Bringing PCPs ‘Back’ into Cancer (Survivorship) Care

Cancer Policy & Advocacy Team
June 23, 2023

Kevin C. Oeffinger, MD, FASCO
Director, DCI Center for Onco-Primary Care
Professor, Department of Medicine

Duke Cancer Institute

Outline

- Historical perspective
- Current status of models of care
- Barriers to care
- Onco-Primary Care
- How to partner with your PCP

Historical Perspective

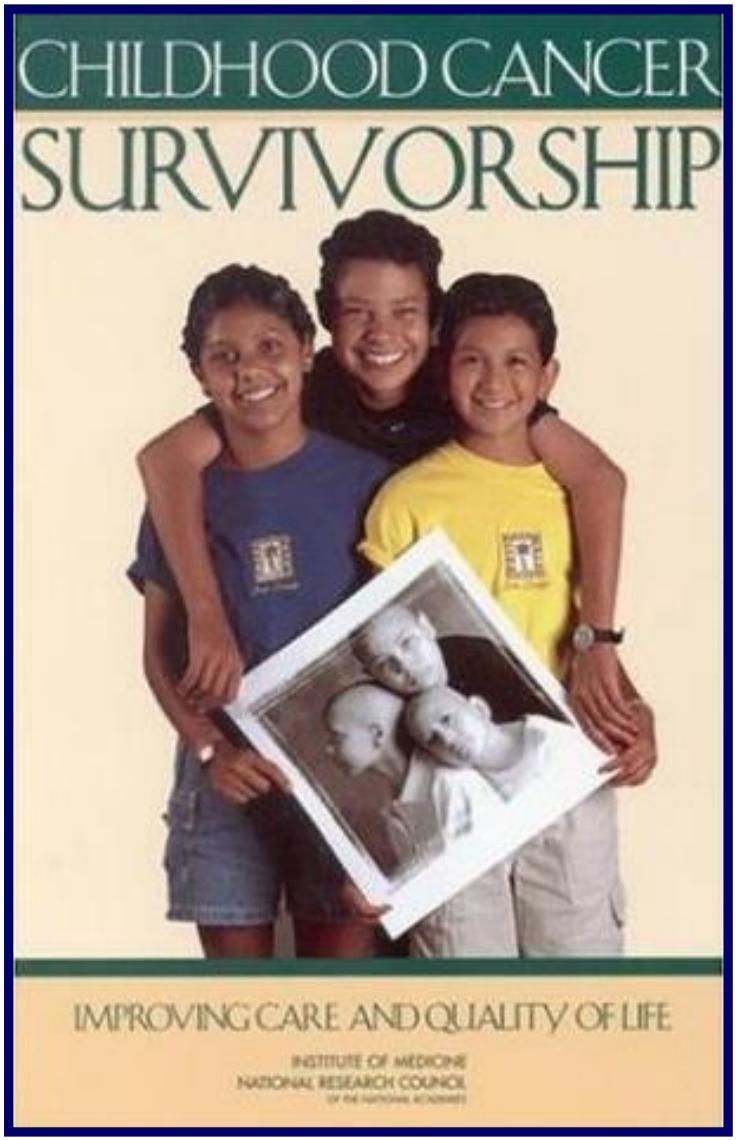
- Survivorship clinics for pediatric cancer survivors implemented in the 1980s – 1990s
- UT Southwestern – After Cancer Experience Young Adult Program - 1994

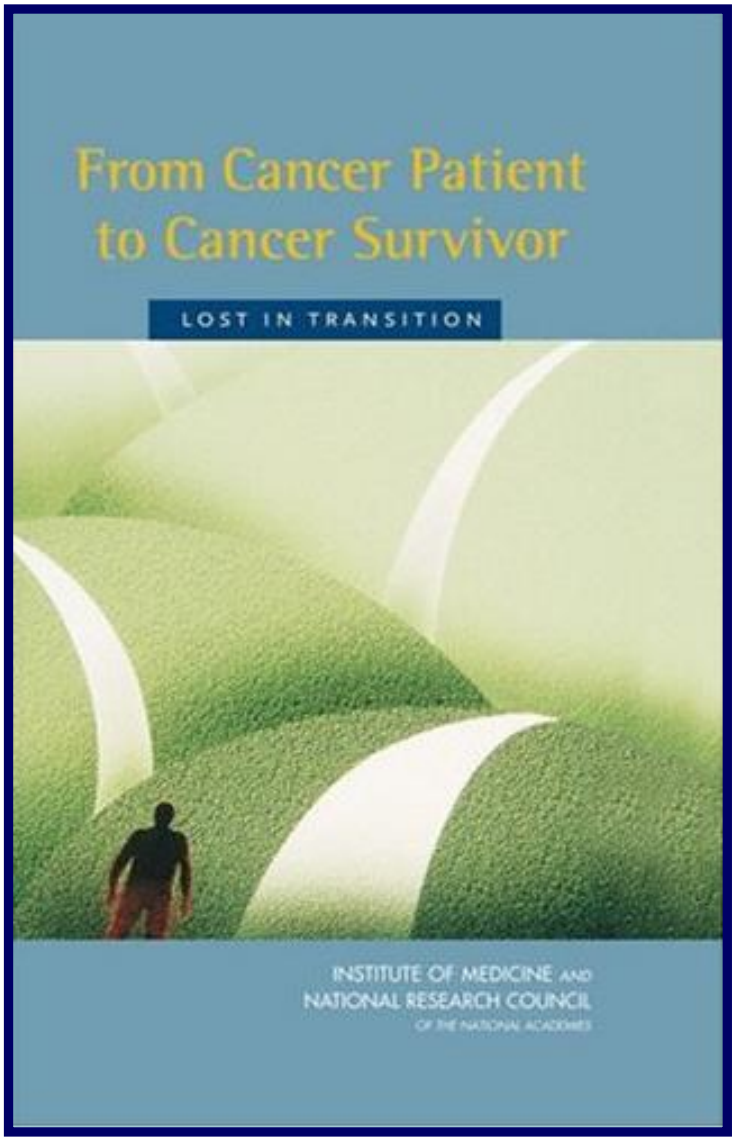
1688 CANCER April 1, 2000 / Volume 88 / Number 7

Grading of Late Effects in Young Adult Survivors of Childhood Cancer Followed in An Ambulatory Adult Setting

Kevin C. Oeffinger, M.D.[1]
Debra A. Eshelman, C.P.N.P.[2]
Gail E. Tomlinson, M.D., Ph.D.[3]
George R. Buchanan, M.D.[3]
Barbara M. Foster, Ph.D.[4]

IOM Reports – 2003, 2005





Models of Care

VOLUME 24 · NUMBER 32 · NOVEMBER 10 2006

JOURNAL OF CLINICAL ONCOLOGY

REVIEW ARTICLE

Models for Delivering Survivorship Care

Kevin C. Oeffinger and Mary S. McCabe

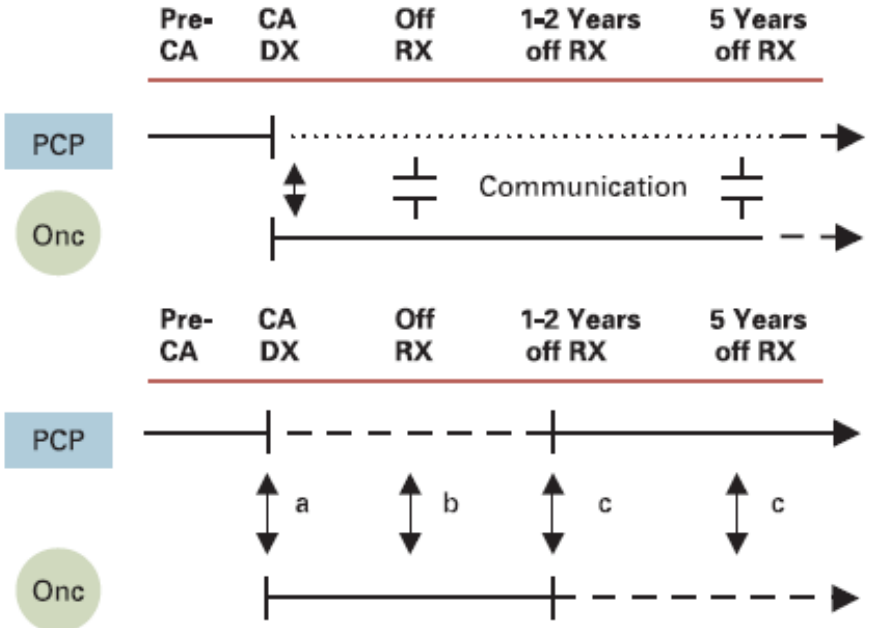
A B S T R A C T

Survivors of adult cancer face lifetime health risks that are dependent on their cancer, cancer treatment exposures, comorbid health conditions, genetic predispositions, and lifestyle behaviors. Content, intensity, and frequency of health care that addresses these risks vary from survivor to survivor. The aims of this article are to provide a rationale for survivor health care and to articulate a taxonomy of models of survivor care that is applicable to both community practices and academic institutions.

J Clin Oncol 24:5117-5124. © 2006 by American Society of Clinical Oncology

Concepts:

- Shared Care
- Risk-Stratified Care
- Role of the PCP

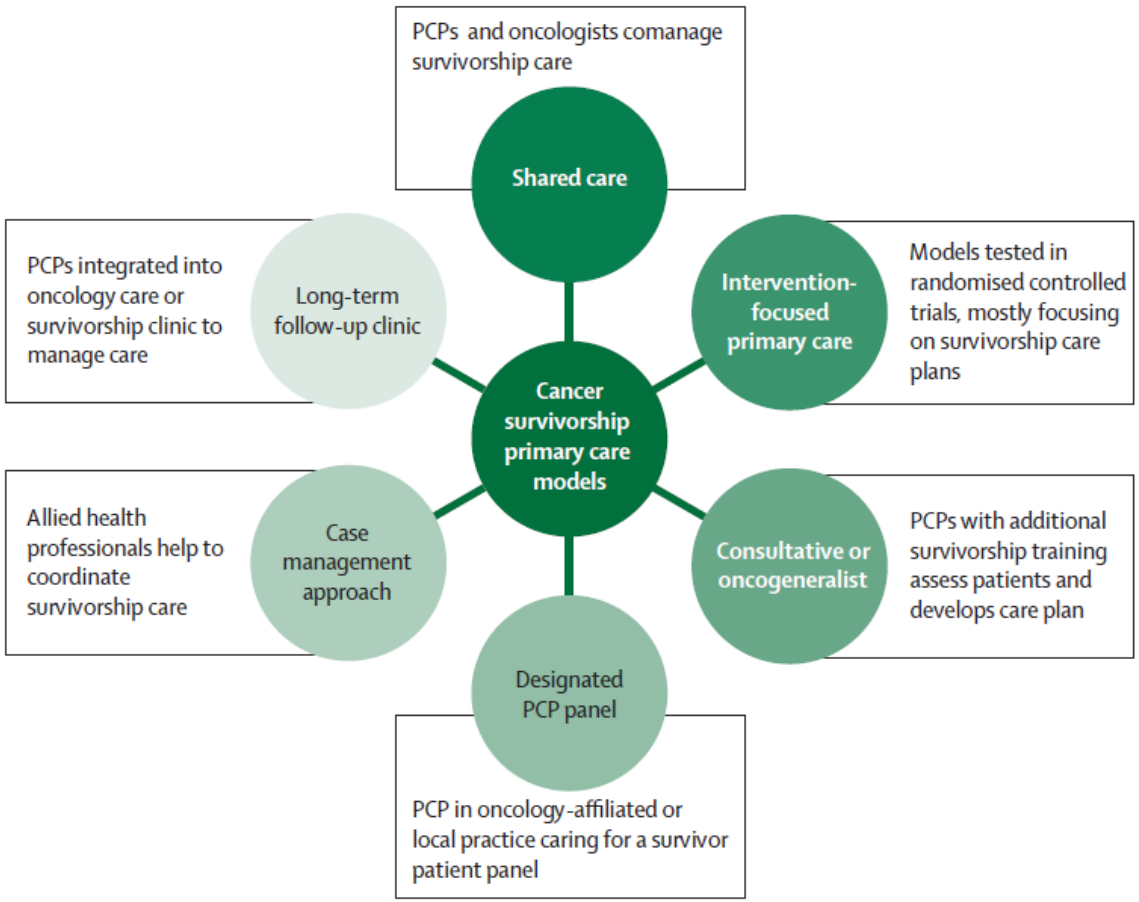


Duke Cancer Institute

Integrating primary care providers in the care of cancer survivors: gaps in evidence and future opportunities

Larissa Nekhlyudov, Denalee M O'Malley, Shawna V Hudson

Since the release of the Institute of Medicine report: *From cancer patient to cancer survivor: lost in transition*, in 2005, there has been a national call in the USA to provide coordi
emphasis on the role of primary care. Several models of
providers (PCPs) as receiving cancer survivors who are tr
specific types of information from oncology-based care (eg, s
cancer survivorship team. In this Series paper, we assess
literature, with a specific focus on strategies that aim to
different settings. We offer insights differentiating PCPs'
expertise could be used. We provide recommendations for e
that might advance the integration of PCPs in the care of ca



MSKCC APP Model

CARE DELIVERY ReCAP

Advanced Practice Providers and Survivorship Care: They Can Deliver

Bridgette Thom, MS[1]; Annelies H. Boekhout, PhD, RN[2]; Stacie Corcoran, RN[1]; Roberto Adsuar, MS[1]; Kevin C. Oeffinger, MD[3]; and Mary S. McCabe, RN[1]

J Oncol Pract 15:e230-e237.

- Advanced Practice Providers seeing survivors; clinic embedded in cancer disease groups
- **Pros**: large volume (10K-12K visits/yr), cost-effective, all cancer groups, high-quality care, SCP for patient and PCP
- **Cons**: 'Moving the mouse down the snake', space, lack of a primary care network, 1000 survivors = 1000 PCPs

Johns Hopkins PCP Model

Journal of Cancer Survivorship
https://doi.org/10.1007/s11764-022-01166-3

ORIGINAL RESEARCH

Check for updates

Optimizing cancer survivorship in primary care: patient experiences from the Johns Hopkins Primary Care for Cancer Survivors clinic

Youngjee Choi[1] · Elaina Parrillo[2] · Jennifer Wenzel[2,3,4] · Victoria F. Grabinski[3] · Aamna Kabani[3] · Kimberly S. Peairs[1,4]

- PCPs seeing survivors in their regular clinics
- **Pros**: integrated survivorship care with routine care, high-quality care, development of an SCP for patient
- **Cons**: only 6 general internists; low volume (400+/yr or about 1-2 survivors per PCP per week), predominantly breast cancer survivors

Barriers with Models

Oncologist perspective:

- Like to see ‘healthy’ survivors
- Trust bond with patient
- Difficulty finding a PCP for a survivor
- Lack of risk-stratified approach (ie, one-size fits all)
- Systems still operating in a volume-based manner (ie, RVUs)

PCP perspective:

- ‘Black hole’ of cancer care
- Poor communication from oncology team

How do We Communicate?

NOT THIS WAY

- biopsy on 3/14 and this demonstrated invasive ductal carcinoma, grade 3, ER/PR negative, Her2 overexpressed (3+ by IHC).

- established care with Dr. ___ on 4/17 and underwent MRI breast, showing 2.7cm mass right breast and suspicious nodes

- tentatively scheduled for bilateral mastectomy and reconstruction, but when her biomarkers returned as her2 positive disease, this was put on hold to further consider the utility of neoadjuvant chemotherapy.

- 4/14 Axilla core biopsy + for metastasis to node.

- 4/14 staging studies demonstrated liver lesion, favoring focal fat infiltration

- liver MRI notable for hemangioma, no other concerning lesions

- 5/14-8/14 Neoadjuvant TCHP chemotherapy done; continue Herceptin only through 4/15

- 9/14 Bilateral Mastectomies with complete pathological response ypT0ypN0 (0/16); reconstruction with tissue expanders.

- Adjuvant radiation 9/14- 10/14

- continuing adjuvant herceptin through 4/2015

Barriers with Models

Oncologist perspective:

- Like to see ‘healthy’ survivors
- Trust bond with patient
- Difficulty finding a PCP for a survivor
- Lack of risk-stratified approach (ie, one-size fits all)
- Systems still operating in a **volume-based** manner (ie, RVUs)

PCP perspective:

- ‘Black hole’ of cancer care
- Poor communication from oncology team
- Complexity of care
- Systems are still operating in a **volume-based** manner

Hudson, Crabtree, et al.

