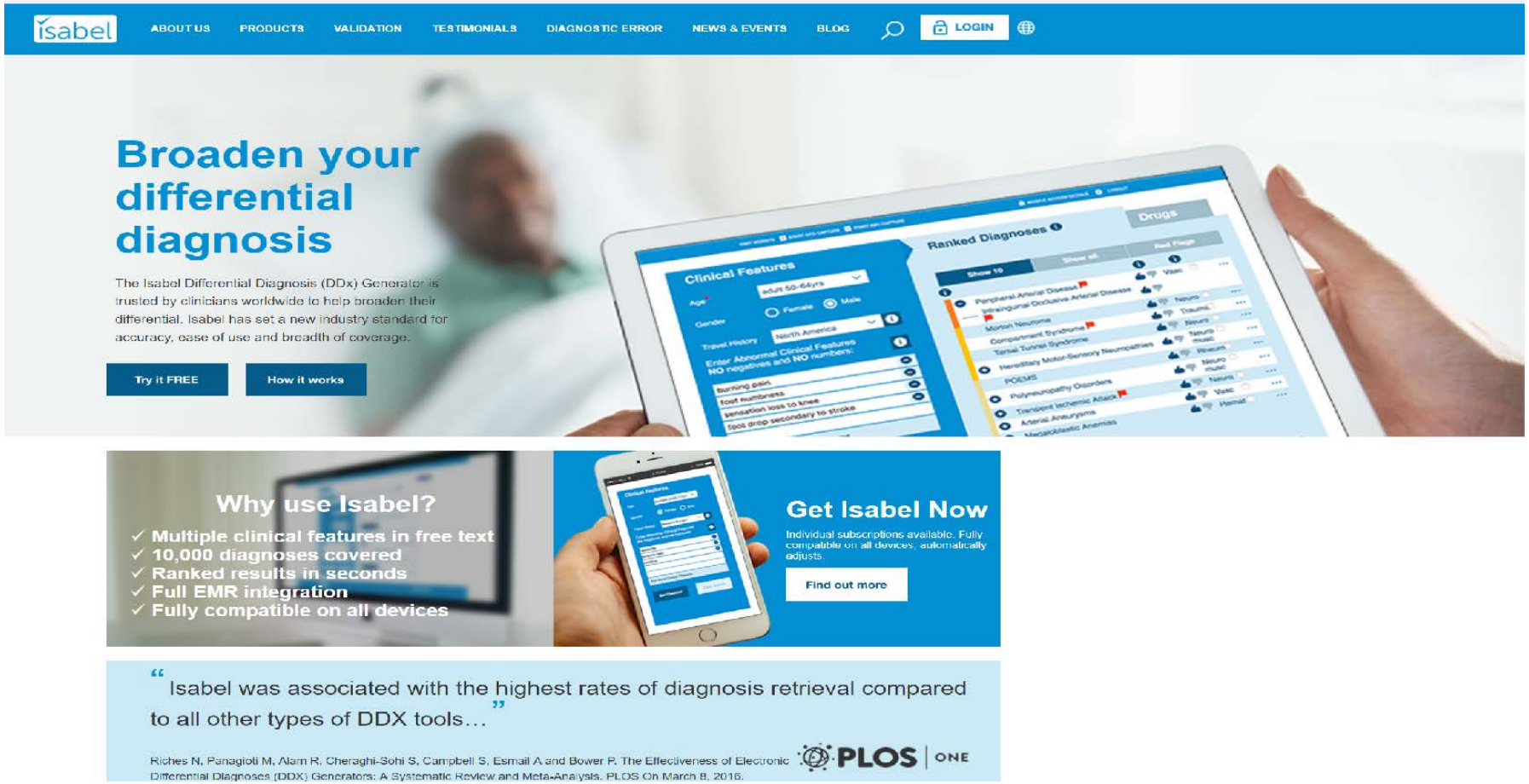
at greater / lower risk of multiple ‘return visits’ before initiation of diagnostic referral



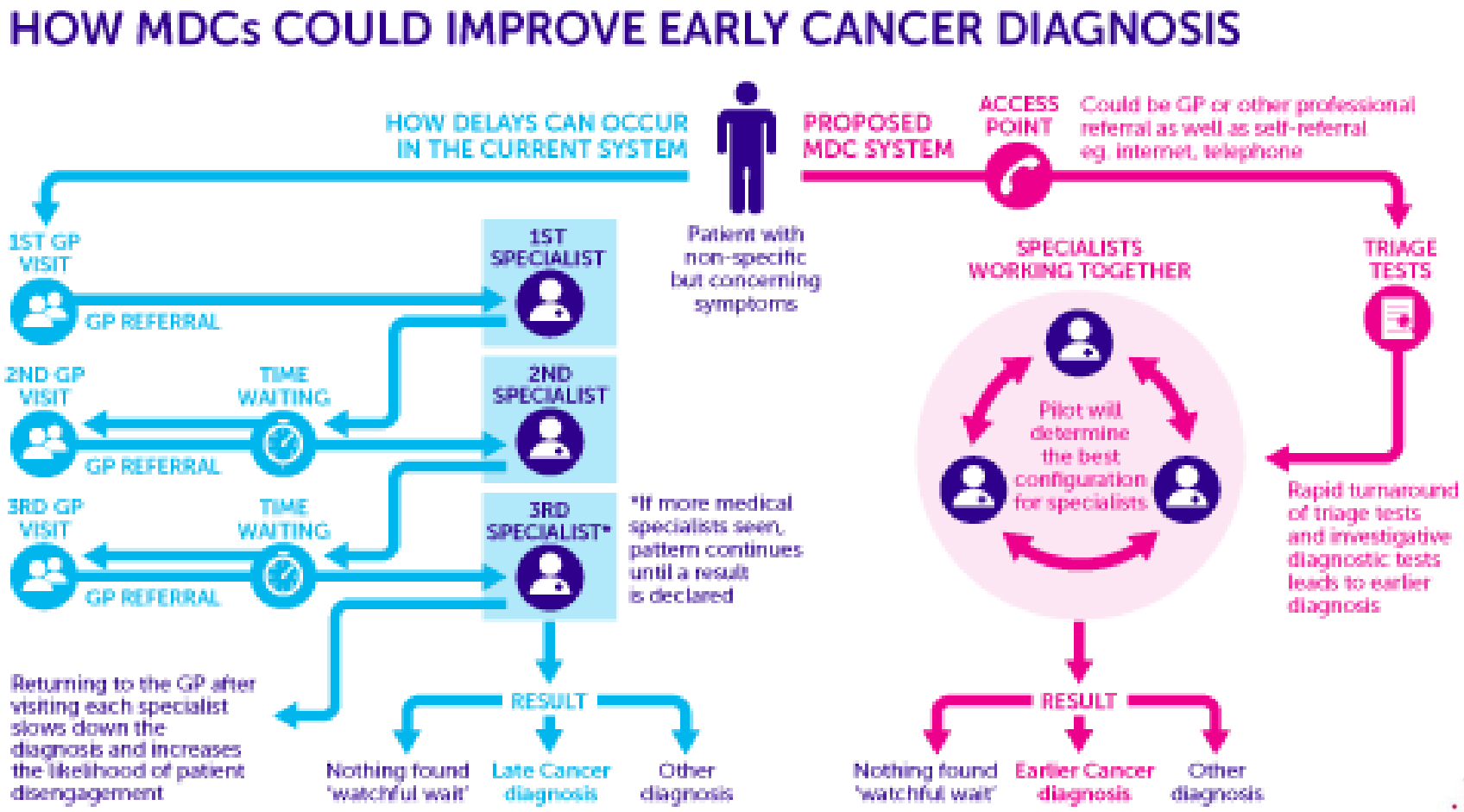


Lyratzopoulos G et al., *Lancet Oncology* 2012

Decision-support tools



Multidisciplinary Diagnostic Centres



CANCER RESEARCH UK

CanTest

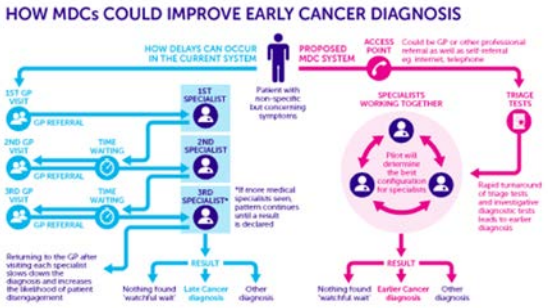
The research collaborative awarded the inaugural Catalyst Award

