

Choosing What to De-Implement

Lesly A. Dossett, MD, MPH

Associate Professor of Surgery

Chief, Division of Surgical Oncology

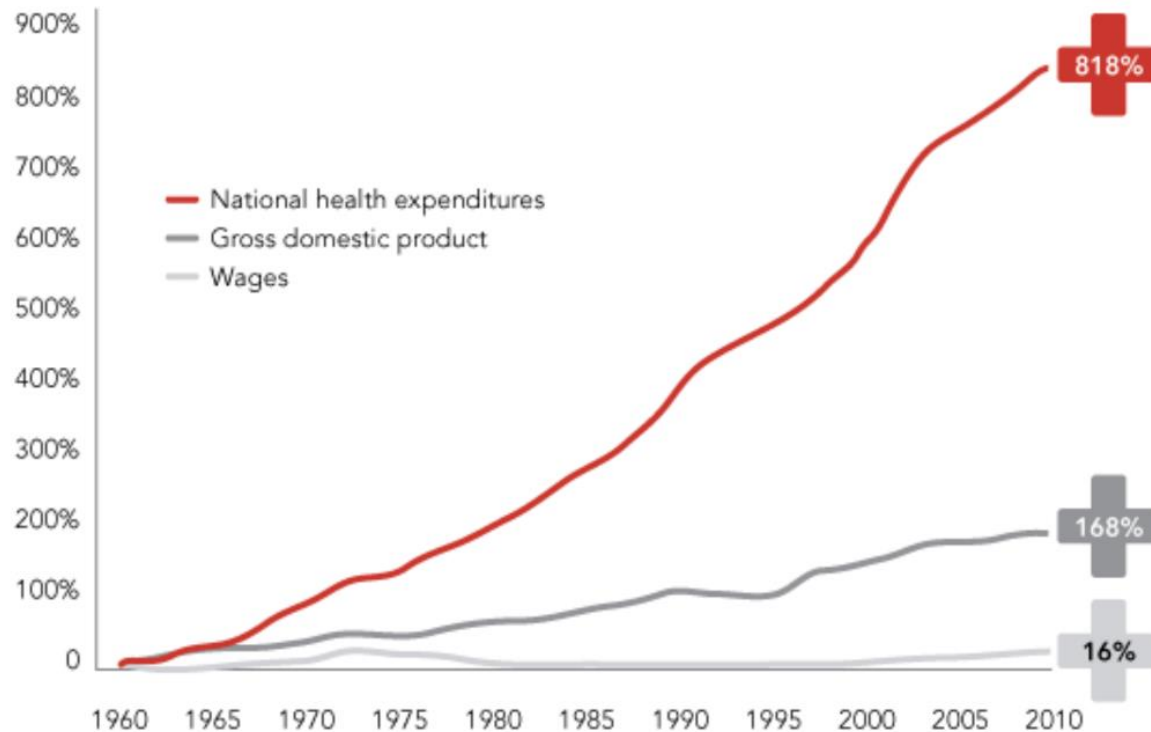
Co-Director, Michigan Program on Value Enhancement