JAMA Internal Medicine | Original Investigation

Cancer Survivorship Care in Advanced Primary Care Practices
A Qualitative Study of Challenges and Opportunities

Ellen B. Rubinstein, PhD; William L. Miller, MD; Shawna V. Hudson, PhD; Jenna Howard, PhD;
Denalee O'Malley, PhD; Jennifer Tsui, PhD; Heather Sophia Lee, PhD; Alicja Bator, MPH; Benjamin F. Crabtree, PhD

JAMA Intern Med. 2017;177(12):1726-1732. doi:10.1001/jamainternmed.2017.4747

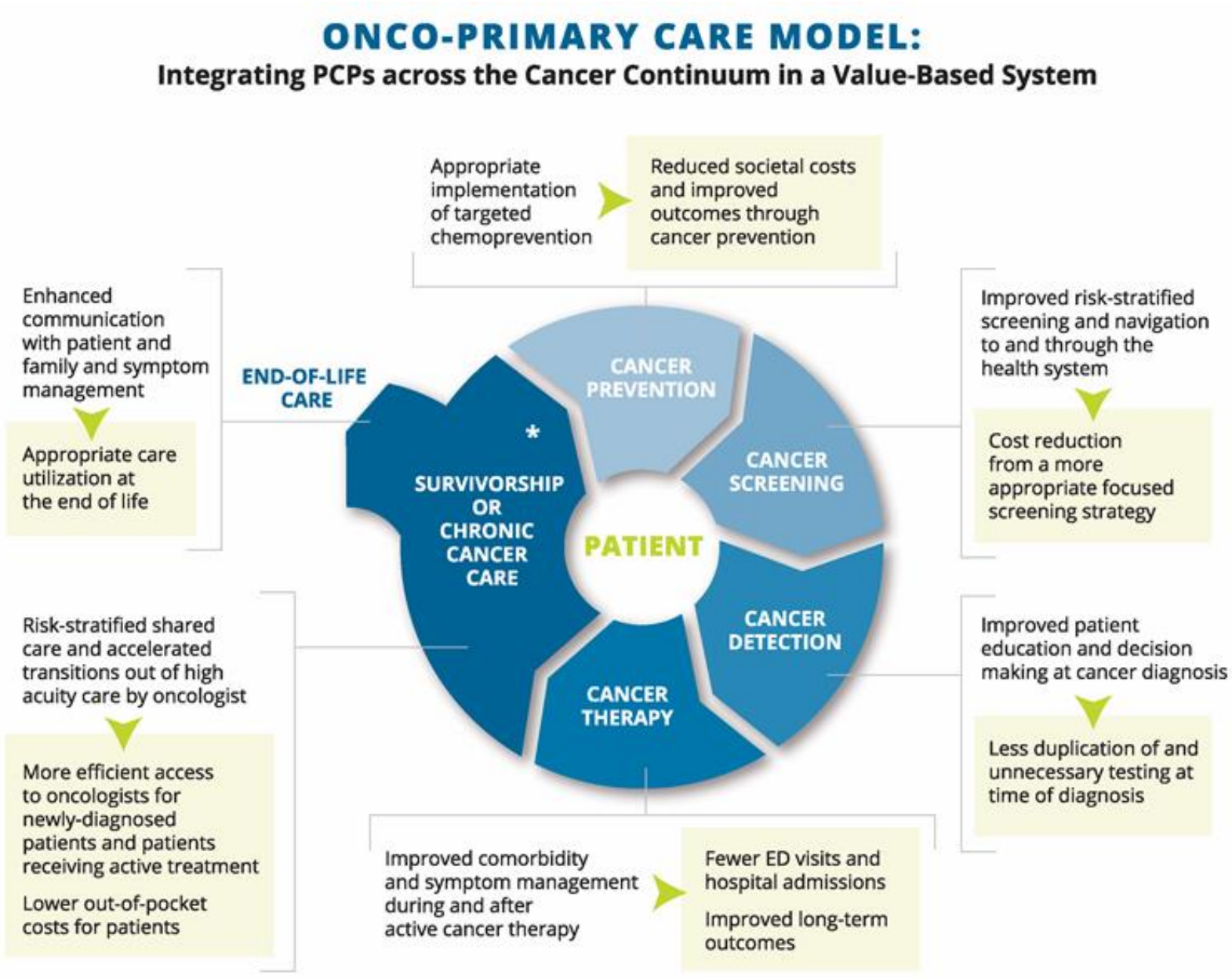
PCPs do not consider survivorship a phase;
rather, they often think of their patient
in the context of their life continuum,
in which cancer was
just one of the major events in their life.
(paraphrased by Oeffinger)

Onco-Primary Care???

- History of cardio-oncology (or onco-cardiology)
- Onco-fertility, Onco-nephrology
- Genesis of Onco-Primary Care

Aims of Center

1. Deliver evidence-based, patient-centered, personalized health care across the cancer continuum by enhancing the interface between cancer specialists and primary care clinicians;
2. Conduct innovative research with cutting-edge technology that can be translated to the community setting;
3. Train and educate clinicians and researchers to extend this mission; and
4. Generate policy to lead to practice redesign



Onco-Primary Care: The next frontier in value-based cancer care
Zafar SY, Patierno S, McLellan MB, Shah K, Oeffinger KC

Duke Center for Onco-Primary Care

Washington / Fulkerson / Owens

Kastan / Patierno

DCI

- Duke Durham, North, & Raleigh
- Duke Cancer Network
- WakeMed / CancerCare+

DCI Onco-Primary Care

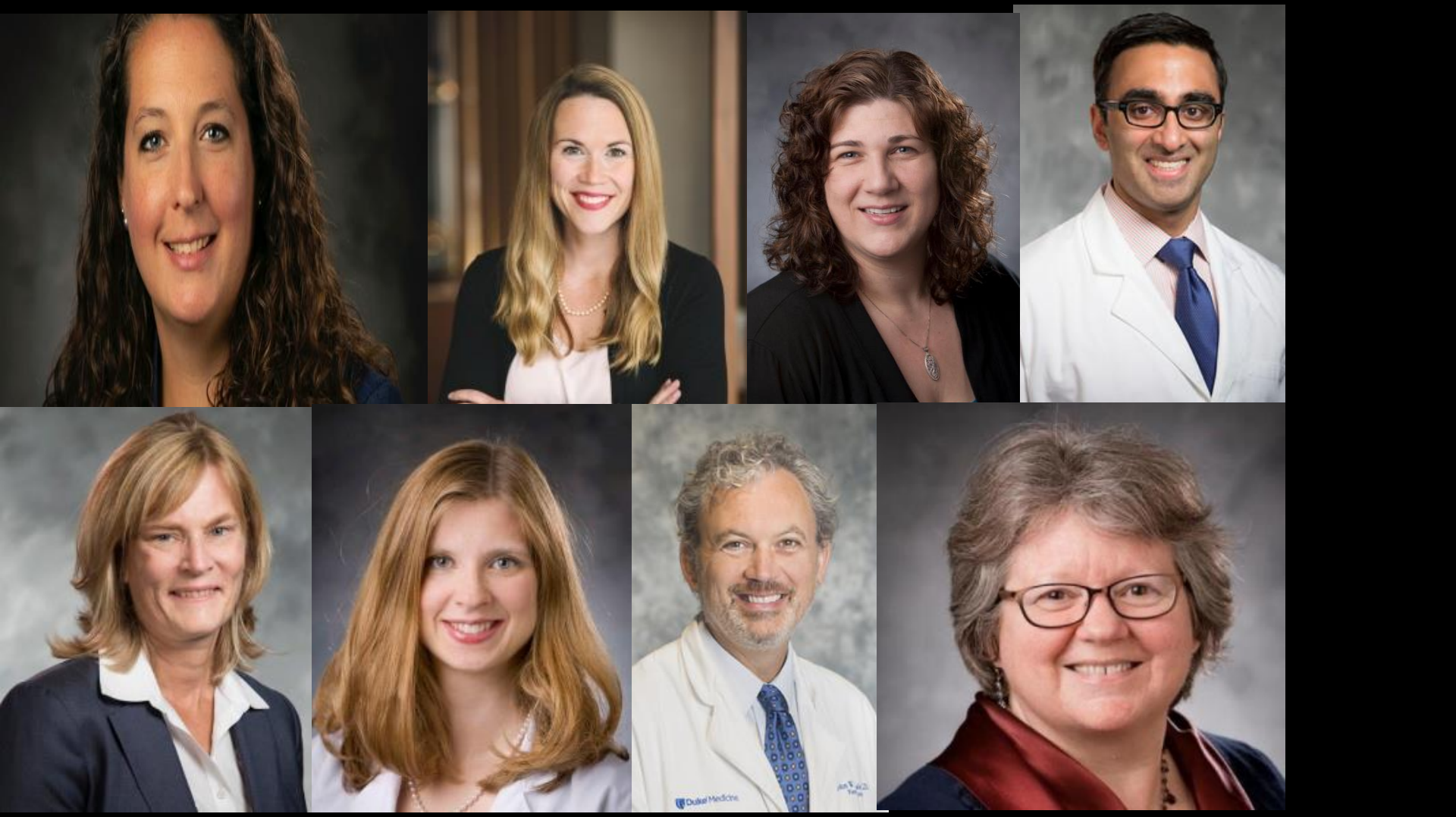
Kevin Oeffinger, MD
Cheyenne Corbett, PhD
Leah Zullig, PhD
John Ragsdale, MD
Kevin Shah, MD, MBA
Susan Dent, MD
Danielle Brander, MD
Rebecca Shelby, PhD
Tamara Somers, PhD

28 members (virtual)
6 departments
8 current R01s

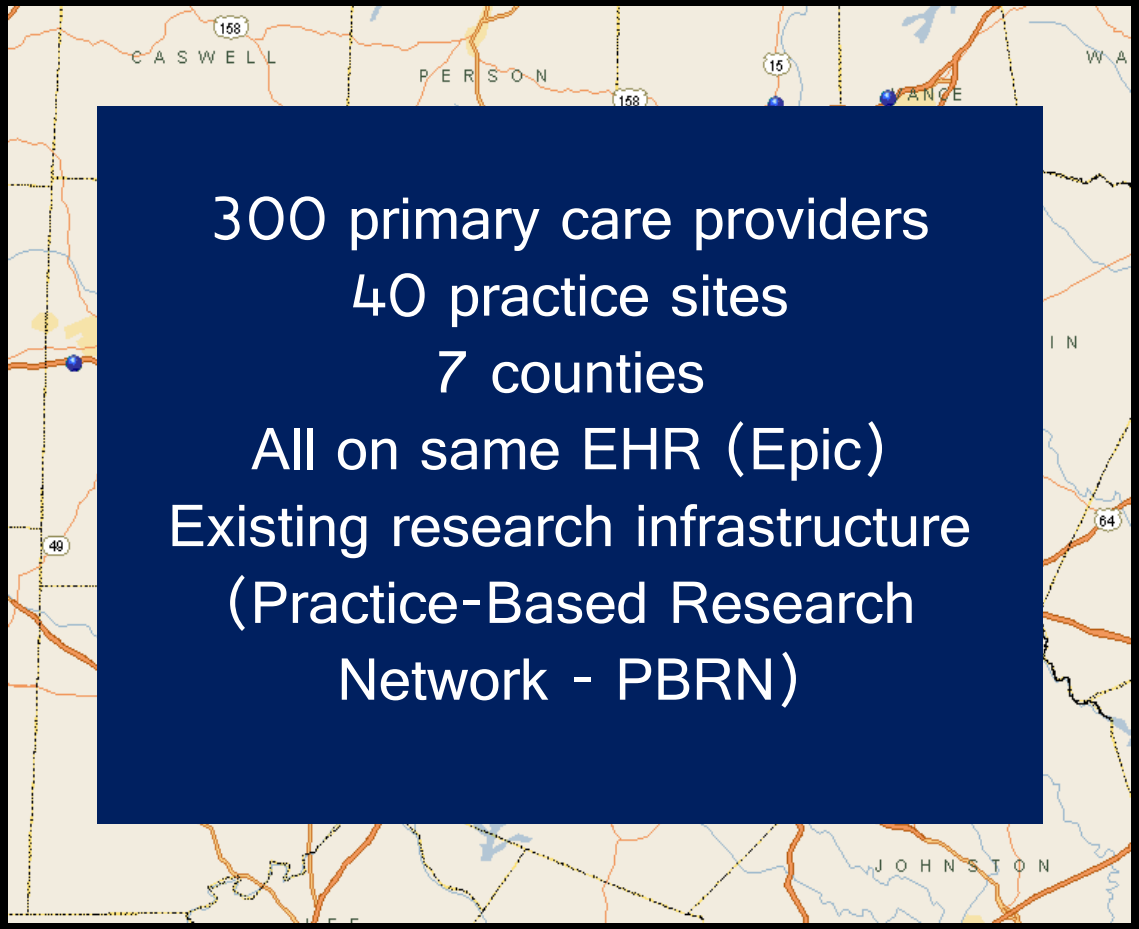
DPC

- 40 clinics across 7 counties
- 300 providers
- 300,000 unique patients

Leadership at DCI Center for Onco-Primary Care



Duke Primary Care and Duke Primary Care Consortium



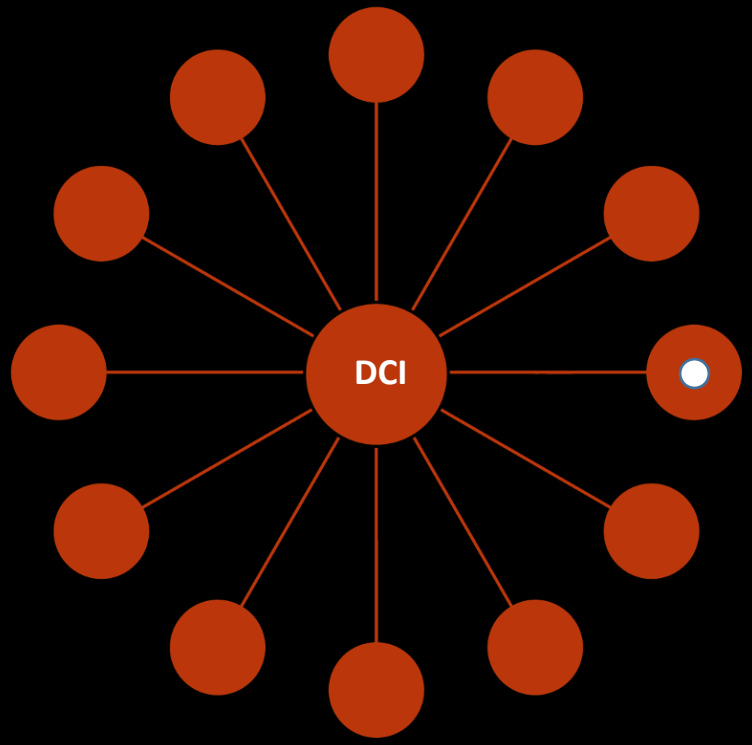
300 primary care providers
40 practice sites
7 counties
All on same EHR (Epic)
Existing research infrastructure (Practice-Based Research Network - PBRN)

County	Practice
Durham	DPC Pickett Road DPC Croadaile DUC Croasdaile DUC Fayetteville Road Durham Medical Center Durham Pediatrics – Main Sutton Station Internal Medicine Triangle Family Practice
Granville	DPC Butner-Creedmoor Oxford Family Physicians
Vance	DPC Henderson
Alamance	DPC Mebane Kernodle Clinic West
Chatham	DPC of Galloway Ridge
Orange	DPC Hillsborough DUC Hillsborough DPC Meadowmont DPC Timberlyne
Wake	DPC Apex DPC Blue Ridge DPC Brier Creek DPC Creedmoor Road DPC Midtown DPC Knightdale DPC Morrisville DPC Waverly Place DPC Wellesley DPC Western Wake DPC Wake Forest DPC Wakelon Internal Medicine DUC Brier Creek DUC Knightdale DUC Morrisville North Hills Internal Medicine

DCI Center for Onco-Primary Care

Distributed Care Model

Duke Primary Care
(300 primary care physicians
in 40 sites across 7 counties)