4 UK centres (Cambridge, Exeter, Leeds & UCL)
5 international partners (Houston & Seattle, USA; Melbourne, Au; Aarhus, DK; Utrecht, NL)

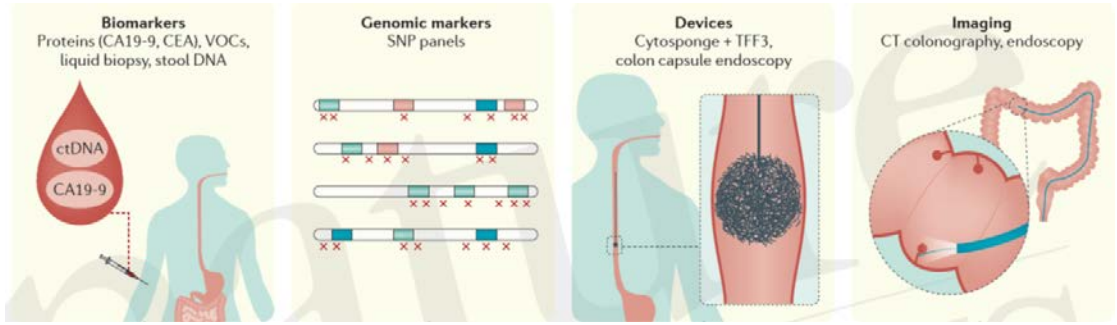
Aims to accelerate progress towards earlier diagnosis of cancer, with particular focus on optimising the diagnostic process in primary care through smarter use of tests

Expertise in Primary care, Internal Medicine, Epidemiology, Psychology, Health Technology Assessment, Statistics, Health Economics, Public health

Conclusions



First symptom → PCP appointment → Hospital referral → Diagnosis



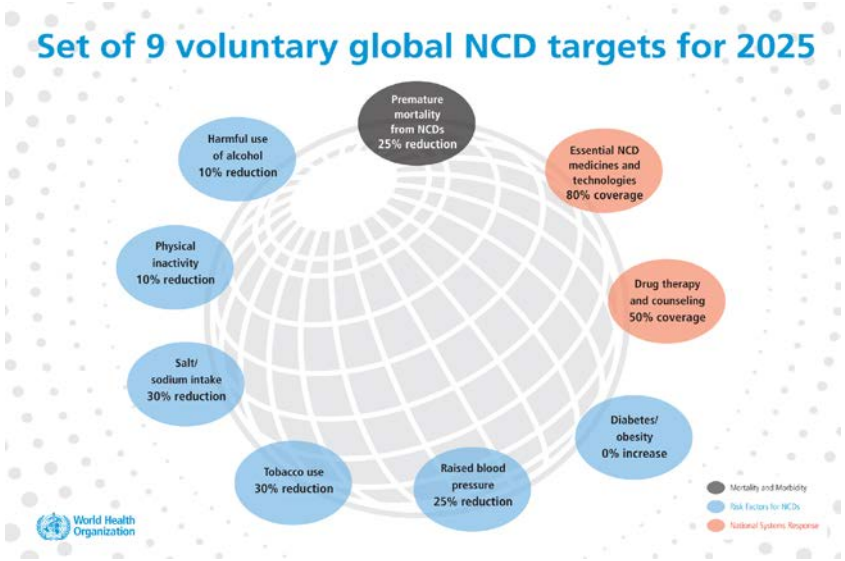
A Decentralised Model for Cancer Services

Dr Dinesh Pendharkar MD PhD MBA
Director Oncology
Sarvodaya Hospital & Research Center
Faridabad (Delhi)
drpendharkar@gmail.com

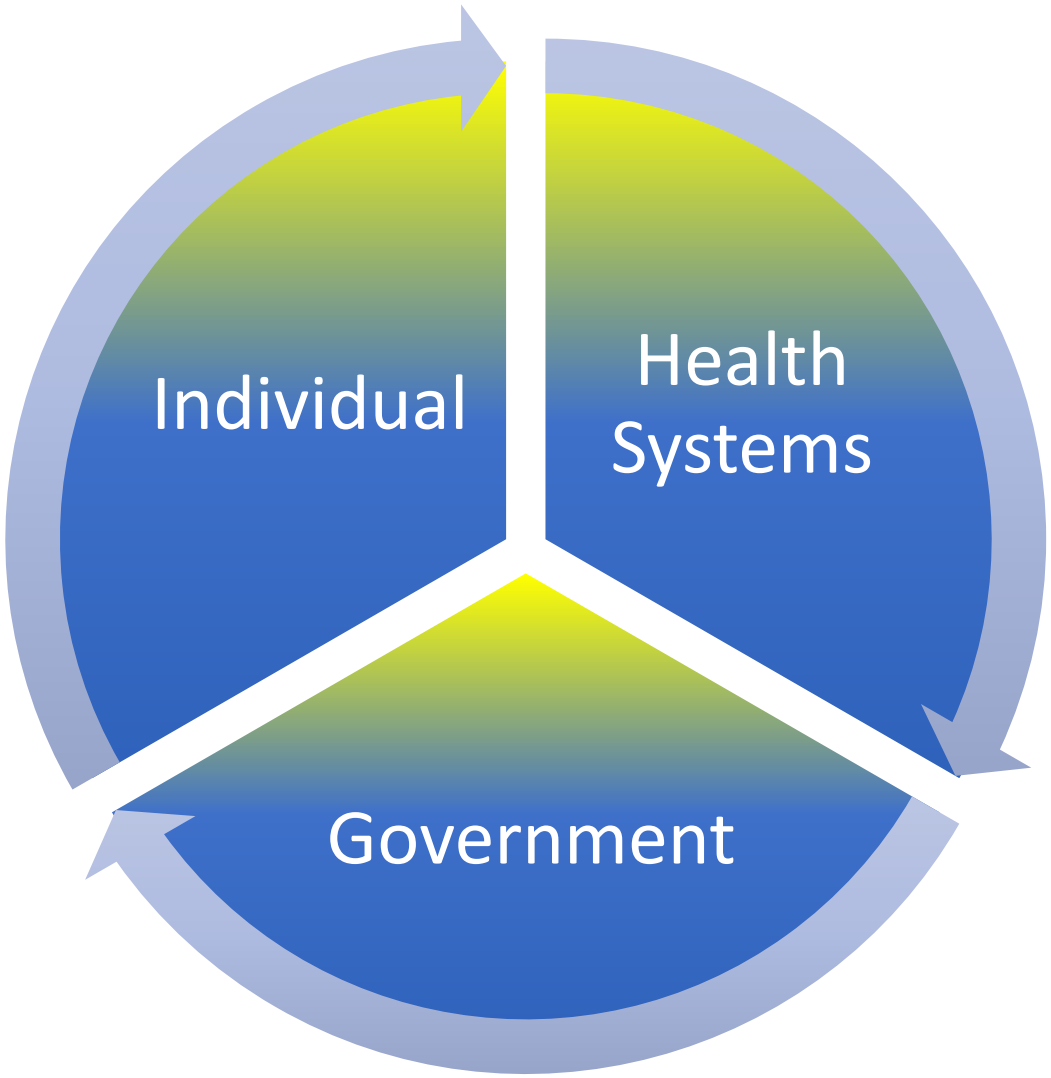
Early detection –is easy sometimes , But what next ???

- India has 40 % head and neck cancer which can be detected very early without much ado
- You have palpated a breast lump or in LMIC seen mass skin involvement.
- What next ?????