Michigan Medicine



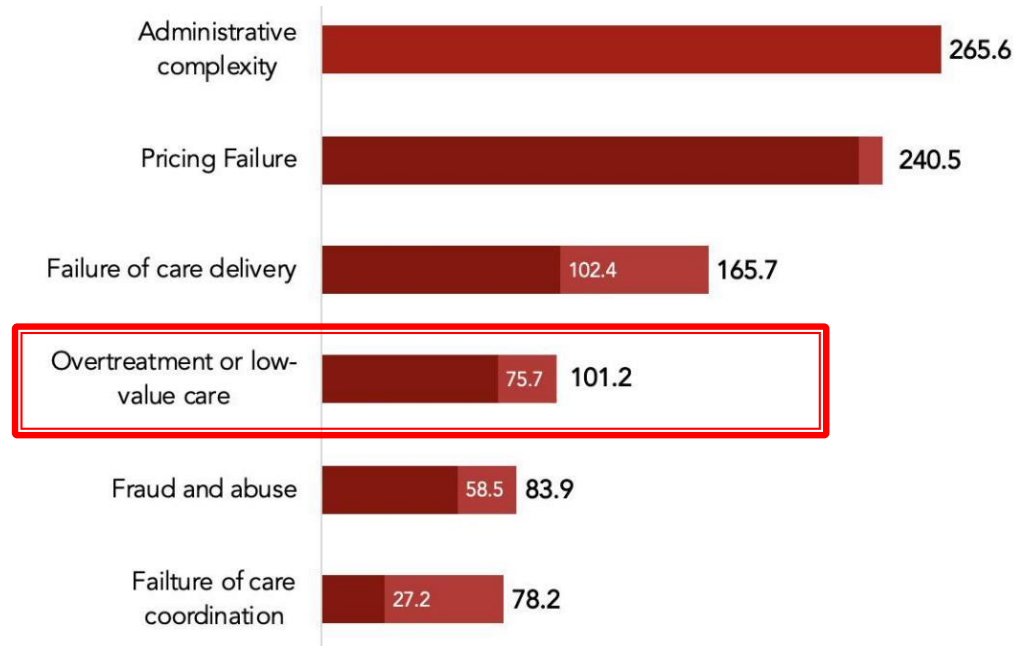


Health care spending has grown faster than the rest of the economy



Total Annual Costs of **Waste** in Healthcare (in Billion)

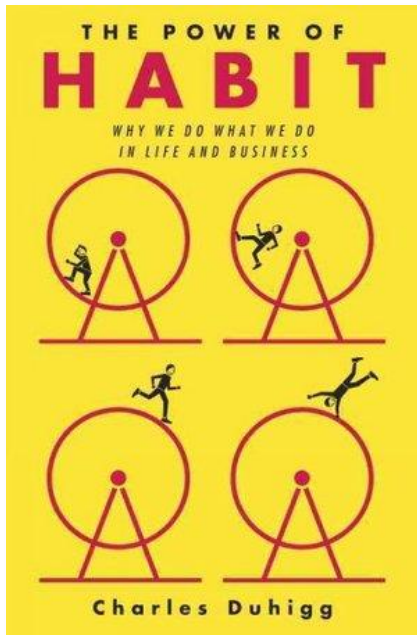
(JAMA October 2019) - Total estimate ranges from \$760B - \$935B



Shrank et al. Waste in the US health care system: estimated costs and potential for savings. *JAMA*. 2019.



Services providing
little or no benefit
to patients, have potential to
cause harm, incur
unnecessary cost to
patients, or **waste resources**.



"It's much easier to start doing something new than to stop doing something habitual without a replacement behavior." - Elliot Berkman

Why Forming a New Good Habit Is Easier Than Breaking a Bad One

How to Break Bad Habits

Breaking bad habits isn't about stopping, but substituting.



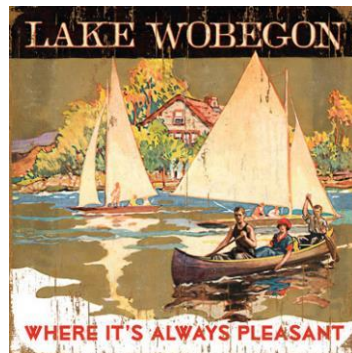
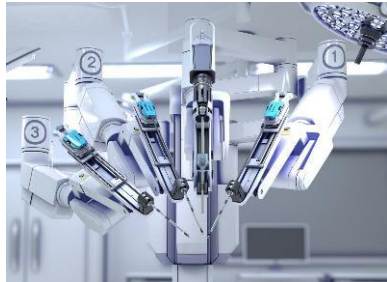
Nick Berlin, MD, MPH
PGY 5 Plastics Resident
National Clinician Scholar

SURGICAL PERSPECTIVE

Too Much Surgery

Overcoming Barriers to Deimplementation of Low-value Surgery

Nicholas L. Berlin, MD, MPH,† Ted A. Skolarus, MD, MPH,‡§ Eve A. Kerr, MD,§¶||
and Lesly A. Dossett, MD, MPH¶||#✉*



Berlin et al. Too much surgery: overcoming barriers to deimplementation of low-value surgery. *Annals of Surgery*. 2020.