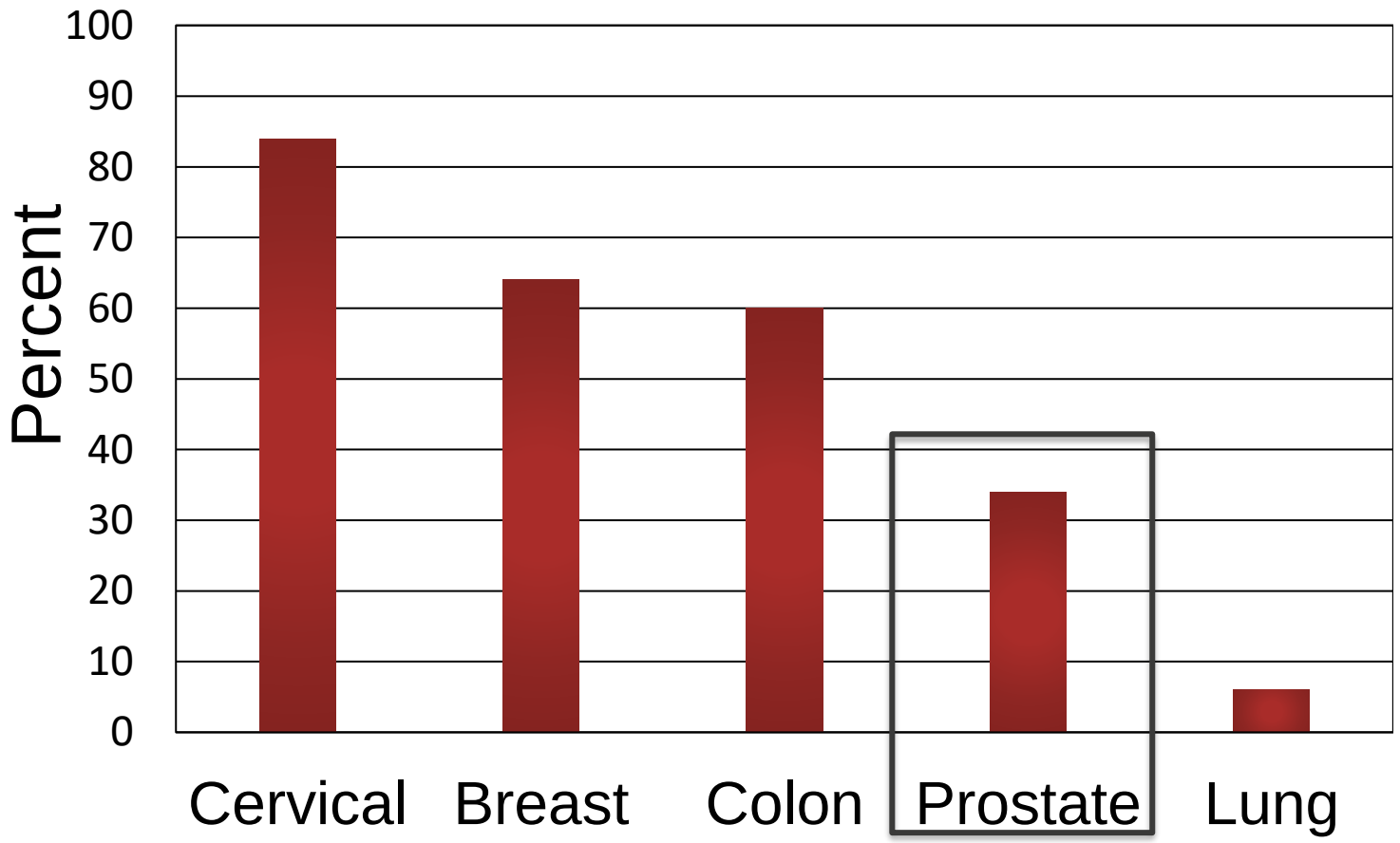


Onco-champions
primary care physician

‘Screenable’ Cancers in the U.S.

Cancer	Cases/yr	% of total	% of deaths
Breast	246,660	14.6%	6.8%
Colorectal	134,490	8.0%	8.3%
Cervical	12,990	0.8%	0.7%
Prostate	180,890	10.7%	4.4%
Lung	224,390	13.3%	26.5%
Total		**47.4%**	**46.7%**