Global Cooperation
Innovation at scale
Innovative solutions



Major Challenge - Access to care



Requirement

- Strategy to increase access to care
- Strategy to reduce cost of cancer care
- Strategy to reduce social/ familial impact of cancer
- Strategy to decentralize care

Cost of Access to Care

- Bringing care close to the periphery
- Decentralization of care
- Create centers in every region the country
- Empower government owned facilities in cancer care
- Rationalize government expenditure with focus on curable cancers, adjuvant chemotherapy

Cost of hospitalization and diagnostics

- Use available government owned low cost (No cost) facilities
- Use government own diagnostics

Cost of Medication

- Rationalize essential drug list based on cost
- Rationalize chemotherapy regimens based on cost and maximum possible efficacy
- Rational regimens which can have an uninterrupted supply
- Guidelines to exclude use of drugs and propagate rational use of drugs

Cost of wage loss

- Bringing facility to periphery, close to residence
- Decentralization

Aim

- Creation and implementation of new health care delivery model
- Initiate cancer care services at district hospital

Primary Objectives

- To expand and ease access to cancer care
- To offer cancer care services at lowermost administrative level, government owned hospital setup

Secondary Objectives

- To establish **a nodal cancer unit** in district/regional health facility
- To create a ***community point of contact for cancer*** (CPCC)
- To empower the district hospital in assisting cancer patient by training of a medical and paramedical personnel

Other objectives

- Cancer counseling services
- Assistance in cancer detection ,evaluation
- Assistance in cancer care including treatment like chemotherapy
- Assistance in cancer prevention
- Assistance in palliative care and supportive care
- Public education on cancer
- Advocacy and liaising

Physical Facility

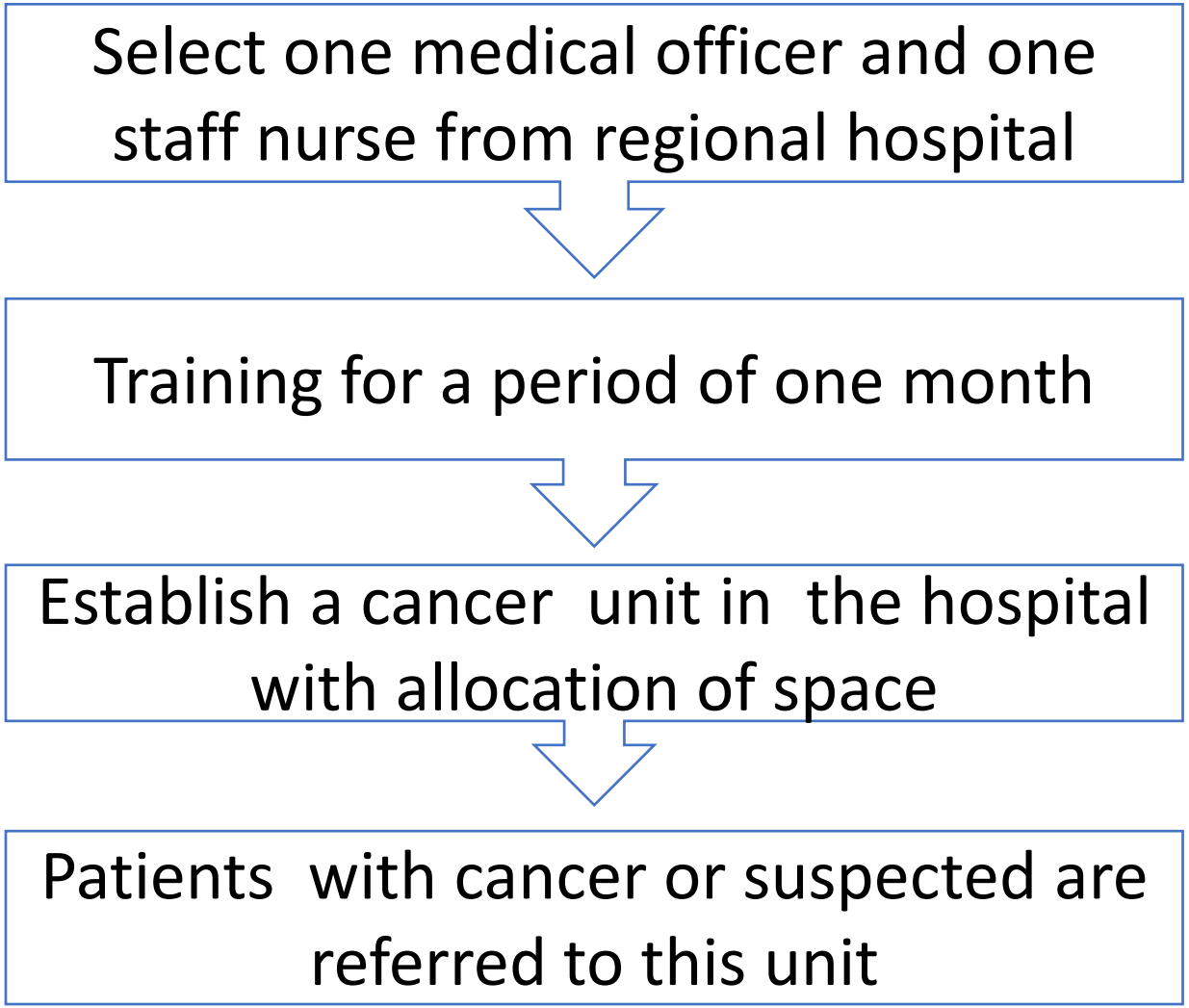
Physician & Nursing

Nodal Cancer Unit

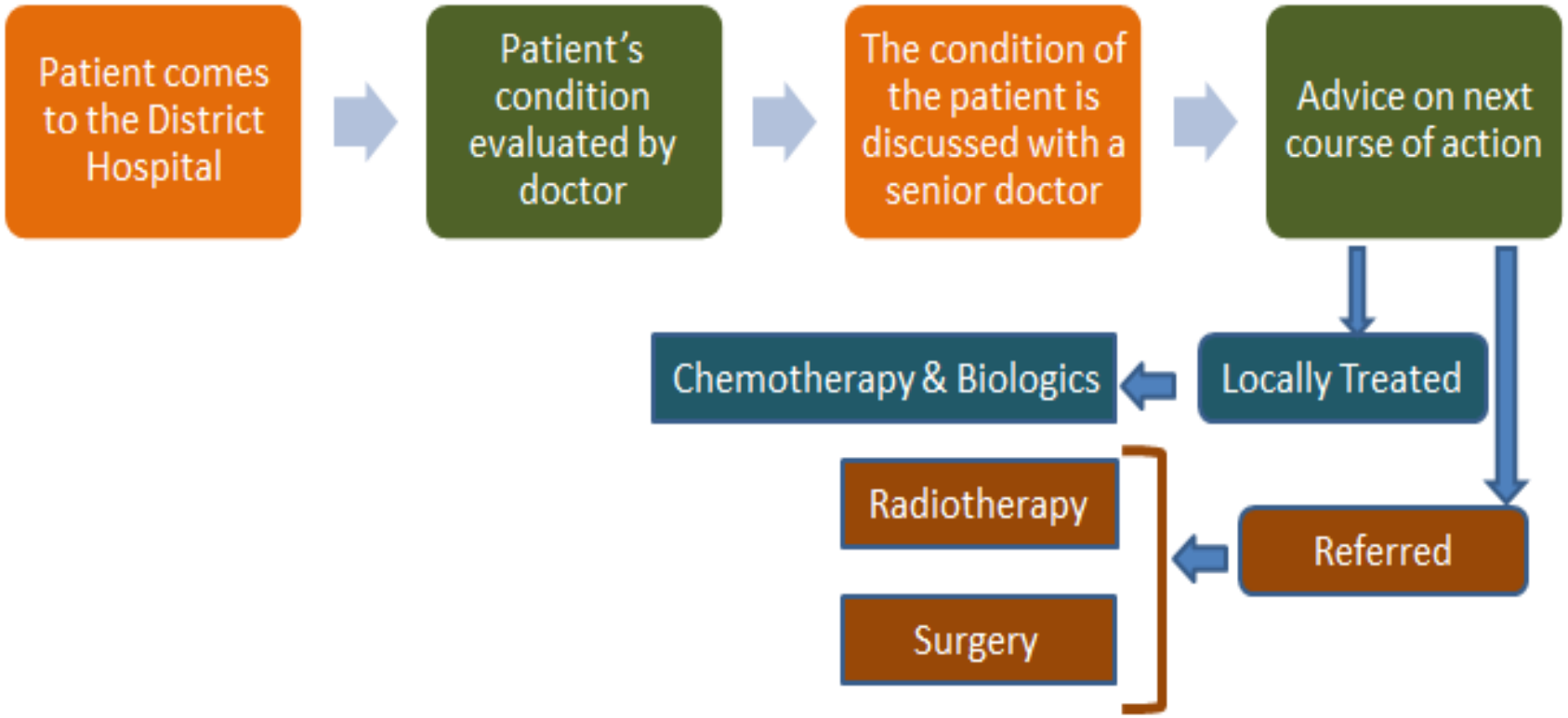
Systems & Processes

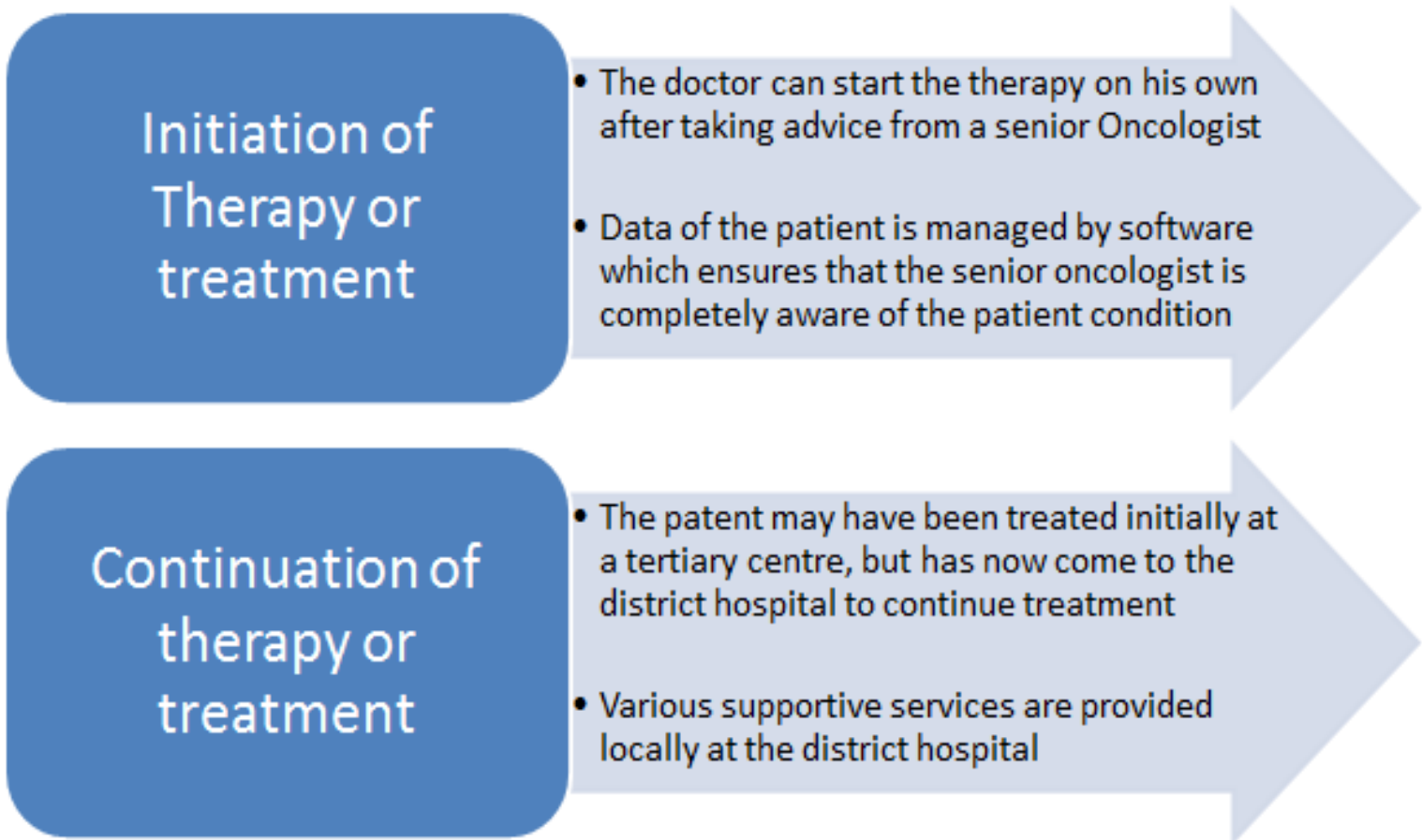
Oncology Backup

Overall Process

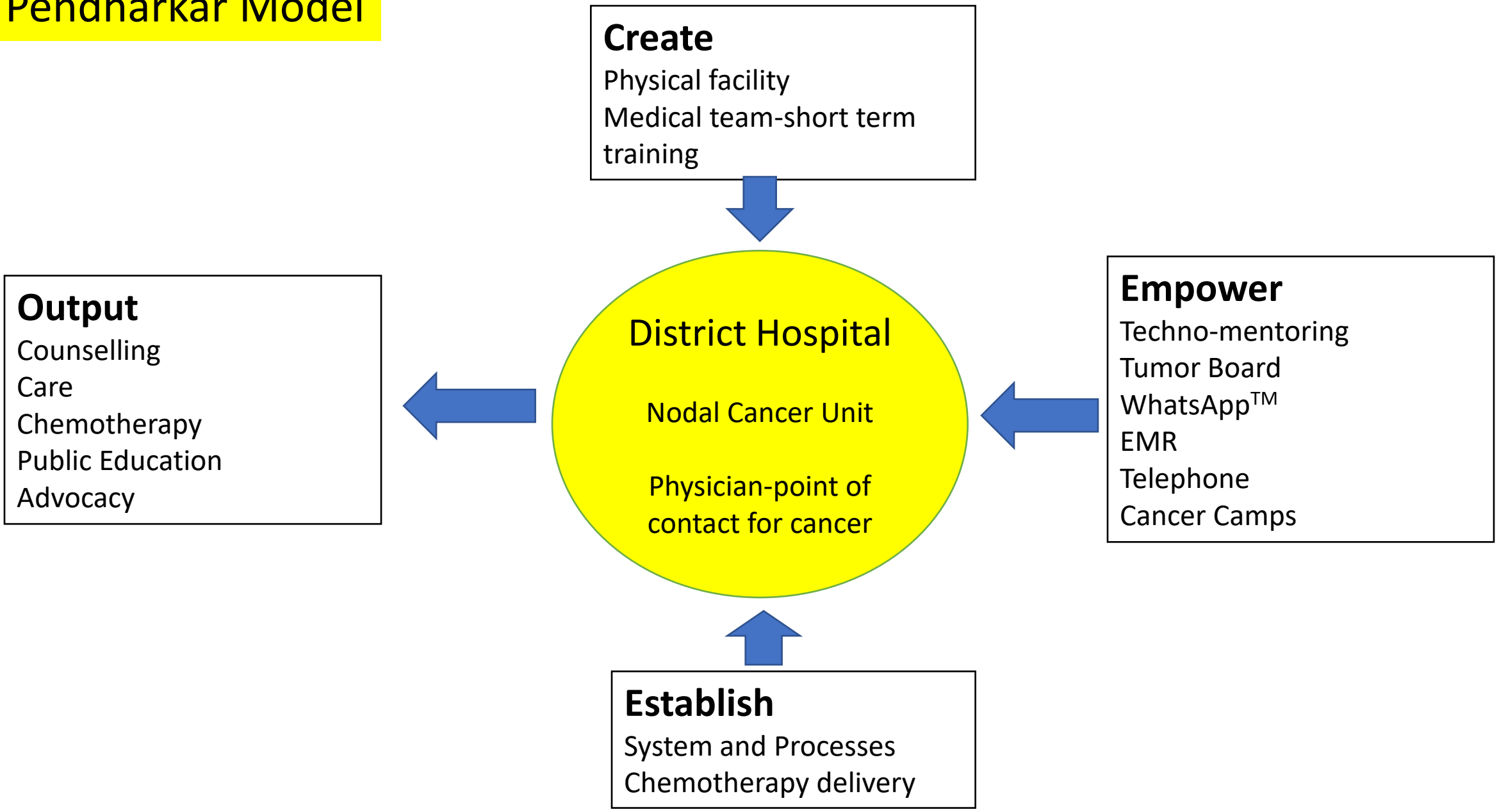


Flow Chart of patient care at District Hospital




Initiation of Therapy or treatment
• The doctor can start the therapy on his own after taking advice from a senior Oncologist
• Data of the patient is managed by software which ensures that the senior oncologist is completely aware of the patient condition
Continuation of therapy or treatment
• The patent may have been treated initially at a tertiary centre, but has now come to the district hospital to continue treatment
• Various supportive services are provided locally at the district hospital