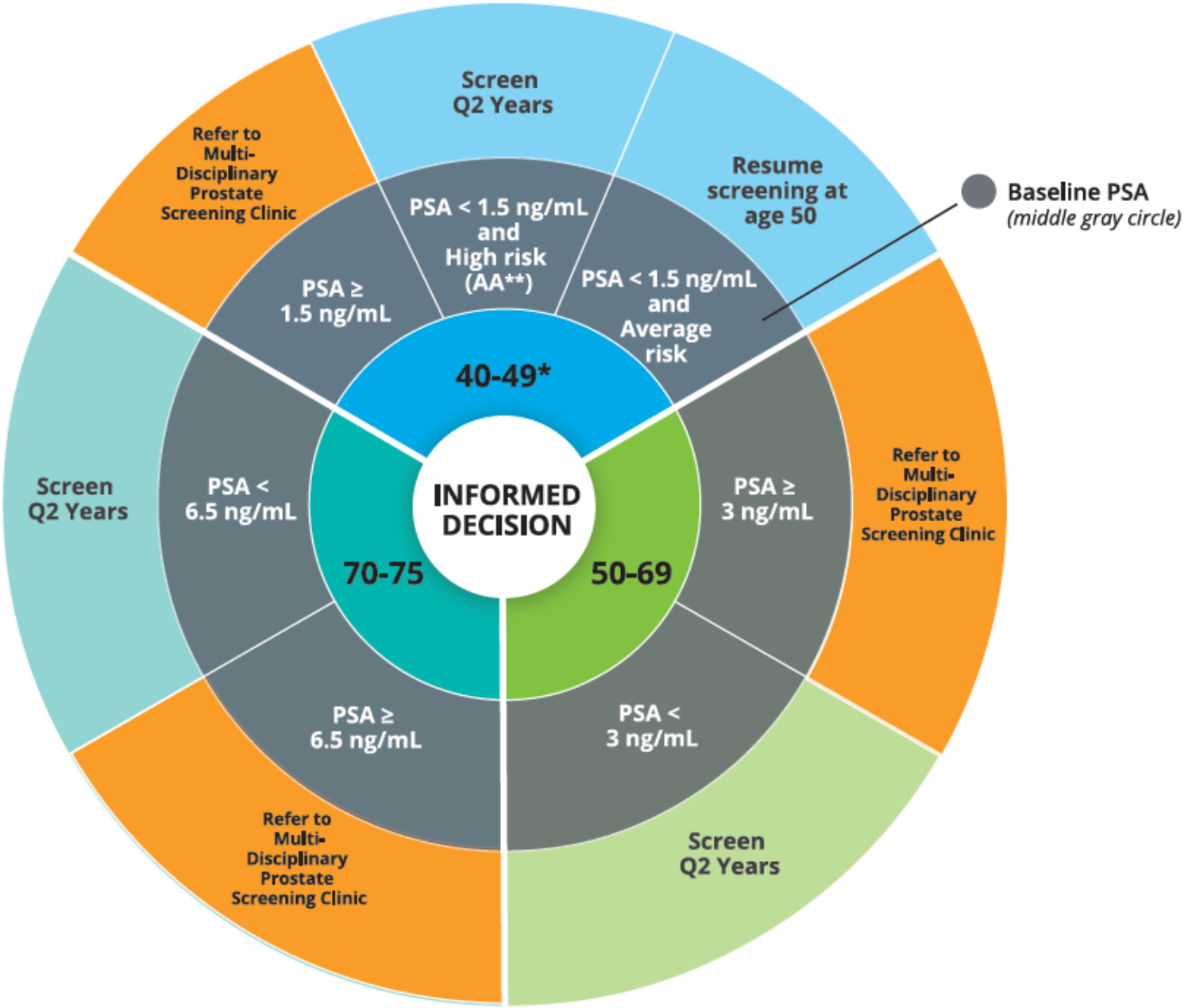
U.S. Cancer Screening Rates – 2019-2020

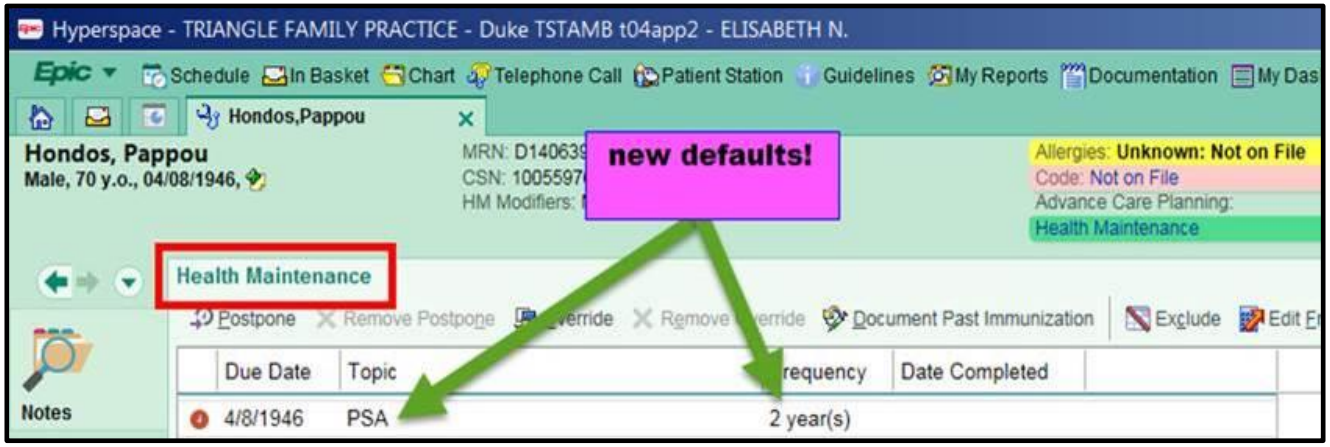


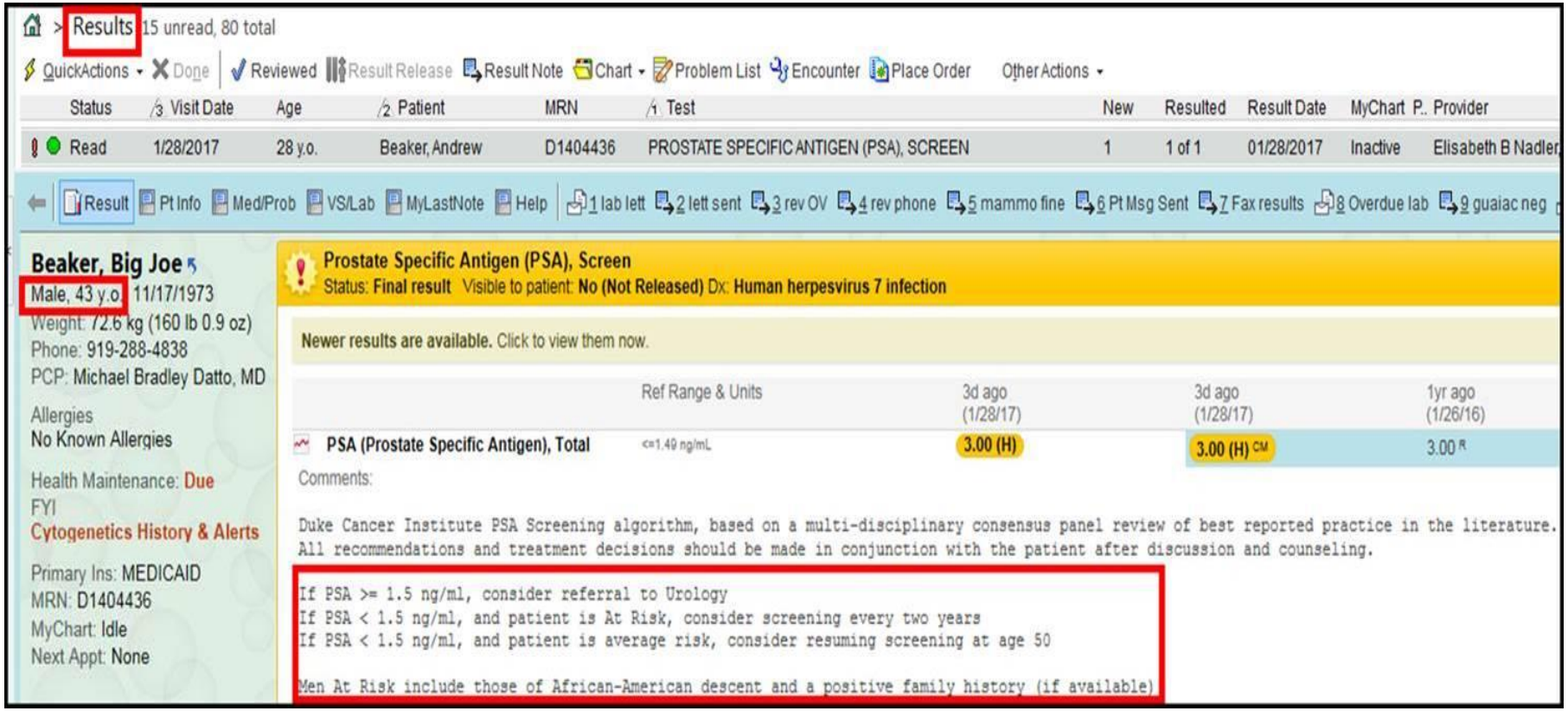
Duke Cancer Institute

ACS Facts and Figures, 2019-2020

EHR-BASED RISK-STRATIFIED PROSTATE CANCER SCREENING

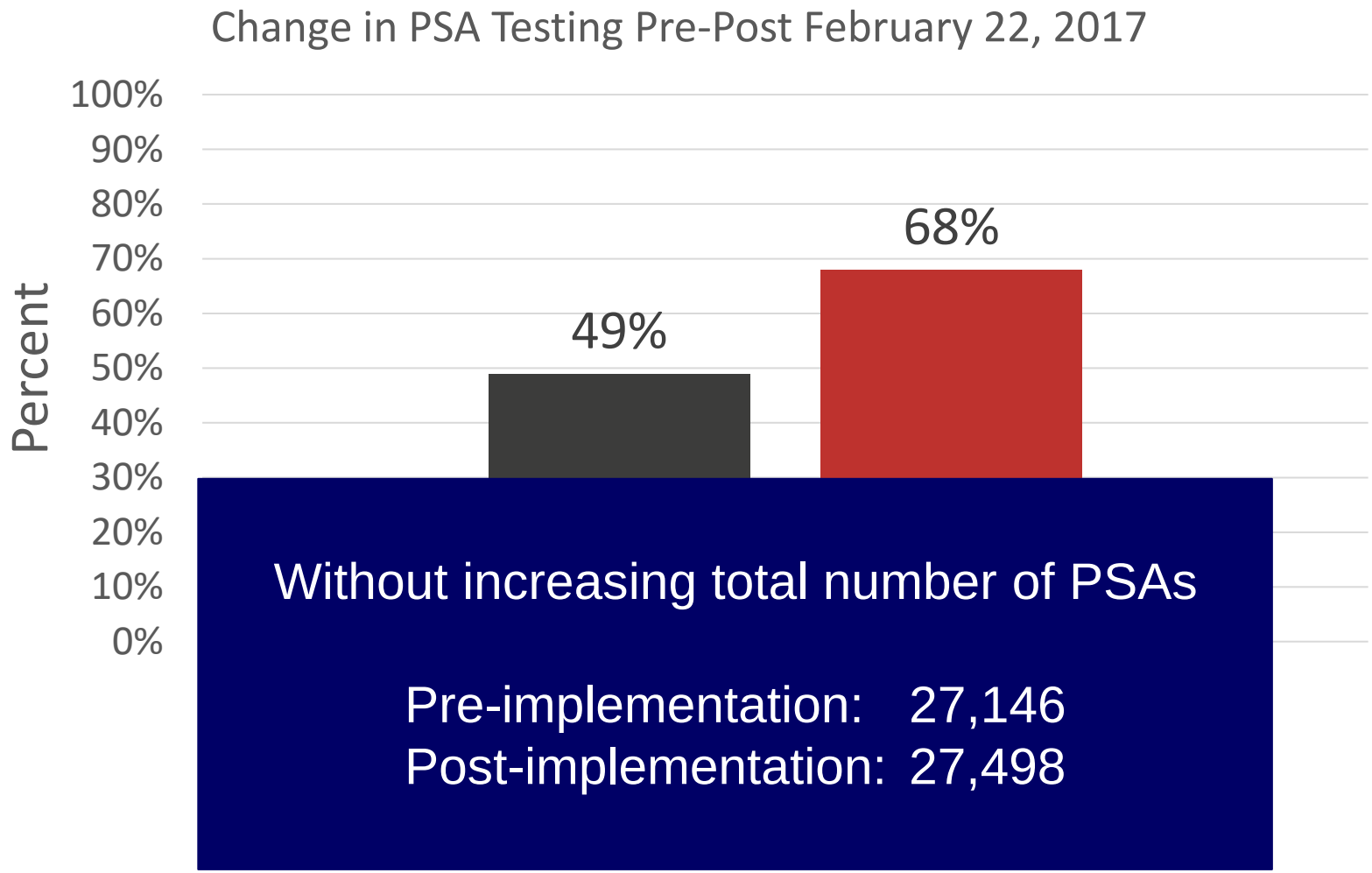






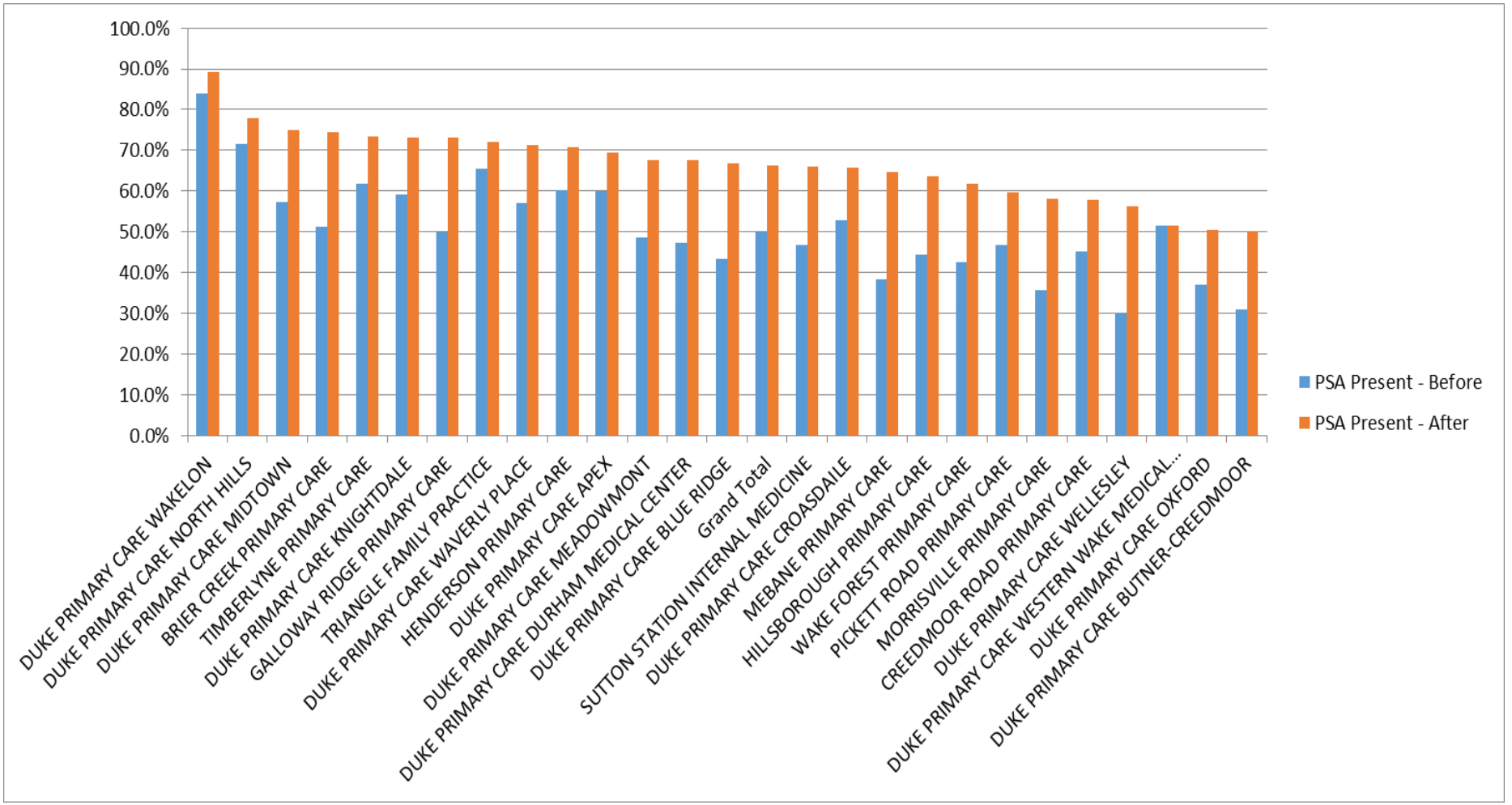
Polascik T, et al. Supported by DIHI.

Implementation Resulted in Improved Screening



Shah A, et al. J Gen Intern Med, 2021

% up-to-date increased in all clinics



Shah A, et al. J Gen Intern Med, 2021; Michael ZD et al. World Mens Health, 2022

ePSA Virtual Clinic

- Problem: increased referrals to urology and an increasing time to evaluation (>90 days)
- Pilot: elevated PSA clinic
  - Staffed by onco-primary care APPs
  - Men with PSA <10 referred by Duke Primary Care (DPC)
  - Virtual visit to biopsy or return to primary care
- In first 12 months:
  - Average time to (virtual) visit = 14 days
  - 209 men – 15% with prostate ca (26/32 w Gleason $\geq$7)
  - Average time for urology visit (PSA >10) = 46 days
  - Very positive responses from men and from DPC

E-communication: Cancer Diagnostics

- Patients with a suspicious imaging study but without a pathologic diagnosis
- eConsult to APP for (virtual) evaluation and scheduling IR biopsy
- Fast track to appropriate Oncology team

cancers

MDPI

Article

The PATHFINDER Study: Assessment of the Implementation of an Investigational Multi-Cancer Early Detection Test into Clinical Practice

Lincoln D. Nadauld [1,*], Charles H. McDonnell III [2], Tomasz M. Beer [3], Minetta C. Liu [4], Eric A. Klein [5], Andrew Hudnut [2], Richard A. Whittington [6], Bruce Taylor [6], Geoffrey R. Oxnard [7], Jafi Lipson [8], Margarita Lopatin [9], Rita Shaknovich [9], Karen C. Chung [9], Eric T. Fung [9], Deborah Schrag [7] and Catherine R. Marinac [7]

cancers

MDPI

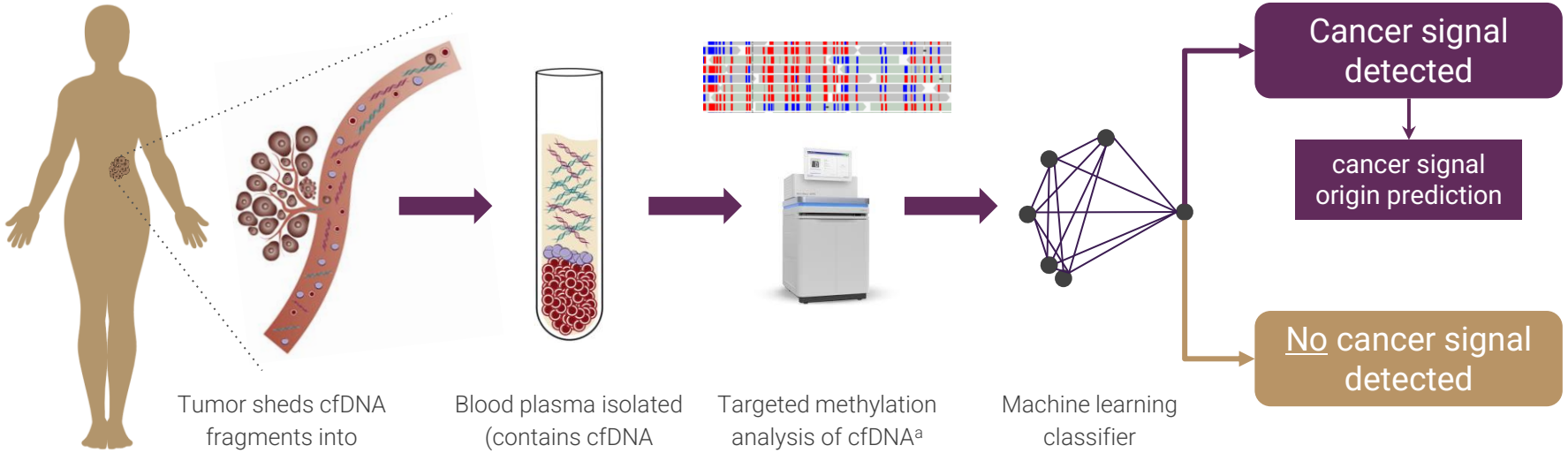
Article

Cell-Free DNA–Based Multi-Cancer Early Detection Test in an Asymptomatic Screening Population (NHS-Galleri): Design of a Pragmatic, Prospective Randomised Controlled Trial

Richard D. Neal [1,*], Peter Johnson [2], Christina A. Clarke [3,†], Stephanie A. Hamilton [4,†,‡], Nan Zhang [3], Harpal Kumar [4,†], Charles Swanton [5,6,§] and Peter Sasieni [7,§]

Process Overview of Multi-Cancer Early Detection With Galleri® Test

Cancer can be anywhere: using a targeted methylation, next-generation sequencing (NGS)-based assay analyzing cfDNA and machine learning to detect cancer and predict cancer signal origin



cfDNA, cell-free DNA. [a]Bisulfite treatment; targeted probes pull out fragments matching regions of interest.
The Galleri® test does not detect all cancers and should be used in addition to routine cancer screening tests recommended by a healthcare provider.
Adapted from Liu MC, et al. *Ann Oncol*. 2020;31(6):745-759. DOI:10.1016/j.annonc.2020.02.011.
Galleri is a registered trademark of GRAIL, LLC.

US-GRL-2200079

Key Performance Features of Multi-Cancer Early Detection Test

Demonstrated in CCGA substudy 3

> 50	MCED test detected a cancer signal across more than 50 AJCC cancer types
44%	Positive predictive value[a]
0.5%	False-positive rate
41%	Sensitivity stages I-III for all cancer[b]
68%	Sensitivity stages I-III for 12 prespecified cancers representing ⅔ of cancer mortality in US
89%	Rate of cancer signal origin predicted correctly[c]

A cancer signal detected across > 50 cancers, including unscreened cancers such as:

- Anus
- Corpus uteri (2 types[d])
- Esophagus[e]
- Exocrine pancreas
- Gallbladder
- Hodgkin and non-Hodgkin lymphoma
- Bile duct (3 types[f])
- Kidney
- Larynx
- Leukemia
- Liver
- Melanoma of the skin
- Malignant pleural mesothelioma
- Merkel cell carcinoma
- Nasopharynx
- Neuroendocrine (3 types[g])
- Oral cavity
- Oropharyngeal[h]
- Oro- and hypo-pharynx[i]
- Ovary[j]
- Plasma cell myeloma[k]
- Renal pelvis and ureter
- Soft tissue sarcoma (5 types[l])
- Small intestine
- Stomach
- Testis
- Urinary bladder
- Vagina
- Vulva

Recommended screening programs[m]

Breast | Cervix uteri | Colon and rectum | Lung | Prostate

[a]Estimated values were adjusted to SEER (Surveillance, Epidemiology, and End Results) cancer incidence and stage distribution in the 50–79 years age group. [b]Including missing stage and cancer classes that do not have staging per AJCC staging manual. [c]For cancer participants with a positive cancer signal. [d]Corpus uteri carcinoma and carcinosarcoma; Corpus uteri sarcoma. [e]Esophagus and esophagogastric junction.[f]Distal bile duct; Perihilar ducts; Intrahepatic bile ducts. [g]Neuroendocrine tumors of the appendix; Neuroendocrine tumors of the colon and rectum; Neuroendocrine tumors of the pancreas. [h]HPV-mediated (p16+) oropharyngeal cancer. [i]Oropharynx (p16-) and hypopharynx. [j]Ovary, fallopian tube and primary peritoneal carcinoma. [k]Plasma cell myeloma and plasma cell disorders. [l]Soft tissue sarcoma: of the abdomen and thoracic visceral organs; of the head and neck; of the retroperitoneum; of the trunk and extremities; unusual histologies and sites. [m]USPSTF A, B, or C rating.

AJCC, American Joint Committee on Cancer; CCGA, Circulating Cell-free Genome Atlas; USPSTF, United States Preventive Services Task Force.

GRAIL data on file GA_2021_008 and Klein E, et al. *Ann Oncol*. 2021;32(9):1167-1177. DOI: 10.1016/j.annonc.2021.05.806.

US-GRL-2200073

PATHFINDER | Key Performance Features of Galleri

Refined MCED TEST

Galleri (Refined MCED Test)
(prespecified analysis reanalyzed blood samples)

0.9%	Cancer signal detected
99.5%	Specificity
43%	Positive predictive value
88%	Accuracy of top two cancer signal origin prediction
67%	Stage I–III (among 21 detected new cancers)
38%	Stage I–II (among 21 detected new cancers)

26 cancers diagnosed among 25 true positives, including cancers not commonly screened[a]

Distant recurrences
Breast (n=5)

New cancers
Colon or rectum (n=2)
Endometrium (uterus) (n=1)
Head and neck (n=2)
Liver or Bile-duct (n=2)
Lung (n=1)
Lymphoid leukemia (n=1)
Lymphoma (n=4)
Ovary, peritoneum, or fallopian tube (n=2)
Pancreas (n=1)
Plasma cell neoplasm (n=1)
Prostate (n=1)
Sarcoma (n=1)
Small intestine (n=1)
Waldenstrom macroglobulinemia (n=1)

[a]Cancers with USPSTF recommended screening programs (A, B, or C rating) comprise: breast, cervix uteri, colon and rectum, lung, and prostate.MCED, multi-cancer early detection,; USPSTF, United States Preventive Services Task Force. Schrag D, et al. Presentation at European Society for Medical Oncology (ESMO) Congress; September 9-13, 2022. Galleri is a registered trademark of GRAIL, Inc.GRAIL Data on File GR-2022-0086 EOS analysis. Galleri is a registered trademark of GRAIL, LLC.

US-GRL-2200104

NCT05155605

PATHFINDER 2

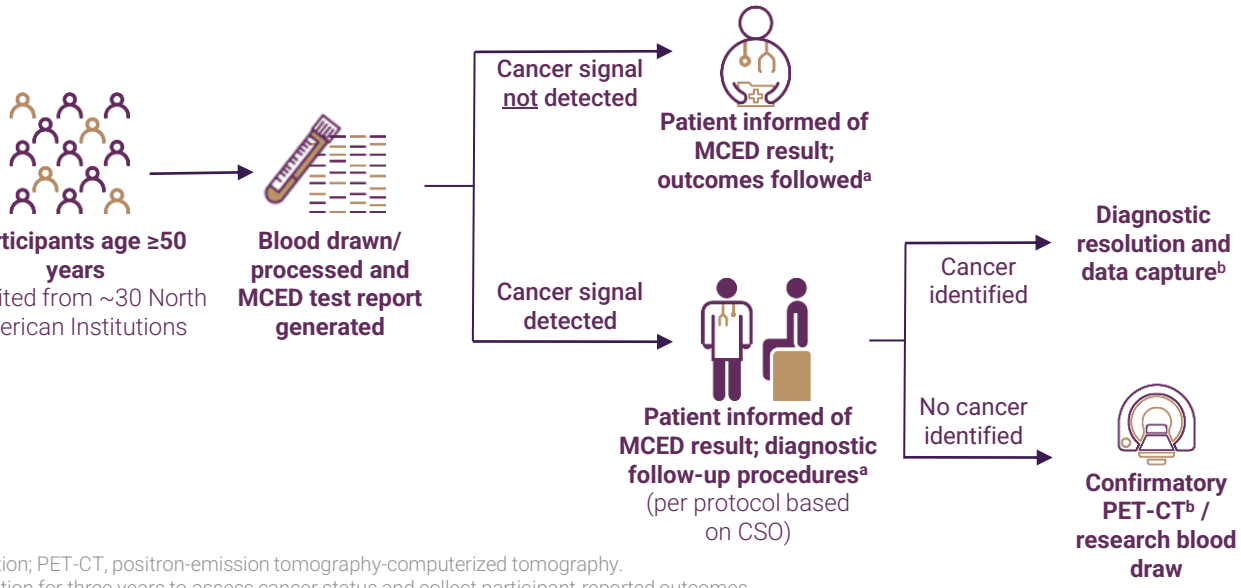
A prospective, multicenter, interventional study of MCED test, with returned results in North American Healthcare Systems

Study Objectives

Primary Objectives

- Evaluate the safety of the MCED test in terms of diagnostic testing triggered by the MCED test result
- Evaluate performance of the MCED test in individuals eligible for cancer screening

Study Design

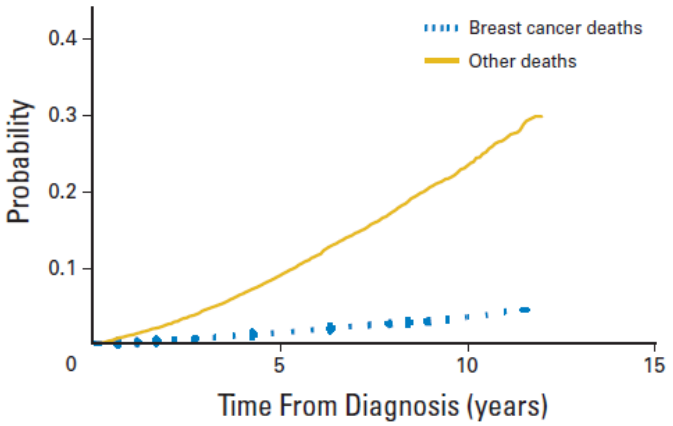


CSO, cancer signal origin; MCED, multi-cancer early detection; PET-CT, positron-emission tomography-computerized tomography.
[a]All participants will be actively followed by enrolled institution for three years to assess cancer status and collect participant-reported outcomes.
[b]Clinical information including but not limited to cancer type, pathologic, imaging and clinical staging information will be captured.

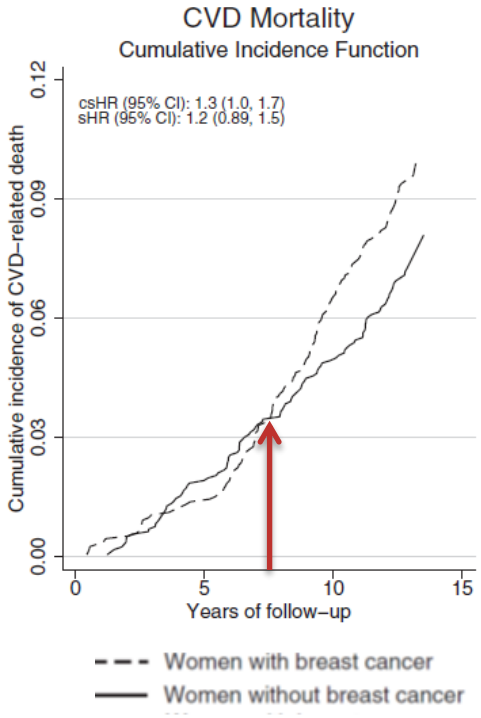
US-GRL-2200068

Importance of Non-Cancer Comorbidities

Probability of death from breast cancer or other causes among women age 50 and older with ER+ early stage breast cancer
SEER: 1988-2001

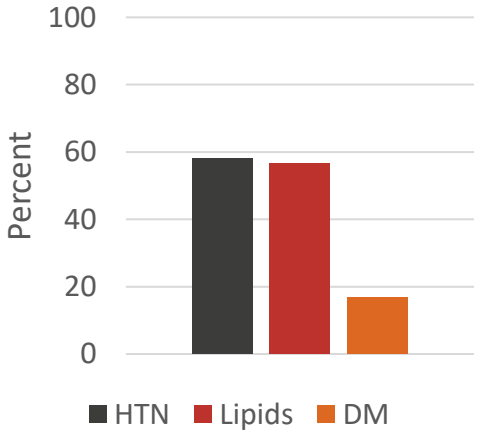


Hanrahan EO, et al. J Clin Oncol, 2007



Bradshaw PT, et al. Epidem, 2016

Percent of women with early stage breast cancer and a cardiovascular risk factor
SEER-Medicare: 2000-2007

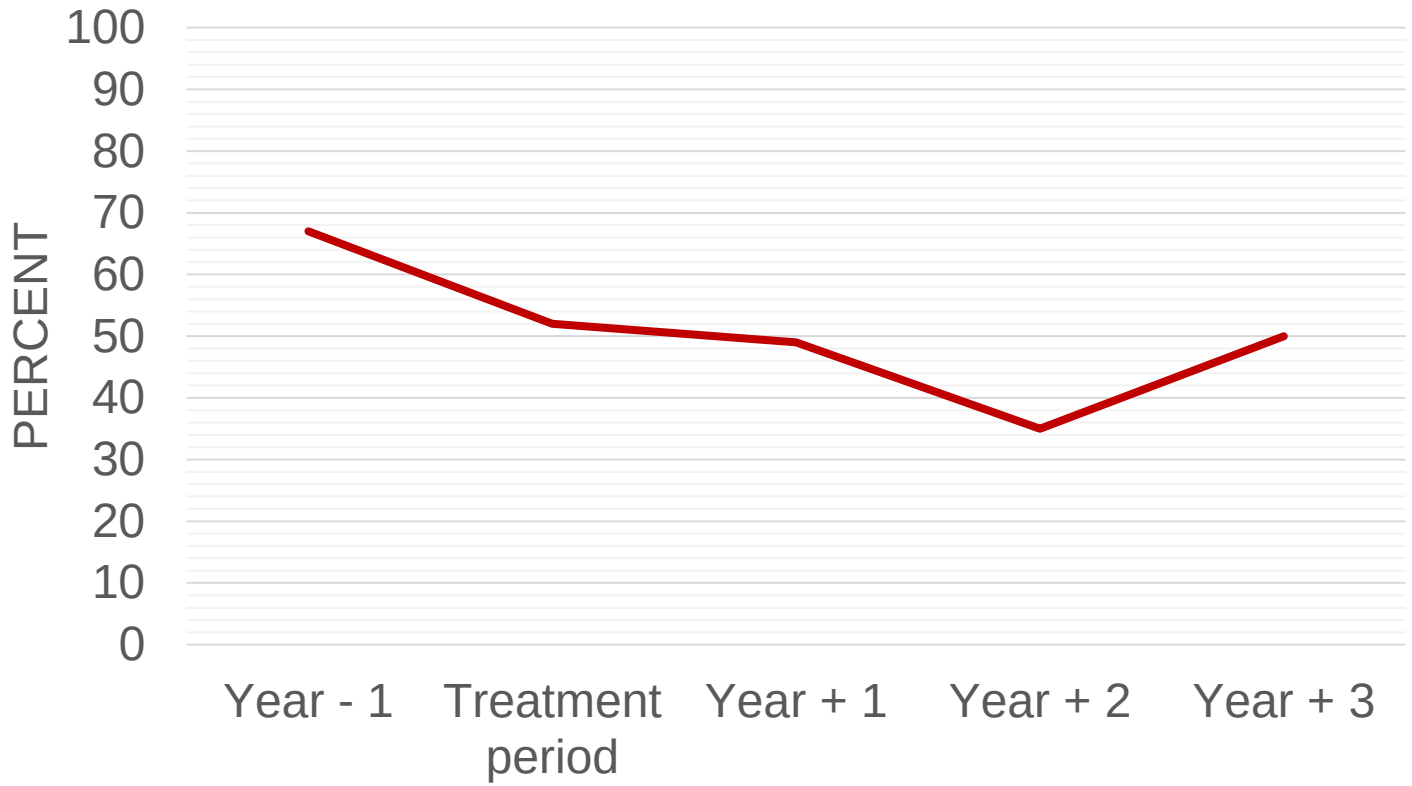


Chen J, et al. J Am Coll Cardiol, 2012

Duke Cancer Institute

Adherence to Medications for Comorbidities

Percent of breast cancer survivors adherent to their statin therapy prior to and following early stage breast cancer diagnosis and treatment
(Group Health 1990-2008, N=4,221 women)

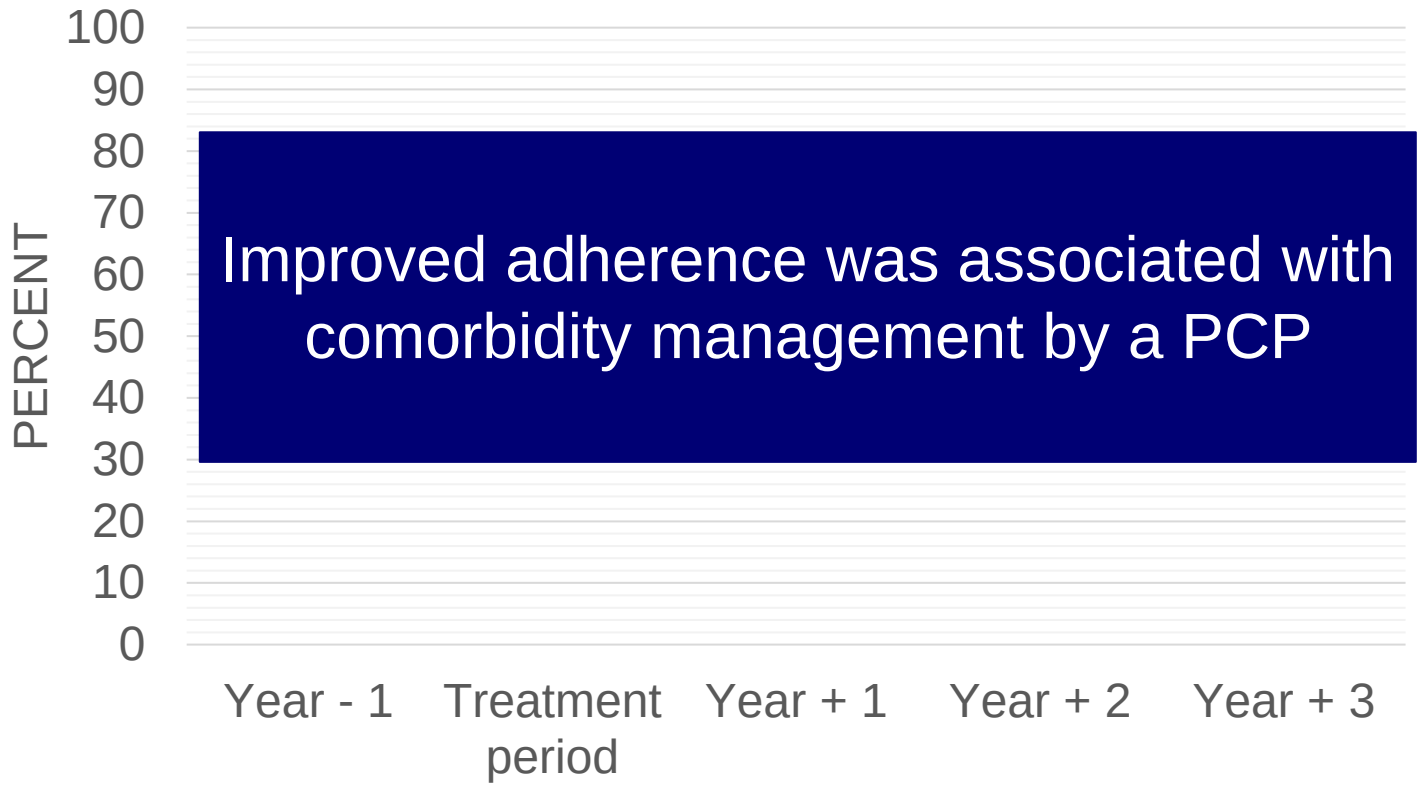


Duke Cancer Institute

Calip GS, et al. Breast Cancer Res Treat, 2013

Adherence to Medications for Comorbidities

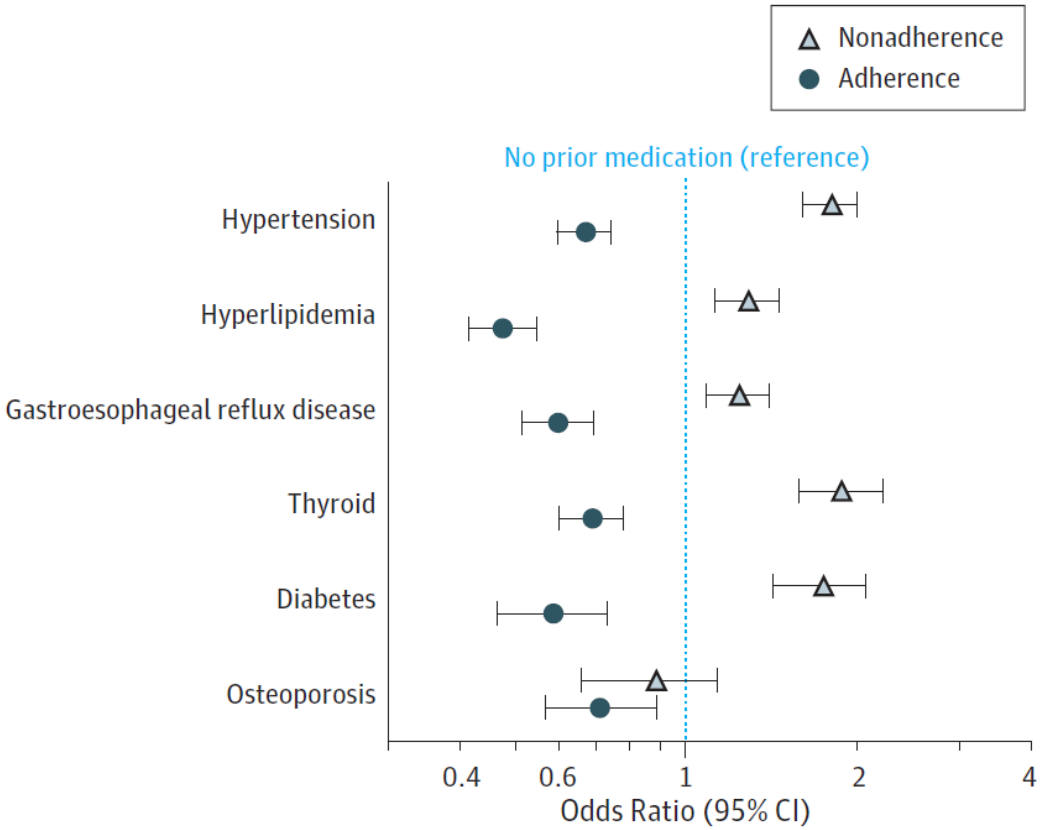
Percent of breast cancer survivors adherent to their statin therapy prior to and following early stage breast cancer diagnosis and treatment
(Group Health 1990-2008, N=4,221 women)



Calip GS, et al. Breast Cancer Res Treat, 2013

Non-Adherence = Non-Adherence

Nonadherence to adjuvant hormonal therapy in women with early stage breast cancer

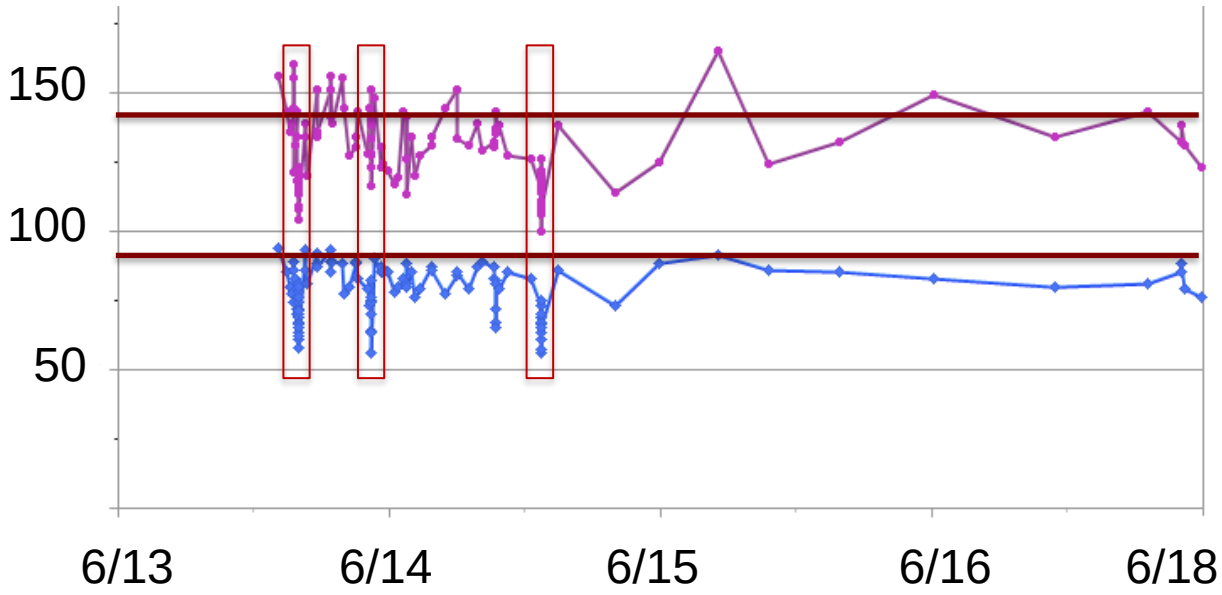


Duke Cancer Institute

Neugut AI, et al. JAMA Oncol, 2016

47-year-old breast cancer survivor

- Diagnosed at age 42
- Invasive ductal carcinoma
- ER- PR- HER2+
- T2N1
- Chemotherapy
  - Docetaxel
  - Carboplatin
  - Pertuzamab
  - Trastuzumab
- 50 Gy to Right breast