Pendharkar Model



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Dispur
ASSAM
NAGALAND
Kohima
Shillong
MEGHALAYA
Imphal
MANIPUR
Agartala
TRIPURA
Aizawl
MIZORAM
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GUJARAT
Bhopal
MADHYA PRADESH
DAMAN & DIU
Daman
Silvassa
DADRA & NAGAR HAVELI
Mumbai
MAHARASHTRA
Raipur
CHHATTISGARH
ODISHA
Bhubaneswar
BAY OF BENGAL
TELANGANA
Hyderabad
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Panaji
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Port Blair
LEGEND
International Boundary
State Boundary
Country Capital
State Capital
Map not to Scale
INDIAN OCEAN
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State	Districts/Hospitals	Area (km^2)	Population (Mln)*
Madhya Pradesh	51	308,252	81.40
Odisha	30	155,707	45.59
Himachal Pradesh	11	055,673	07.10
Rajasthan	33	342,239	74.80
Total	125	861,871	208,89

Uttar Pradesh	**10**		

*Ref.Indiaonlinepages.com, 2017 estmated

Himachal Pradesh

- Dec 2016 First training
- 26 Jan 2017 Official launch by Health Minister
- 11 Districts Trained
- More than 1000 patients already assisted

मंडी अस्पताल में कैंसर केयर यूनिट शुरू

वीरवार को स्वास्थ्य मंत्री कौल सिंह ठाकुर ने किया शुभारंभ

निजी रिपोर्टर | मंडी

स्वास्थ्य एवं परिवार कल्याण, राजस्व व विधि मंत्री कौल सिंह ठाकुर ने वीरवार को जोनल हॉस्पिटल मंडी में कैंसर केयर यूनिट व टीबी के रोगियों के लिए डेली रेजिमिन फिक्स्ड डोज कम्बीनेशन योजना का शुभारंभ किया। कौल सिंह ठाकुर ने कहा कि कैंसर के मरीजों को उनके घर द्वार के समीप बेहतर उपचार की सुविधा प्रदान करने के लिए सरकार ने जिला अस्पतालों मंडी, हमीरपुर, ऊना, चंबा, कुल्लू, किन्नौर, बिलासपुर, व कांगड़ा व नागरिक चिकित्सालय रोहडू व रामपुर में कैंसर रोग की जानकारी प्रदान करने तथा कैंसर रोग के उपचार की सुविधा प्रदान करने का निर्णय लिया है। मंडी, हमीरपुर, ऊना, चंबा व कांगड़ा में यह सुविधा अब शुरू हो गई। जबकि अन्य जिला में भी इसे जल्द शुरू किया जाएगा।

स्वास्थ्य मंत्री ने कहा कि कैंसर यूनिट का मुख्य कार्य कैंसर के प्रति जागरूकता, कैंसर रोग का निदान इलाज करना है। कैंसर के रोगियों का शुरू में ही पता लगाने के लिए मंडी, हमीरपुर व बिलासपुर में घर-घर जाकर स्क्रीनिंग करके लोगों की जांच शुरू की गई है। कैंसर के कारणों में प्रमुख कारण तंबाकू का प्रयोग है।

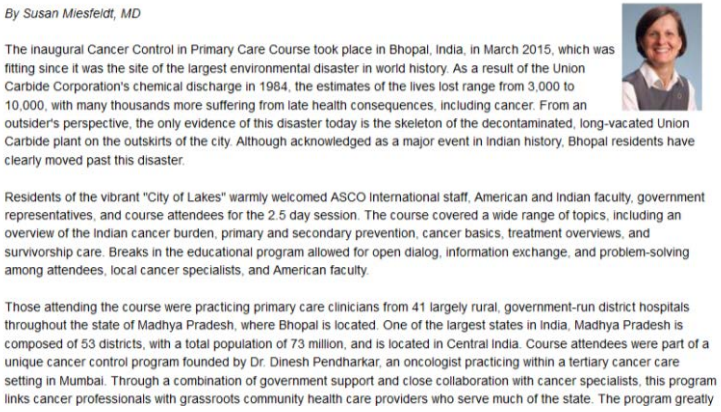
प्रदेश सरकार ने तंबाकू नियंत्रण कार्यक्रम के तहत राज्य के सार्वजनिक स्थलों पर धूम्रपान पर प्रतिबंध लगाया है। सरकार ने हाल ही में खुली सिगरेट व बीड़ी बेचने पर भी प्रतिबंध लगा दिया है तथा बनाना अनिवार्य किया गया है। स्वास्थ्य मंत्री ने बताया कि टीबी के मरीजों के लिए आरंभ की गई डेली रेजिमिन फिक्स्ड डोज कम्बीनेशन योजना नई योजना के तहत रोगियों को दवा की मात्रा निर्धारित की गई है। टीबी के रोगी को पहले एक दिन छोड़कर डाटस प्रदाता की देखरेख में दवाई खिलाई जाती थी, लेकिन अब यह हर रोज खिलाई जाएगी। पहले रोगी को सात गोलियां एक दिन में लेनी पड़ती है लेकिन इसे अब कम करके तीन-चार गोलियों निर्धारित की

मंडी : टीबी रोगियों के लिए डेली रेजिमिन फिक्स्ड डोज कॉम्बीनेशन योजना शुरू करते स्वास्थ्य मंत्री कौल सिंह ठाकुर व अन्य।

Roles…

1. Leading community-based cancer awareness and prevention ,education
2. Conducting cancer screening and early detection services
3. Referring patients to appropriate tertiary centers for diagnostic and tertiary care services, including surgery, radiation, and adjuvant treatment care planning.
4. Administering basic chemotherapy services, under the ongoing direction of specialists
5. Conducting post-treatment surveillance
6. Providing palliative care and end of life services.

Miesfeldt S. The inaugural cancer control in primary care course in Bhopal India; 2015.Available from :http://www.connection.asco.org/commentary/inaugural-cancer- control-primary –care-course-bhopal-india.(last accessed on 2016 Mar13).



By Susan Miesfeldt, MD

The inaugural Cancer Control in Primary Care Course took place in Bhopal, India, in March 2015, which was fitting since it was the site of the largest environmental disaster in world history. As a result of the Union Carbide Corporation's chemical discharge in 1984, the estimates of the lives lost range from 3,000 to 10,000, with many thousands more suffering from late health consequences, including cancer. From an outsider's perspective, the only evidence of this disaster today is the skeleton of the decontaminated, long-vacated Union Carbide plant on the outskirts of the city. Although acknowledged as a major event in Indian history, Bhopal residents have clearly moved past this disaster.

Residents of the vibrant "City of Lakes" warmly welcomed ASCO International staff, American and Indian faculty, government representatives, and course attendees for the 2.5 day session. The course covered a wide range of topics, including an overview of the Indian cancer burden, primary and secondary prevention, cancer basics, treatment overviews, and survivorship care. Breaks in the educational program allowed for open dialog, information exchange, and problem-solving among attendees, local cancer specialists, and American faculty.