National Hypertension Guidelines

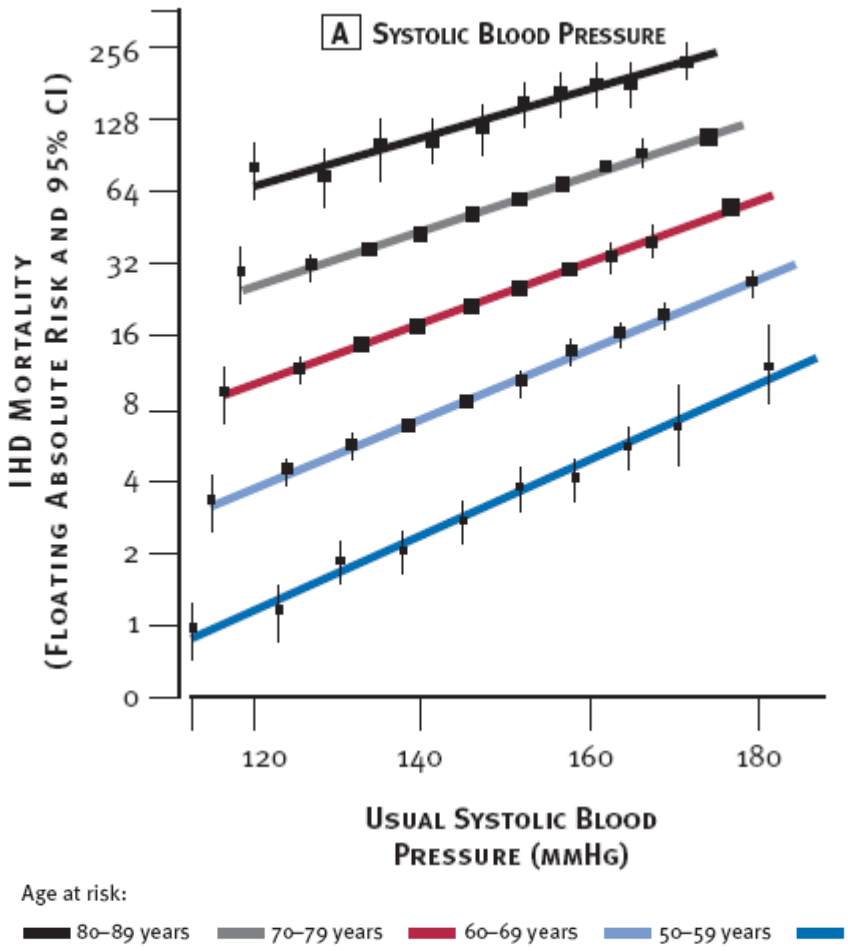
(for non-cancer patients)

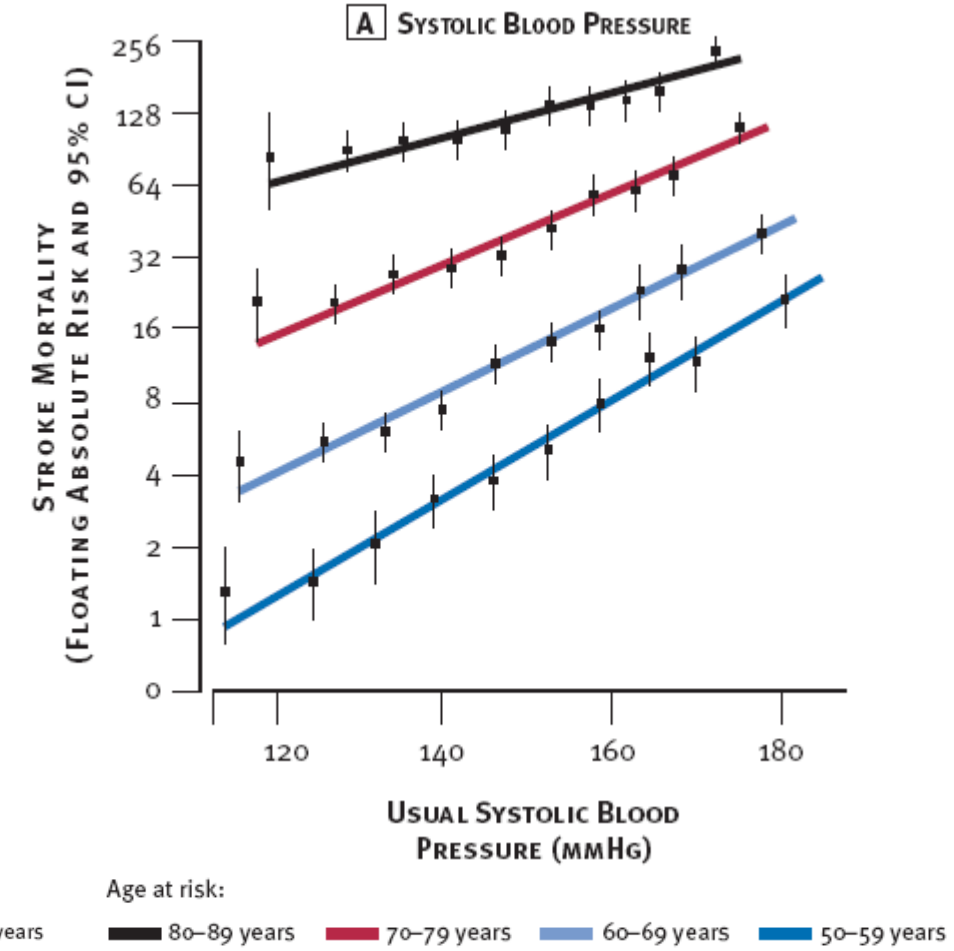
	JNC 8 2014	ACC / AHA 2017*	ACP / AAFP 2017#	ACC HF 2017^
Systolic	**< 140**	**< 140**	**< 140**	**< 130**
		< 130		
Diastolic	**< 90**	**< 90**	**< 90**	**< 80**
		< 80		

* Risk-stratified by 10-year ASCVD risk < or ≥ 10%
# For individuals ≥ 60 years of age
^ At risk of HF (Stage A) including treatment with cardiotoxic cancer therapy

Abbreviations: JNC, Joint National Committee; ACC, American College of Cardiology
AHA, American Heart Association; ACP, American College of Physicians;
AAFP, American Academy of Family Physicians; HF, heart failure;
ASCVD, atherosclerotic cardiovascular disease

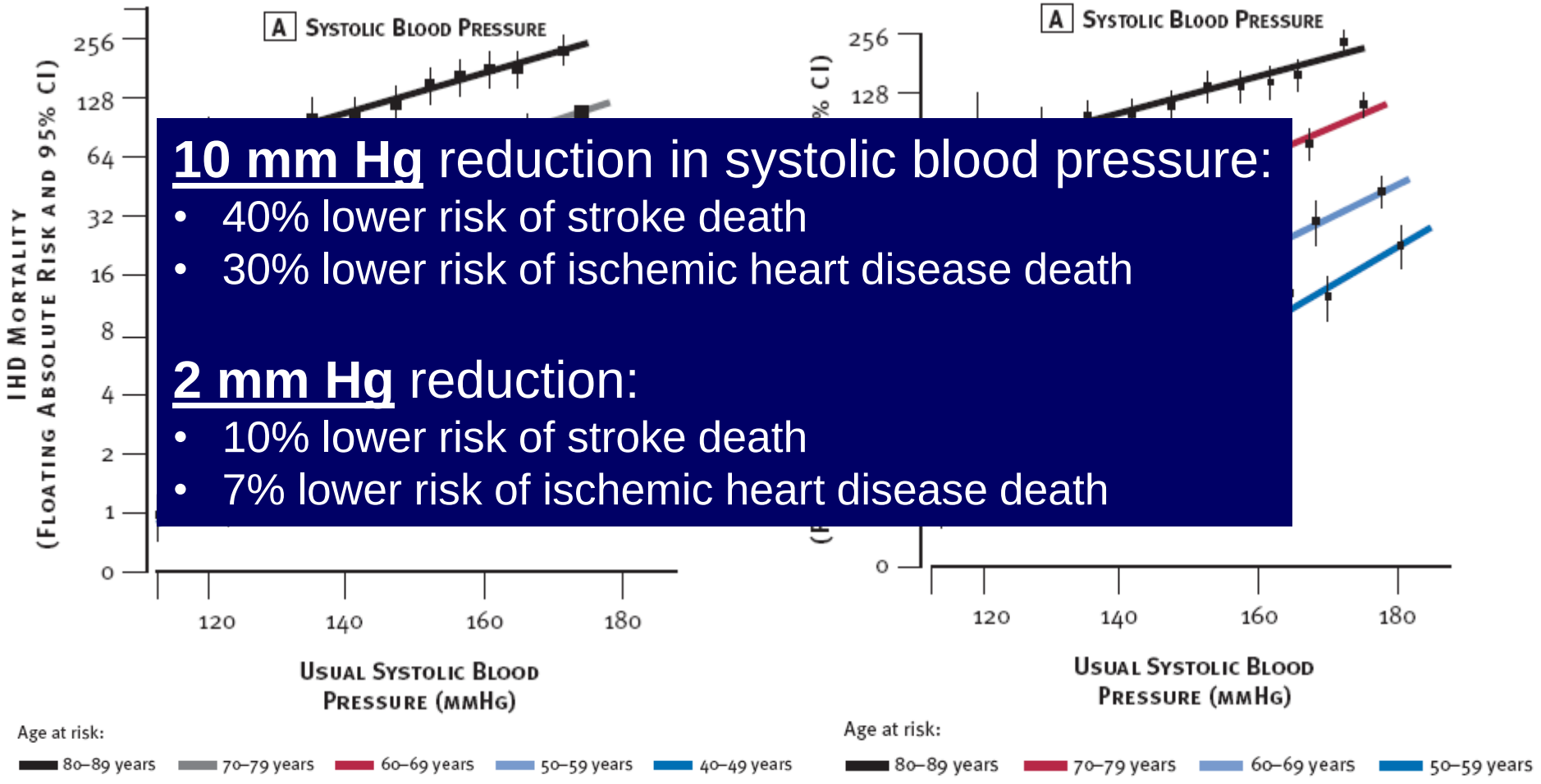
Relationship of BP to Events





Lewington S, et al. Lancet, 2002

Relationship of BP to Events



10 mm Hg reduction in systolic blood pressure:

- 40% lower risk of stroke death
- 30% lower risk of ischemic heart disease death

2 mm Hg reduction:

- 10% lower risk of stroke death
- 7% lower risk of ischemic heart disease death

Lewington S, et al. Lancet, 2002

ONE TEAM Study:

Onco-primary care networking to support TEAM-based care (R01CA249568)

Kevin Oeffinger, MD (Director, DCI Center for Onco-Primary Care)
Leah Zullig, PhD (Associate Professor, Population Health Sciences)

Co-Investigators:
Kevin Shah, MD (DPC)
Yousuf Zafar, MD, MHS (DCI, Margolis)
Rachel Greenup, MD, MPH (DCI)
Linda Sutton, MD (Duke Cancer Network)
Rebecca Shelby, PhD (DCI, Supportive Care Program)
Michaela Dinan, PhD (Population Health Sciences)
Bryce Reeve, PhD, MA (Population Health Sciences)
Nadine Barrett, PhD, MA, MS (DCI)
Theresa Coles, PhD (Population Health Sciences)
Terry Hyslop, PhD (DCI Director of Biostatistics)

Duke Primary Care Duke Cancer Institute

ONE TEAM Study – Specific Aims

1. Determine the effectiveness of a self-guided, multi-level iGuide intervention and a tailored/targeted iGuide2 intervention vs usual care on:
   - HEDIS quality measures for blood pressure, diabetes, and statin therapy
   - Medication adherence (co-morbidity medications)
   - Patient-centered communication in cancer care
2. Secondary aims
   - Patient-centered outcomes (patient activation, care coordination, barriers to medication adherence, financial toxicity)
   - Health care use (outpatient/ED visits, hospital days)
   - Provider activation
   - Costs of care

ONE TEAM Study – Interventions

1. iGuide
   - Patient-facing
     - Video vignettes regarding the importance of managing non-cancer comorbidities
     - Patient webinars
     - Delivery by patient portal, mail, etc
   - PCP-facing
     - Automated EHR-template letter from oncology team to PCP
     - Tele-education zooms with CME (case-based, relationship building)
2. iGuide2
   - Patient-facing
     - Tailored messaging
   - PCP-facing
     - PCP-facing dashboards from the oncology team
     - e-consult

ONE TEAM Study – Interventions

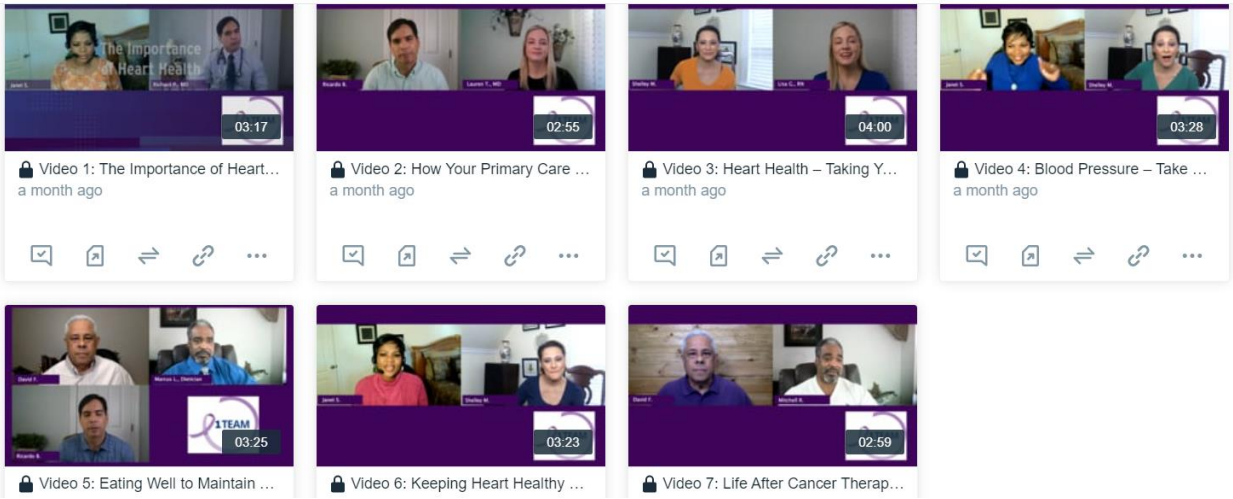
importance of managing non-cancer comorbidities

il, etc

ter from oncology team to PCP

- Tele-education zooms with CME (case-based, relationship building)

2. iGuide2



– Patient-f
  - Tailore
– PCP-fac
  - PCP-f
  - e-cons

Duke Cancer Institute

Duke Primary Care

ONE TEAM Study

800 PATIENTS
- 18-79 Years
- Stage I-
- 6 Canc
- ≥ 1 CVD Comor
- Have a

2 CANCER SETTINGS
- Duke Cancer

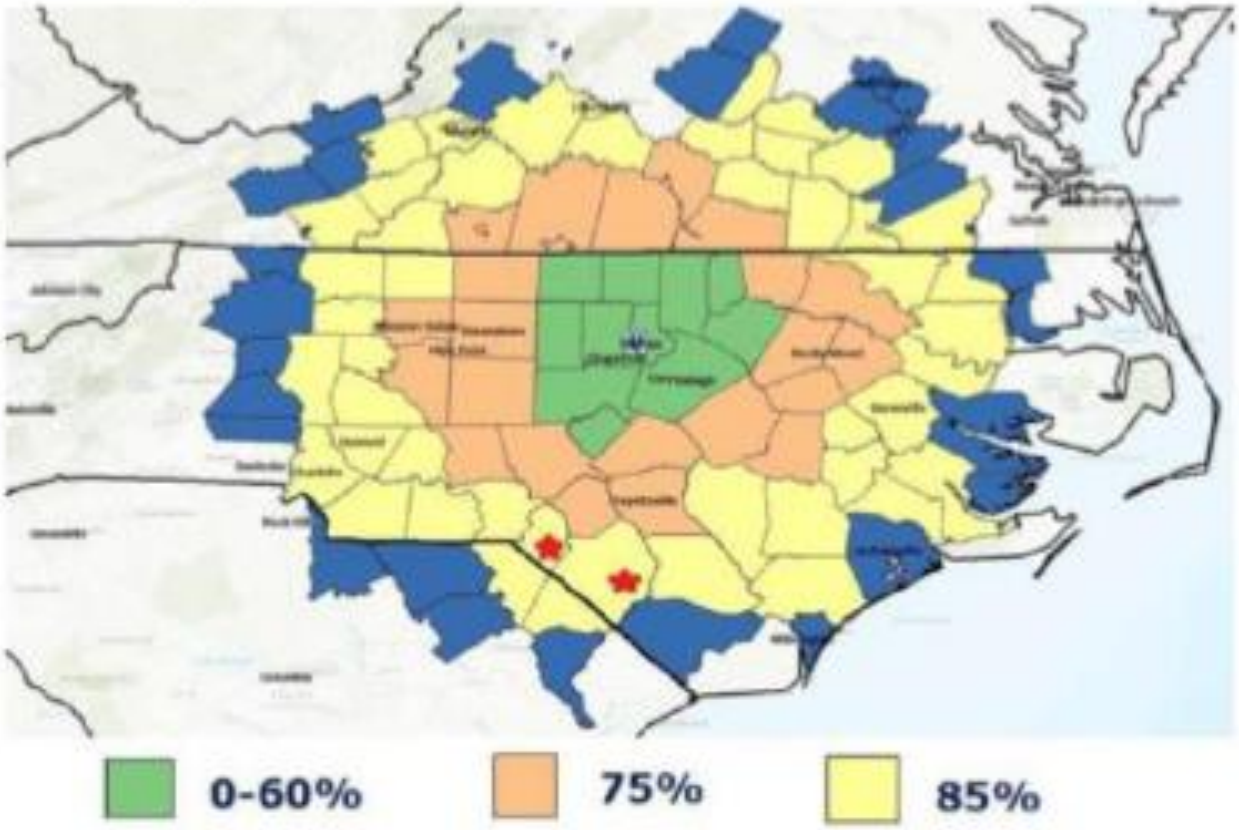
Intervention
40 PCP Clinics

PCP clinic meets all

yes

- iGuide intervention
- iGuide intervention
- iGuide 2

Figure 3. DCI Catchment Area



Measu

18 months
- A1C, lipids
- BP
- Patient surveys
- Provider surveys
- Qualitative interviews

Interve

on #2

rvention (Tailored / Targeted)

PCPs:
- Targeted feedback with goals of treatment

tes

Duke Cancer Institute

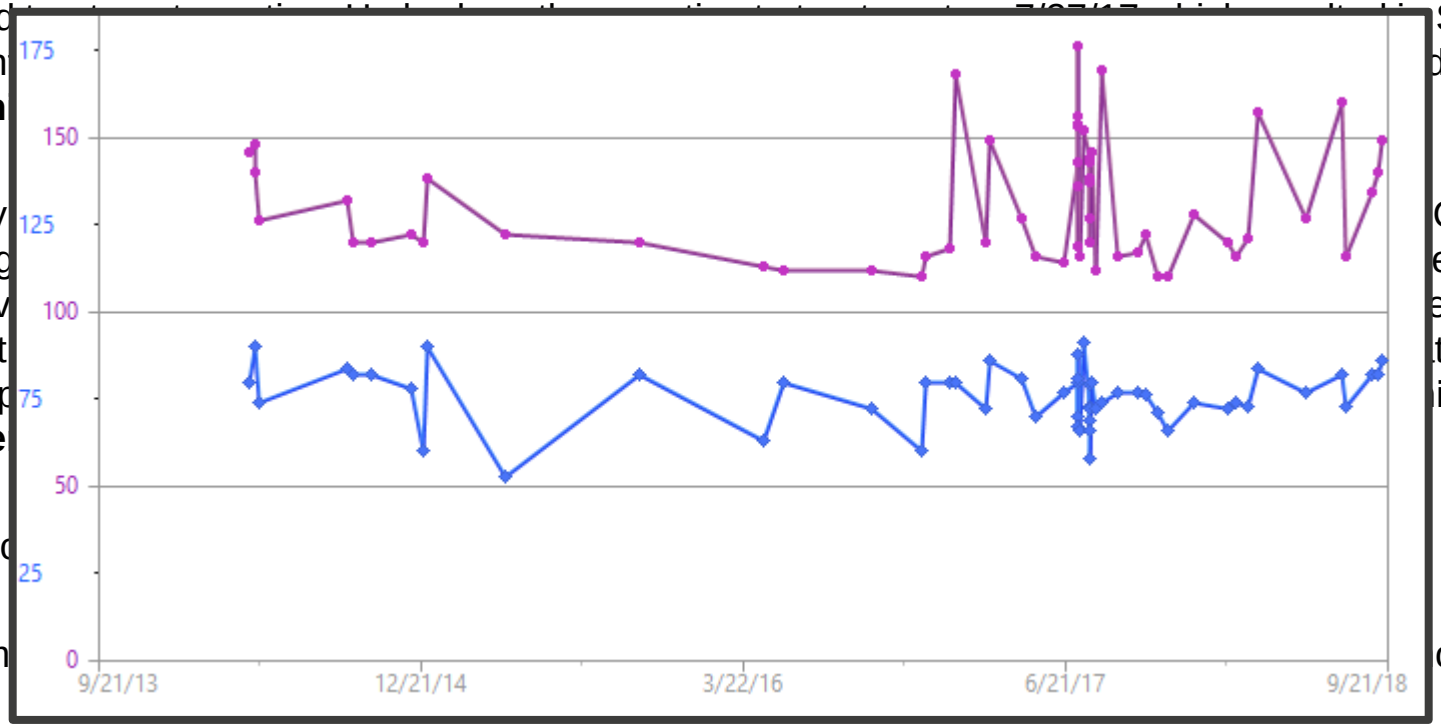
Duke Primary Care

CLL and Ibrutinib

Primary care note: a 51 y.o. with a history of favorable risk treatment naive CLL (trisomy 12, mutated IGHV at initial diagnosis) with recent progression of LAD and splenomegaly with spleen over 20cm; he presents today having recently started on the ublituximab plus TGR1202 which was discontinued after presumed treatment reaction. He had another reaction to treatment on 7/27/17 which resulted in SOB. Treatment was stopped and the patient has withdrawn from study as of 7/28/17, then transitioned to **ibrutinib monotherapy** on 8/7/2017.

CLL and Ibrutinib

Primary care note: a 51 y.o. with a history of favorable risk treatment naive CLL (trisomy 12, mutated IGHV at initial diagnosis) with recent progression of LAD and splenomegaly with spleen over 20cm; he presents today having recently started on the ublituximab plus TGR1202 which was discontinued after presumed SOB. Treatmen d to **ibrutin**

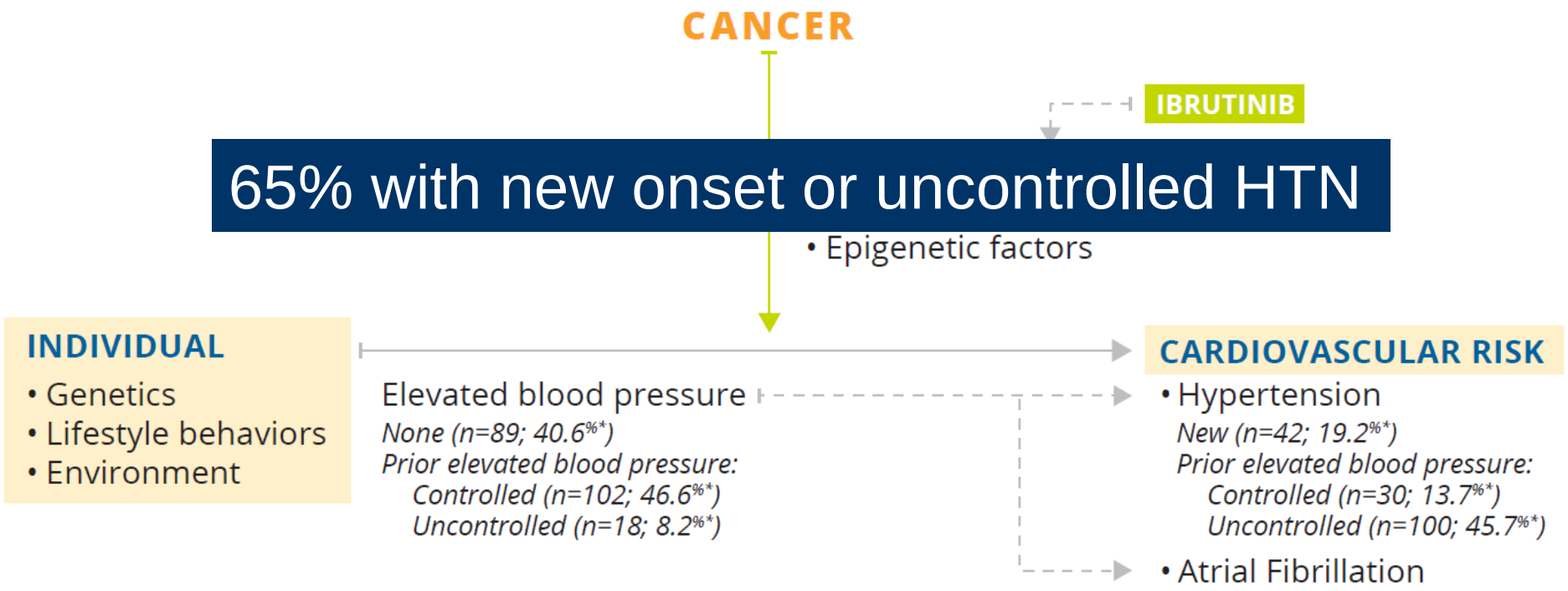


Oncology GHV at initial diag esents today hav esumed treatment tment was stopp **ib monothe**

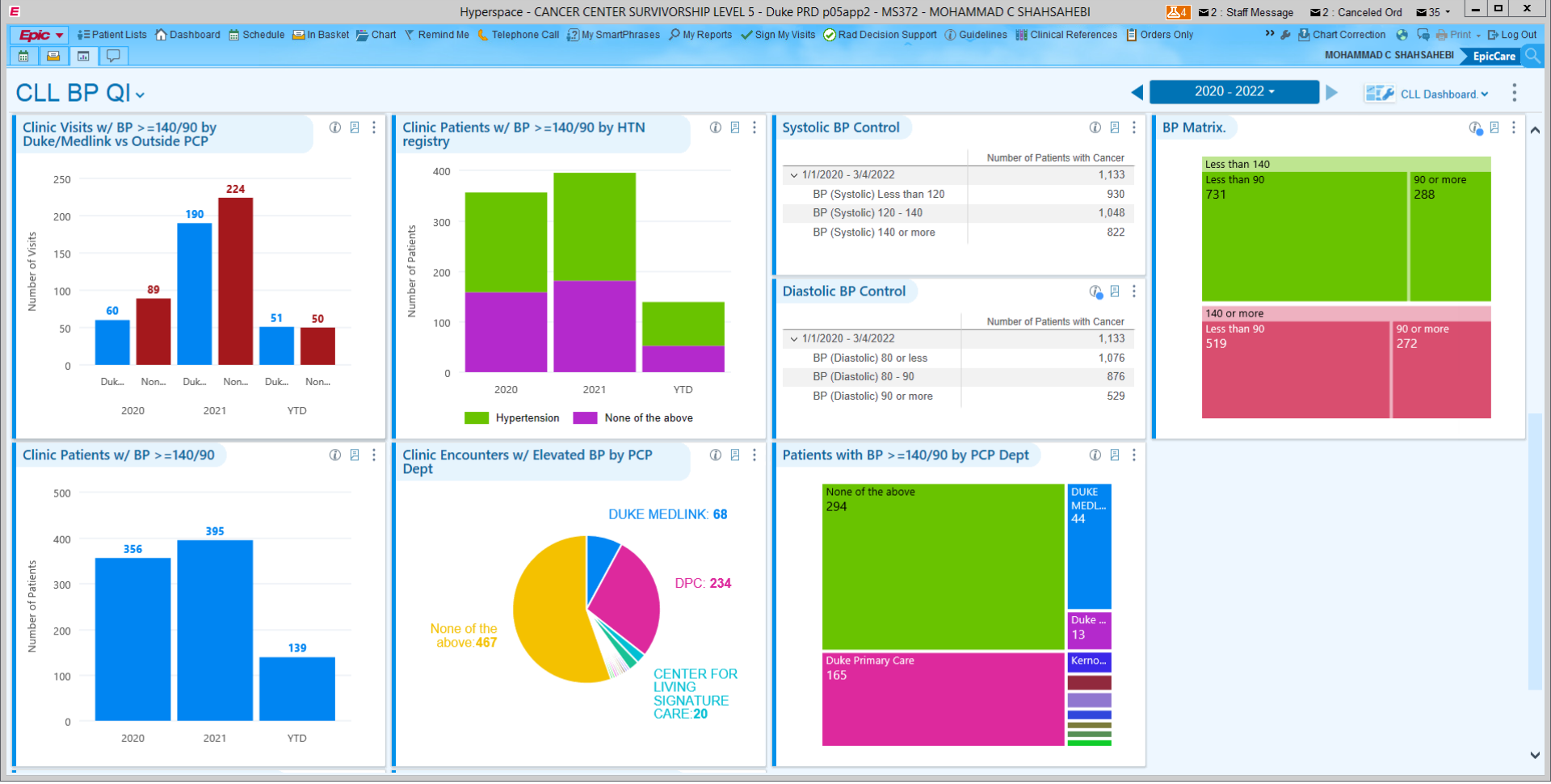
Note the c

No one m opril

ASSOCIATIONS WITH CARDIOVASCULAR RISK



*percentages are calculated based on total study population of n=219; Other notable comorbidities that factor into one's lifetime cardiovascular risk factor profile and require consideration include insulin resistance that progresses to diabetes, state of being overweight/obese, and endothelial dysfunction/atherosclerosis that progresses to coronary artery disease.



Duke Cancer Institute

Hyperspace - CANCER CENTER SURVIVORSHIP LEVEL 5 - Support (SUP) environment - 4 | 2 : Staff Message | 2 : Canceled Ord | 31

Epic | Patient Lists | Dashboard | Schedule | In Basket | Chart | Remind Me | Telephone Call | My SmartPhrases | Chart Correction | Print | Log Out

SUPPORT (SUP) ENVIRO | MOHAMMAD C SHAHSAHEBI

In Basket

New Msg | New Patient Msg | Refresh | Edit Pools | Manage Pools | Preferences | Search | Manage QuickActions | Attach | Out | Properties

: Oeffin... > Patient Update 0 unread, 1 total | Sort & Filter

Status	Msg Date	Patient
Read	03/04/2022 12:33 PM	[redacted]

Comments:
Visit Date: 03/07/2022
Type: Office Visit
Provider: Tammenga, Amy Marie, NP
Specialty/Dept: Oncology
Sender: Shahsahebi, Mohammad, MD
Sent From:
Open?: Open
Pending Orders: N

Done | Chart | Patient Msg | Telephone Call

Message | Patient Info | Meds/Problems | Vitals/Labs | My Last Note | Future Appts | Help

Your Patient has high BP

Received: Today

Shahsahebi, Mohammad, MD → Oeffinger, Kevin Charles, MD

Elevated BP in CLL Clinic

Dear KEVIN CHARLES OEFFINGER, MD,

Your patient, [redacted], had an elevated blood pressure in our CLL clinic.

As you know, the target blood pressure in the CLL patient population is < 140/90. Some of our therapies can cause or worsen hypertension.

Some antihypertensives have established drug-drug interactions with CLL medications. We would avoid starting diltiazem, verapamil, or carvedilol if patients are on oral CLL therapy.

Please evaluate her in clinic or manage by telephone. We are happy to help answer questions with regards to CLL or the CLL treatment.

Thank you,

The Duke Cancer Center CLL Team

Danielle Brander, MD
Andrea Sitlinger, MD
Heather Wolfe, MD
Jennifer Snyder, NP
Amy Tammenga, NP

Duke Cancer Institute

Risk-based health care of cancer survivors

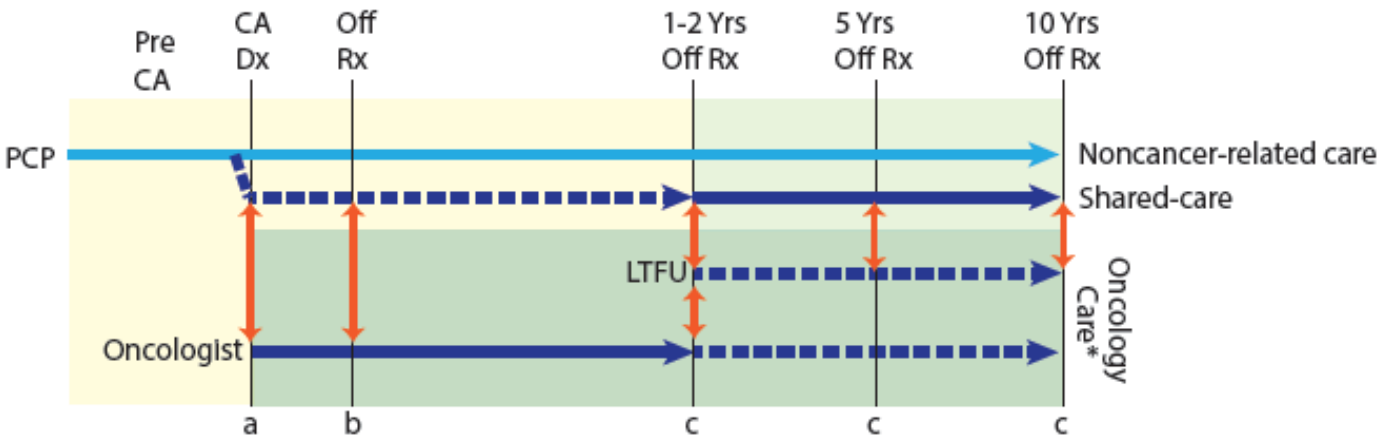
- Monitor for recurrence of cancer
- Surveillance for second cancers and late effects
  - Early diagnosis and intervention
- Prevention
  - Tobacco use, physical activity, calcium intake
- Counseling and targeted education

Oeffinger KC. Institute of Medicine, 2003
Oeffinger KC, Hudson MM. CA Cancer J Clin 54:208-236, 2004

Risk-Stratified Shared Care Model for Cancer Survivors

Low Risk:

All of the following:
- Surgery only or chemotherapy that did not include alkylating agent, anthracycline, bleomycin, or epipodophyllotoxin
- No radiation
- Low risk of recurrence
- Mild or no persistent toxicity of therapy



Communication Points with Primary Care Physician

a Cancer diagnosis and planned therapeutic approach, brief overview of chemotherapy, radiation therapy and/or surgery.

b Survivorship Care Plan: cancer diagnosis, cancer therapy, surveillance recommendations, contact information.

c Periodic update with changes in surveillance recommendations, and new information regarding potential late effects.

d Periodic update of survivor's health for primary care physician's record.