Those attending the course were practicing primary care clinicians from 41 largely rural, government-run district hospitals throughout the state of Madhya Pradesh, where Bhopal is located. One of the largest states in India, Madhya Pradesh is composed of 53 districts, with a total population of 73 million, and is located in Central India. Course attendees were part of a unique cancer control program founded by Dr. Dinesh Pendharkar, an oncologist practicing within a tertiary cancer care setting in Mumbai. Through a combination of government support and close collaboration with cancer specialists, this program links cancer professionals with grassroots community health care providers who serve much of the state. The program greatly

FREE CANCER TREATMENT IN ALL DISTRICTS

01 District cancer care programme extended to all districts

02 Free diagnosis, surgery, chemotherapy & medicines at all DHHs

03 All expenses borne by state from its own resources

04 Radiotherapy centres worth Rs 40-50 crores at Nabarangpur, Jharsuguda, Angul & Bhubaneswar within two years

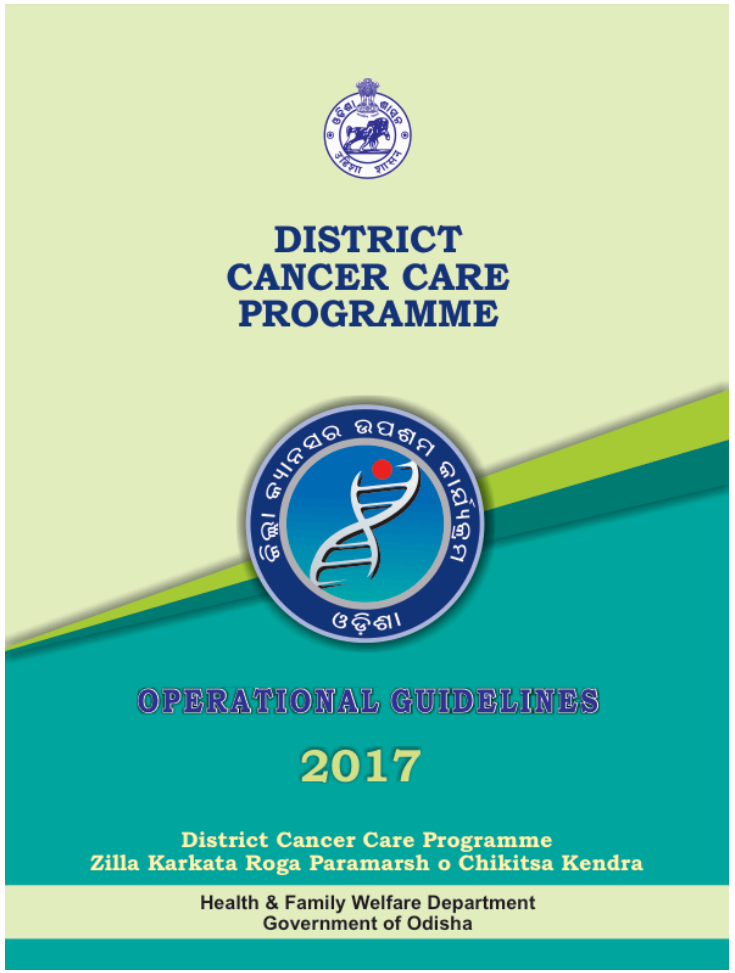
05 Special drive for early detection at community level

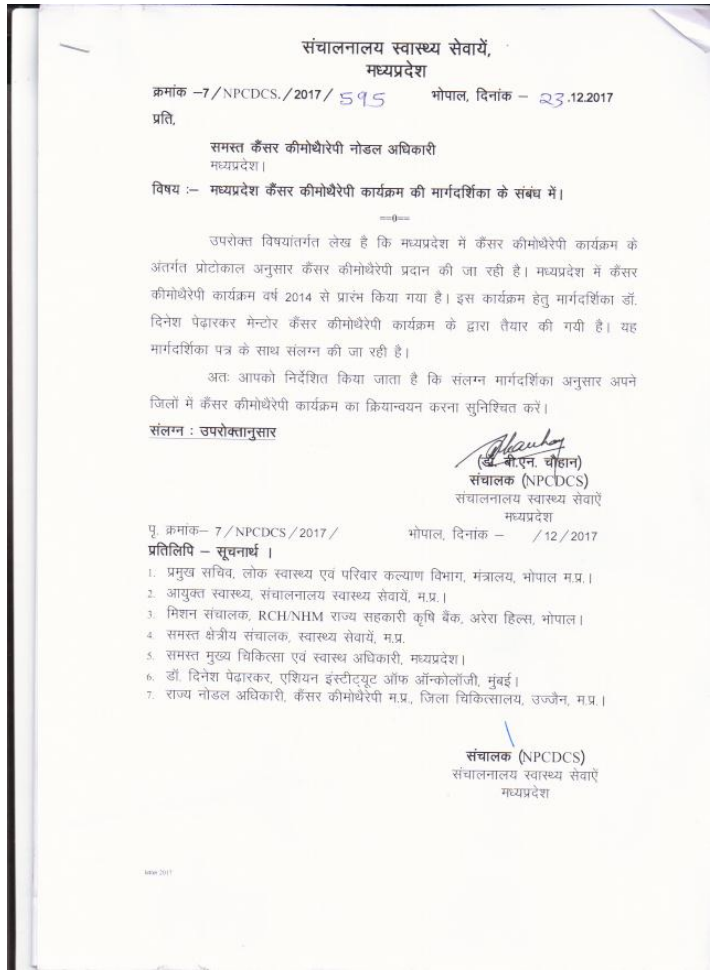
06 5,000 patients benefited from 1st phase cancer care programme in 13 districts

@Naveen_Odisha

@CMO_Odisha
@Naveen_Odisha

CMO.Odisha
Naveen.Odisha





संचालनालय स्वास्थ्य सेवायें,
मध्यप्रदेश

क्रमांक –7/NPCDCS./2017/595 भोपाल, दिनांक – 23.12.2017

प्रति,

समस्त कैंसर कीमोथैरेपी नोडल अधिकारी
मध्यप्रदेश।

विषय :– मध्यप्रदेश कैंसर कीमोथैरेपी कार्यक्रम की मार्गदर्शिका के संबंध में।

==0==

उपरोक्त विषयांतर्गत लेख है कि मध्यप्रदेश में कैंसर कीमोथैरेपी कार्यक्रम के अंतर्गत प्रोटोकाल अनुसार कैंसर कीमोथैरेपी प्रदान की जा रही है। मध्यप्रदेश में कैंसर कीमोथैरेपी कार्यक्रम वर्ष 2014 से प्रारंभ किया गया है। इस कार्यक्रम हेतु मार्गदर्शिका डॉ. दिनेश पेढ़ारकर मेन्टोर कैंसर कीमोथैरेपी कार्यक्रम के द्वारा तैयार की गयी है। यह मार्गदर्शिका पत्र के साथ संलग्न की जा रही है।

अतः आपको निर्देशित किया जाता है कि संलग्न मार्गदर्शिका अनुसार अपने जिलों में कैंसर कीमोथैरेपी कार्यक्रम का क्रियान्वयन करना सुनिश्चित करें।

संलग्न : उपरोक्तानुसार

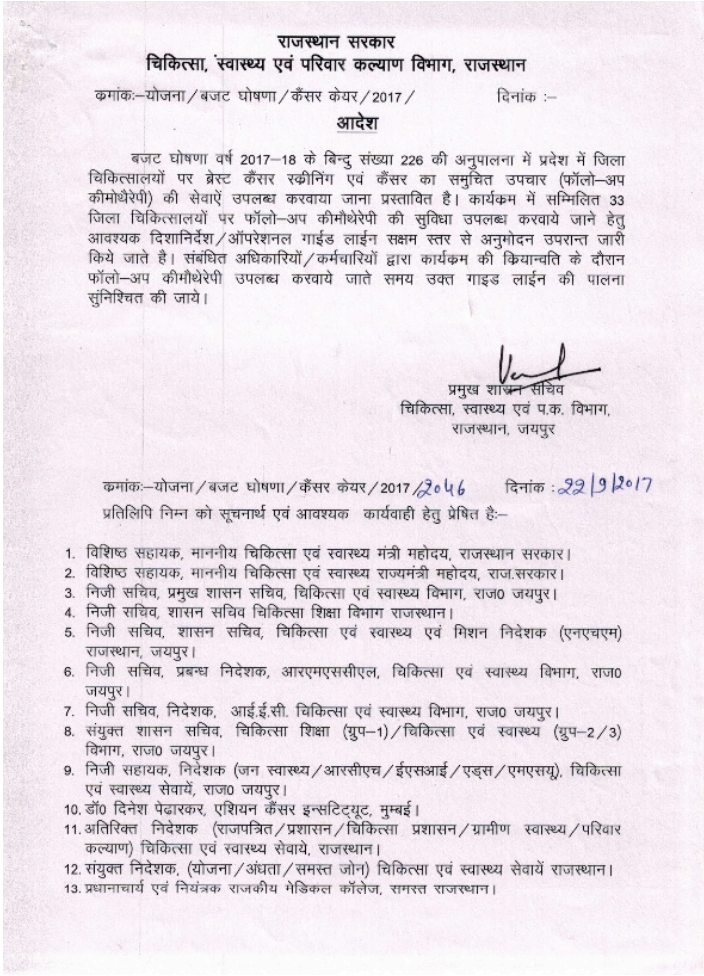
(डॉ. बी.एन. चौहान)
संचालक (NPCDCS)
संचालनालय स्वास्थ्य सेवाऐं
मध्यप्रदेश

पृ. क्रमांक– 7/NPCDCS/2017/ भोपाल, दिनांक – /12/2017

प्रतिलिपि – सूचनार्थ ।

1. प्रमुख सचिव, लोक स्वास्थ्य एवं परिवार कल्याण विभाग, मंत्रालय, भोपाल म.प्र.।
2. आयुक्त स्वास्थ्य, संचालनालय स्वास्थ्य सेवायें, म.प्र.।
3. मिशन संचालक, RCH/NHM राज्य सहकारी कृषि बैंक, अरेरा हिल्स, भोपाल।
4. समस्त क्षेत्रीय संचालक, स्वास्थ्य सेवायें, म.प्र.
5. समस्त मुख्य चिकित्सा एवं स्वास्थ अधिकारी, मध्यप्रदेश।
6. डॉ. दिनेश पेढारकर, एशियन इंस्टीट्यूट ऑफ ऑन्कोलॉजी, मुंबई।
7. राज्य नोडल अधिकारी, कैंसर कीमोथैरेपी म.प्र., जिला चिकित्सालय, उज्जैन, म.प्र.।

संचालक (NPCDCS)
संचालनालय स्वास्थ्य सेवाऐं
मध्यप्रदेश



राजस्थान सरकार
चिकित्सा, स्वास्थ्य एवं परिवार कल्याण विभाग, राजस्थान

क्रमांकः–योजना/बजट घोषणा/कैंसर केयर/2017/ दिनांक :–

आदेश

बजट घोषणा वर्ष 2017–18 के बिन्दु संख्या 226 की अनुपालना में प्रदेश में जिला चिकित्सालयों पर ब्रेस्ट कैंसर स्क्रीनिंग एवं कैंसर का समुचित उपचार (फॉलो–अप कीमोथैरेपी) की सेवाऐं उपलब्ध करवाया जाना प्रस्तावित है। कार्यक्रम में सम्मिलित 33 जिला चिकित्सालयों पर फॉलो–अप कीमोथैरेपी की सुविधा उपलब्ध करवाये जाने हेतु आवश्यक दिशानिर्देश/ऑपरेशनल गाईड लाईन सक्षम स्तर से अनुमोदन उपरान्त जारी किये जाते है। संबंधित अधिकारियों/कर्मचारियों द्वारा कार्यक्रम की क्रियान्विति के दौरान फॉलो–अप कीमोथेरेपी उपलब्ध करवाये जाते समय उक्त गाइड लाईन की पालना सुनिश्चित की जाये।

प्रमुख शासन सचिव
चिकित्सा, स्वास्थ्य एवं प.क. विभाग,
राजस्थान, जयपुर

क्रमांकः–योजना/बजट घोषणा/कैंसर केयर/2017/2046 दिनांक :22/9/2017

प्रतिलिपि निम्न को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित है:–

1. विशिष्ठ सहायक, माननीय चिकित्सा एवं स्वास्थ्य मंत्री महोदय, राजस्थान सरकार।
2. विशिष्ठ सहायक, माननीय चिकित्सा एवं स्वास्थ्य राज्यमंत्री महोदय, राज.सरकार।
3. निजी सचिव, प्रमुख शासन सचिव, चिकित्सा एवं स्वास्थ्य विभाग, राज0 जयपुर।
4. निजी सचिव, शासन सचिव चिकित्सा शिक्षा विभाग राजस्थान।
5. निजी सचिव, शासन सचिव, चिकित्सा एवं स्वास्थ्य एवं मिशन निदेशक (एनएचएम) राजस्थान, जयपुर।
6. निजी सचिव, प्रबन्ध निदेशक, आरएमएससीएल, चिकित्सा एवं स्वास्थ्य विभाग, राज0 जयपुर।
7. निजी सचिव, निदेशक, आई.ई.सी. चिकित्सा एवं स्वास्थ्य विभाग, राज0 जयपुर।
8. संयुक्त शासन सचिव, चिकित्सा शिक्षा (ग्रुप–1)/चिकित्सा एवं स्वास्थ्य (ग्रुप–2/3) विभाग, राज0 जयपुर।
9. निजी सहायक, निदेशक (जन स्वास्थ्य/आरसीएच/ईएसआई/एड्स/एमएसयू), चिकित्सा एवं स्वास्थ्य सेवायें, राज0 जयपुर।
10. डॉ0 दिनेश पेढारकर, एशियन कैंसर इन्सटिट्यूट, मुम्बई।
11. अतिरिक्त निदेशक (राजपत्रित/प्रशासन/चिकित्सा प्रशासन/ग्रामीण स्वास्थ्य/परिवार कल्याण) चिकित्सा एवं स्वास्थ्य सेवाये, राजस्थान।
12. संयुक्त निदेशक, (योजना/अंधता/समस्त जोन) चिकित्सा एवं स्वास्थ्य सेवायें राजस्थान।
13. प्रधानाचार्य एवं नियंत्रक राजकीय मेडिकल कॉलेज, समस्त राजस्थान।

19:34 ...

Tweet

Dr. S., Rajesh IFS
@rskumarifs

Pathbraking initiative on affordable cancer Care In District Hospital at Barwani.A system based pro Bono approach for cancer Care capacity building with tremendous potential for replication @DineshPendhark4 from #NITI's #AspirationalDistricts.

Tweet your reply

NITI Aayog @NITIAayog · 2d

#NewsFromNITI: Adviser @IasAlok chaired meeting on accessible & affordable cancer care in #AspirationalDistricts. Explored 'Pendharkar model' operational in 125 Dist hospitals in #HP, #MP & #Odisha to address financial, social & accessibility issues through public health system.

19:33 ...

You Tweet
Yesterday, 08:53

Alok Kumar 🇮🇳
@IasAlok

@DineshPendhark4 is a Man on a Mission to provide access to cancer care to all. Model of training GDMOs and Nurses to handle patients at the District Hospitals is a scalable one. Has imp elements of task shifting & capacity building. Need to expand to ALL #AspirationalDistricts

Amitabh Kant and 7 others

Tweet your reply

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Takeda Oncology

2017 ASCO EDUCATIONAL BOOK

AMERICAN SOCIETY OF CLINICAL ONCOLOGY

2017 EDUCATIONAL BOOK

Support for this program is funded through

CONQUER CANCER FOUNDATION®
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A special thanks to our Annual Meeting and Program supporters.

Vol. 37

ASCO

"Making a Difference in Cancer Care WITH YOU"

A PEER-REVIEWED, INDEXED PUBLICATION

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Unique Salient Features-
Healthcare Delivery Model- Pendharkar

- Model using existing Human Resource
- Model using existing Infrastructure
- Model using available Financial resources

- *Scalable, Replicable, Innovative Model*

Key elements

- Empower state owned units
- Empower lowermost feasible healthcare unit with other services
- Physician based model
- Mentoring and backup 24 x7