Abbreviations:

Ca=cancer; Dx=diagnosis; Off Rx=completion of cancer therapy; PCP=primary care physician; LTFU=long-term follow-up (survivor) program; Onc=oncologist

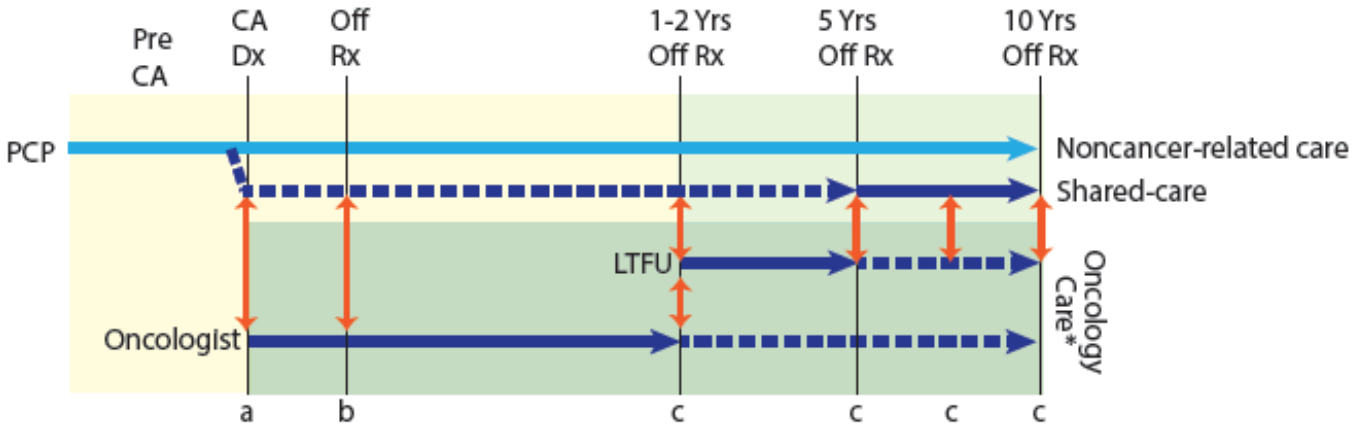
Primary responsibility for cancer-related care; PCP continues to manage noncancer comorbidities and routine preventive health maintenance.

*Cancer Center or Oncologist/oncology group practice; if there is not an LTFU/Survivor Program available, care in the box is provided by the primary oncologist.

Oeffinger KC, McCabe MS. J Clin Oncol, 2005
McCabe MS, et al. Semin Oncol, 2013

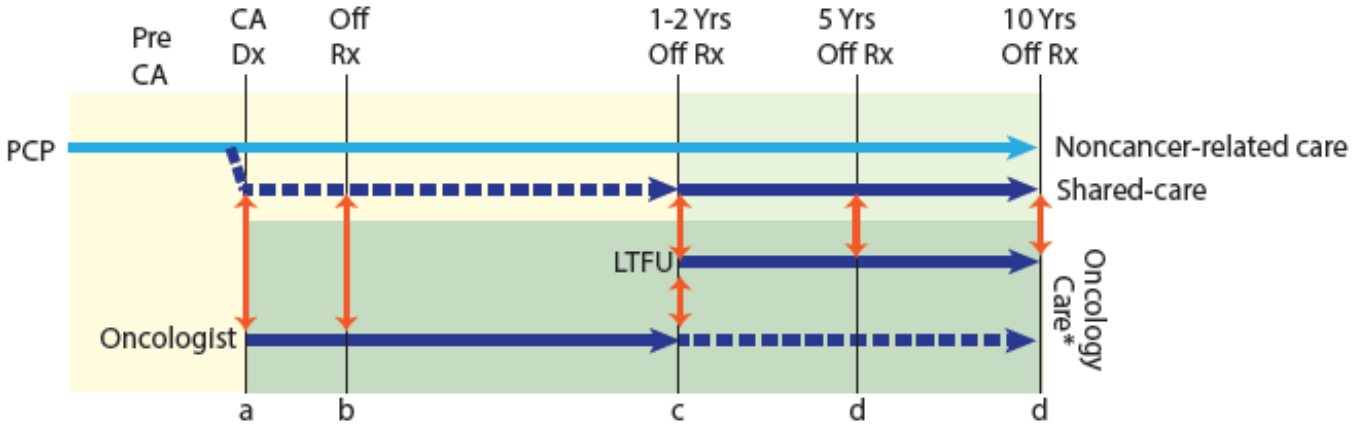
Moderate Risk:

Any of the following:
- Low or moderate dosealkylating agent, anthracycline, bleomycin, or epipodophyllotoxin
- Low to moderate dose radiation
- Autologous stem cell transplant
- Moderate risk of recurrence
- Moderate persistent toxicity of therapy



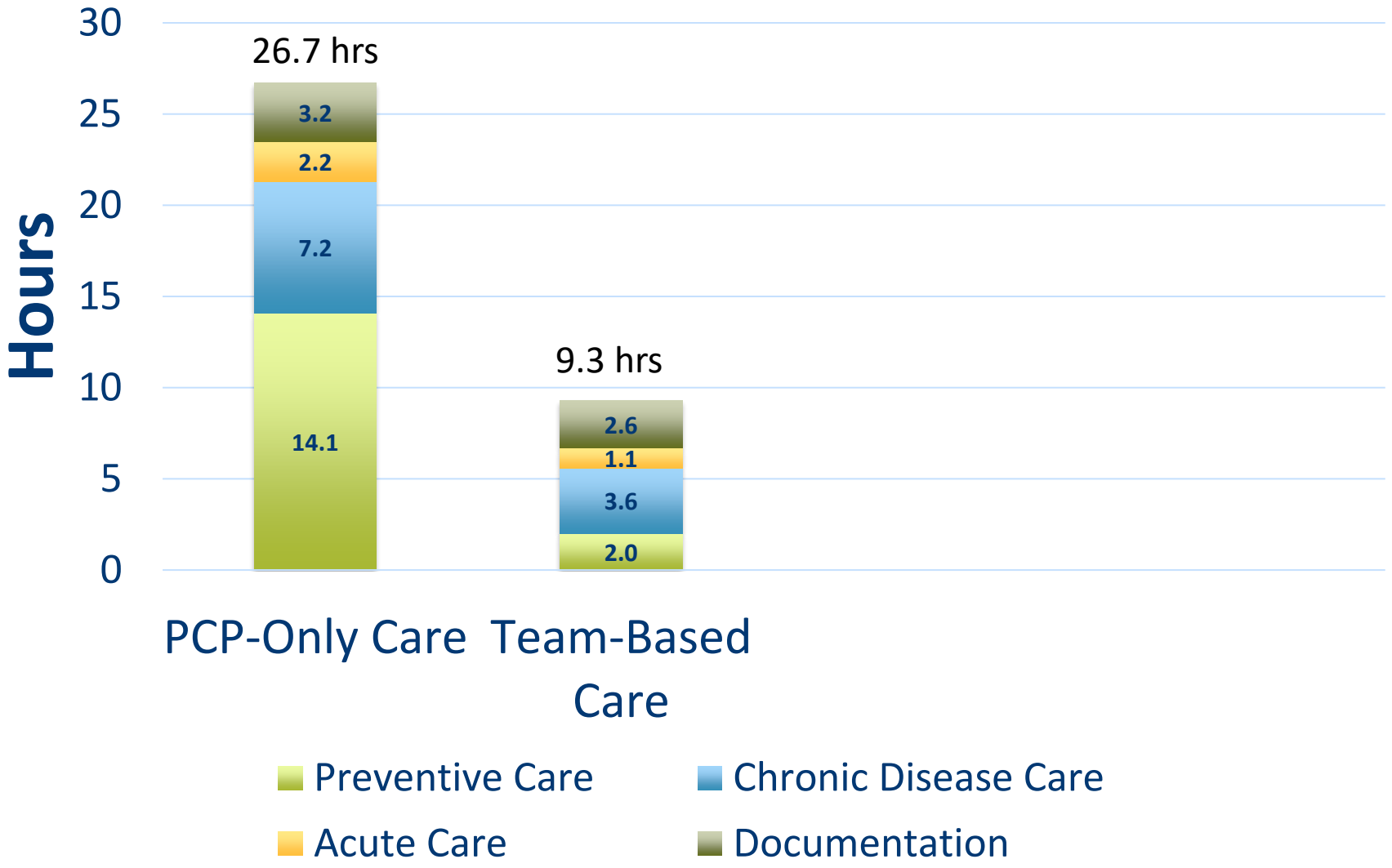
High Risk:

Any of the following:
- High dose alkylating agent, anthracycline, bleomycin, or epipodophyllotoxin
- High dose radiation
- Allogeneic stem cell transplant
- High risk of recurrence
- Multi-organ persistent toxicity of therapy

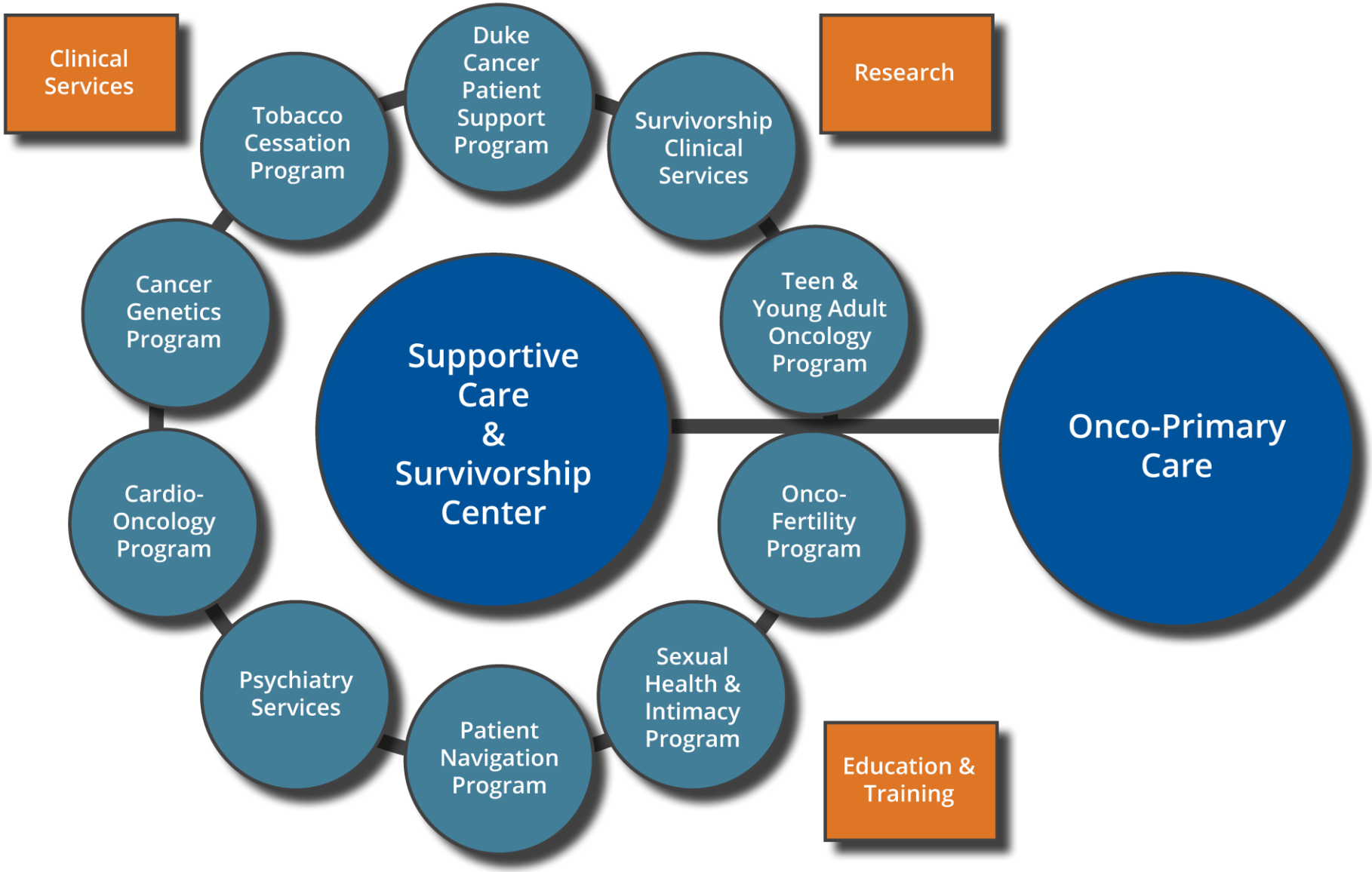


Oeffinger KC, McCabe MS. J Clin Oncol, 2005
McCabe MS, et al. Semin Oncol, 2013

Primary care provider time needed to provide care for average US adult panel of 2500 patients



Porter J, et al. JGIM, 2023


Clinical Services
Tobacco Cessation Program
Duke Cancer Patient Support Program
Survivorship Clinical Services
Research
Cancer Genetics Program
Supportive Care & Survivorship Center
Teen & Young Adult Oncology Program
Onco-Primary Care
Cardio-Oncology Program
Onco-Fertility Program
Psychiatry Services
Patient Navigation Program
Sexual Health & Intimacy Program
Education & Training

Onco-Primary Care APP Visits

- Transition from Oncology team
- 2-3 visits with APP
- Identify PCP (inside / outside of system)
- Box at top of note highlighting PCP responsibilities – 2-3 bullets
- Communicate with PCP
- Transition to PCP
- Pilot: embed APP in high volume PCP clinic

Pilot Duke South Durham

- Embedding onco-primary care APP in the highest volume Duke primary care clinic – ½ day per week
- Role(s)
- Metrics of success
- Second pilot site

RFA from NCI

- Addressing Primary Care Needs of Cancer Survivors – U01
- Testing PCP clinic-level and system-level interventions
  - Automated messaging, reminders, scheduling
  - Multi-directional e-communication
  - PCP clinic onco-primary care champions
  - Learning collaborative
- Quality metrics and outcomes

Working with your PCP

- Average appointment time = 18 minutes
- Priorities
- Patient portal available 365 days
- Sharing information
- 7 second rule
- Calendar reminders and sticky tabs

Lessons – So Far

- Traditions change slowly
- Multi-disciplinary approach is essential
- Partnership – not top-down approach
- Pilot, pilot, pilot – and evaluate
- Scalable and generalizable approaches
- Integrate risk-stratification
- Underpinning of research / implementation

Acknowledgements

- Leah Zullig, PhD
- Kevin Shah, MD, MBA
- Susan Dent, MD
- Mo Shahsahebi, MD
- Andrea Sitlinger, MD
- Rebecca Shelby, PhD
- Daniel George, MD
- Michel Khouri, MD
- Danielle Brander, MD
- Terry Hyslop, PhD
- Anthony Sung, MD
- Eric Chow, MD
- Greg Armstrong, MD
- Jennifer Ford, PhD
- Tara Henderson, MD
- Chaya Moskowitz, PhD
- Bryce Reeve, PhD
- Theresa Coles, PhD
- Michaela Dinan, PhD
- Nadine Barrett, PhD
- Linda Sutton, MD
- Yousuf Zafar, MD
- Rachel Greenup, MD
- John Ragsdale, MD
- Renee Avecilla, MD, CCRP
- Kacey Clayton-Stiglbauer

Funding provided by:
Duke Institute for Health Innovation
National Cancer Institute
American Cancer Society
DCI Center for Onco-Primary Care

Duke Cancer Institute