Thank you

DRPENDHARKAR @ GMAIL. COM

Session: Models of health care for earlier diagnosis of symptomatic cancer

Cancer Diagnosis: the South African experience

Jennifer Moodley

Director Cancer Research Initiative, Faculty of Health Sciences , UCT

Women's Health Research Unit, School of Public Health and Family Medicine, UCT

World Cancer Congress
Kuala Lumpur, Malaysia
1—4 Oct 2018

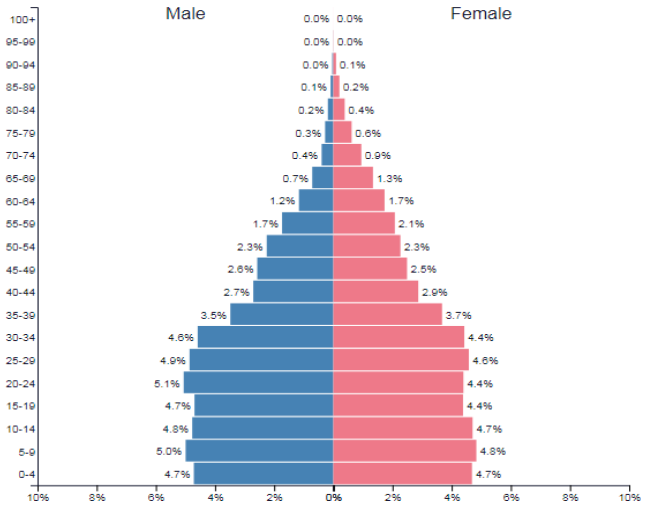
Strengthen
Inspire
Deliver

uicc
global cancer control
WORLD CANCER CONGRESS

Track T2: Advances in screening and early detection

Disclosure of interest: None declared

South Africa 2018
Population 55 866711



Gini coefficient 0.7

Unemployment: 27%

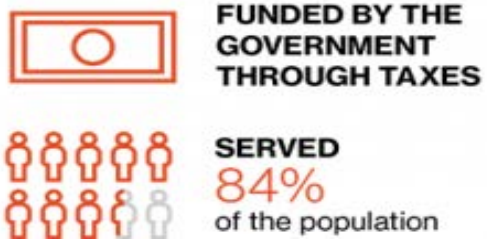
SA: health context

Health System

Private

4.4% GDP

Public



4.1% GDP

National DoH - policy development and oversight
9 Provincial DoH - policy implementation & service delivery
PHC clinics → District hospitals → Regional hospitals → Academic hospitals

Burden of Disease

- Communicable diseases (HIV)
- Perinatal & maternal
- Non-communicable diseases
- Injury-related disorder

SA: health context

- **Recent years increasing focus NCDS including cancer**
- **Ministerial Advisory Committee on Cancer Prevention and Control, 2013**
- **Policy development**
  - National policy and strategic framework on palliative care, 2018
  - Cervical cancer prevention and control policy updated 2017
  - ***Breast cancer prevention and control policy, 2017***
- **Breast cancer in SA**
  - Commonest cancer among women
  - No national data on stage at presentation: studies and hospital reports 24% - 55% (*Cairncross hospital data 2015, Dickens et al IJC 2014*)
  - No population based screening program, diagnosis on basis of symptomatic presentation
  - Women with breast symptoms self-present to 1° health care clinic➔ district hospital ➔ regional or academic health facility for diagnosis and treatment

SA Breast Cancer Prevention and Control Policy, 2017

Goals:

1. Improve survival
2. Decrease time to presentation and time to treatment
3. Decrease stage at presentation
4. Improve quality of life in survivorship and palliation
5. Effectively monitor and evaluate programme implementation and the impact of breast cancer interventions

Services

Dx of benign and malignant breast disease
Some surgical management
Support/training of PHC/District health staff
Survivorship support
Palliative care
Engage NGOS

Organizational structure

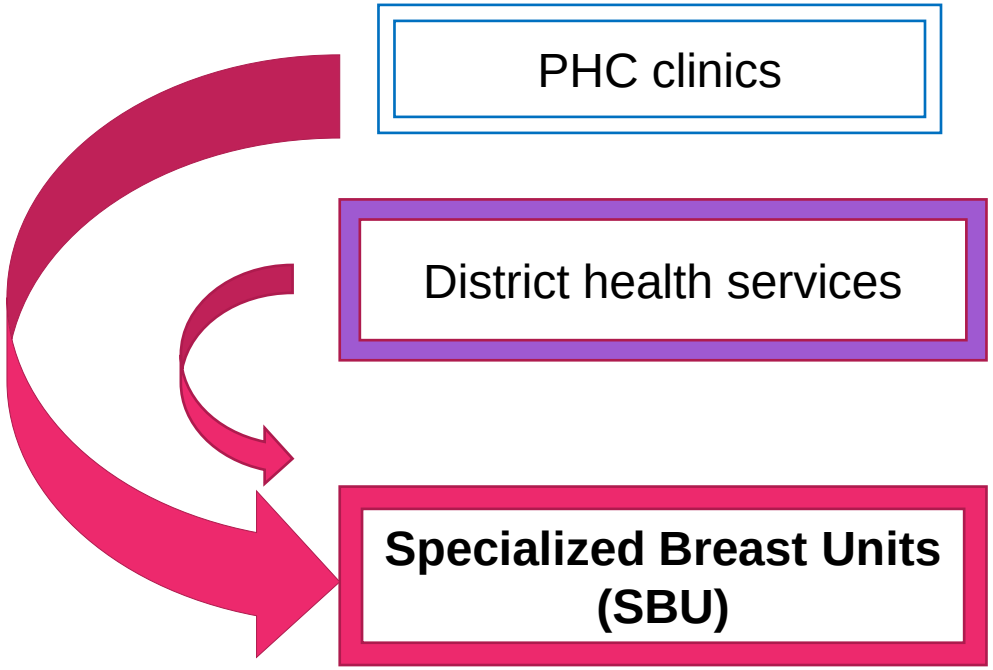
Specialized Breast Units (SBU)

Regional units, clustering of specialists
150 new breast ca./year
Open access/appointment based

Requirements

MDT - surgeons, pathologists, physio, counsellors etc
Breast imaging capacity
Core-needle biopsy equipment
Histopathology laboratories
Standardized protocols

Organizational structure



Regional units, clustering of specialists
150 new breast ca./year
Open access/appointment based

Services

CBE

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Dx of benign and malign[illegible]nt breast disease
Some surgical manageme[illegible]
Support/training of PHC/Distric[illegible] health staff
Survivorship support
Palliative care
Engage NGOS

Organizational structure

PHC clinics

District health services

Specialized Breast Units (SBU)

Regional units, clustering of specialists
150 new breast ca./year
Open access/appointment based

Requirements

PHC nurses skilled at CBE

PHC nurses and drs trained in CBE

MDT - surgeons, pathologists, physio, counsellors etc
Breast imaging capacity
Core-needle biopsy equipment
Histopathology laboratories
Standardized protocols

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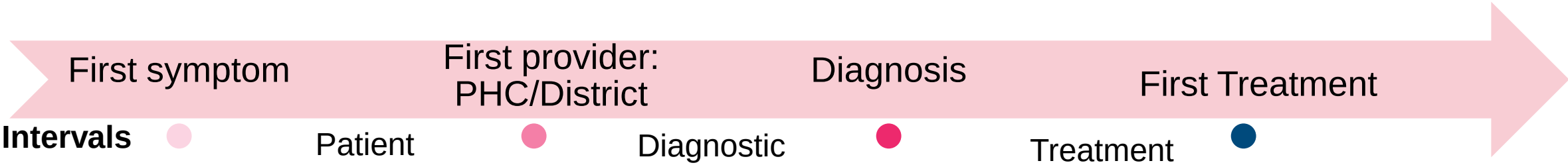
Chemotherapy
Advanced surgery
Radiation Rx
Specialist training

Provincial Oncology Units (PCOs)

COE for oncology

MDT team
Breast imaging
Pathology
Advanced surgery
Medical oncology
Radiation oncology

SA policy: Recommended time intervals



Intervals	Patient	Diagnostic	Treatment
Recommended Time	*None*	*21 days*	*31 days*
Research*	23	28	Sx 40 *(84)* days Chemo 14 days

Current baseline time intervals – limited data

**Study at 1 tertiary centre that has a one-stop breast clinic* *Moodley et al BMC cancer 2018*

Health system challenges: earlier diagnosis of symptomatic cancer

- Limited information on patient, diagnostic, treatment intervals and factors associated with these intervals
  - Required to guide intervention development and strengthen health system for earlier diagnosis
- Human resource challenges – shortage of skilled staff
- Shortage of other resources required for diagnosis e.g. imaging and pathology services
- Transport systems between levels of care
- Lack of electronic patient records and electronic booking systems impacts on:
  - ability to monitor and evaluate targets that have been set
  - referral and feedback system
- *Challenges in providing oncology treatment*

Achieving earlier diagnosis of symptomatic cancer

Well informed population and a strengthened health system

Thank you

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