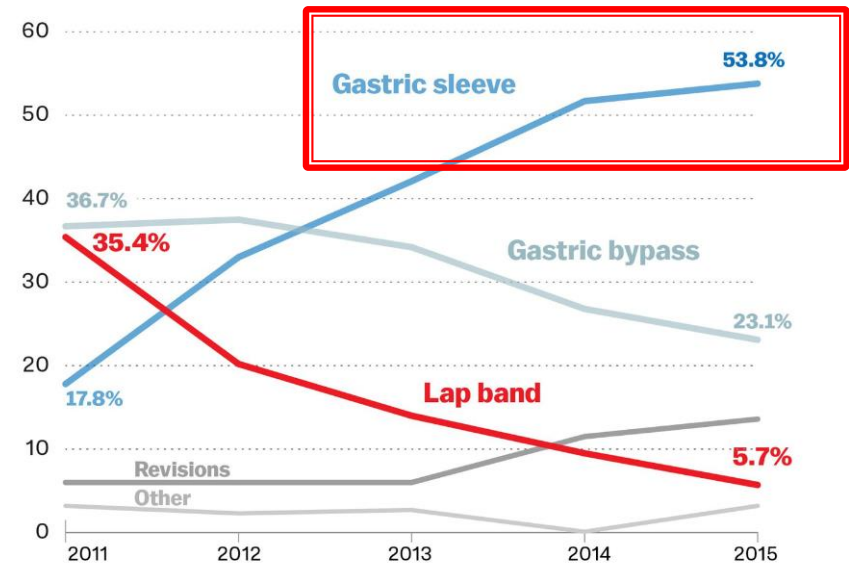
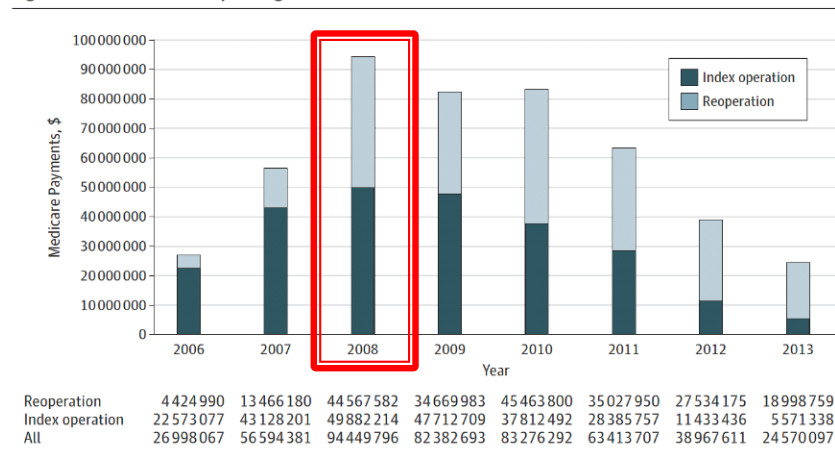
Weight-loss drug Belviq withdrawn from U.S. market amid concerns it raises cancer risk



Other weight loss surgeries are more effective, but doctors will still keep doing the lap band



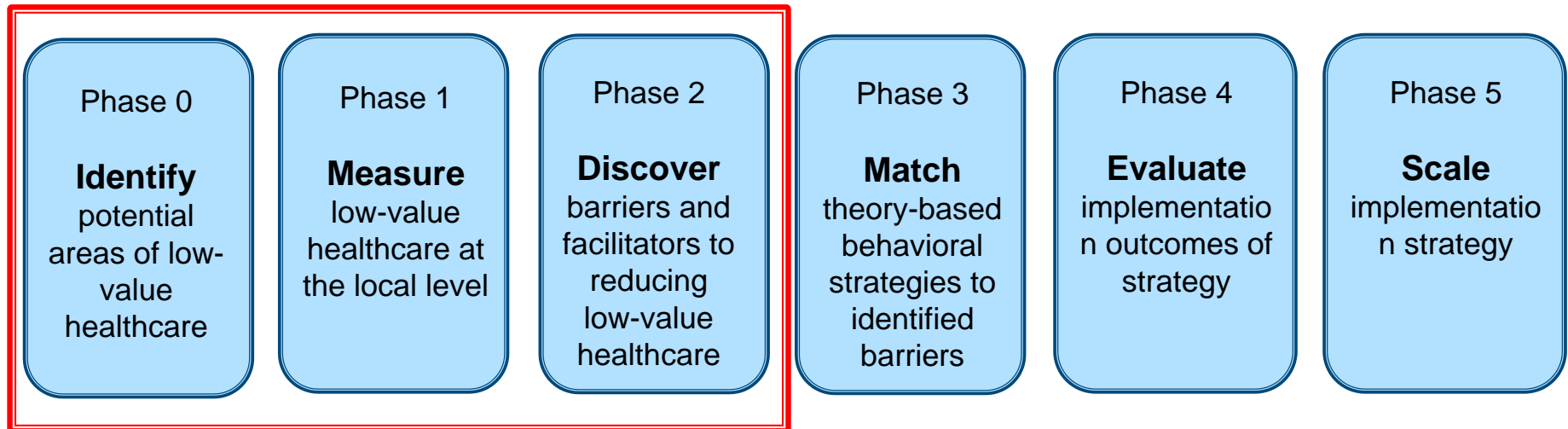
Figure 2. Annual Medicare Spending on Gastric Band Procedures



Ibrahim et al. Reoperation and Medicare expenditures after laparoscopic gastric band surgery. *JAMA Surgery*. 2017.

A Framework for De-implementation in Surgery

Ton Wang, MD,† Michael S. Sabel, MD,* and Lesly A. Dossett, MD, MPH*†✉*

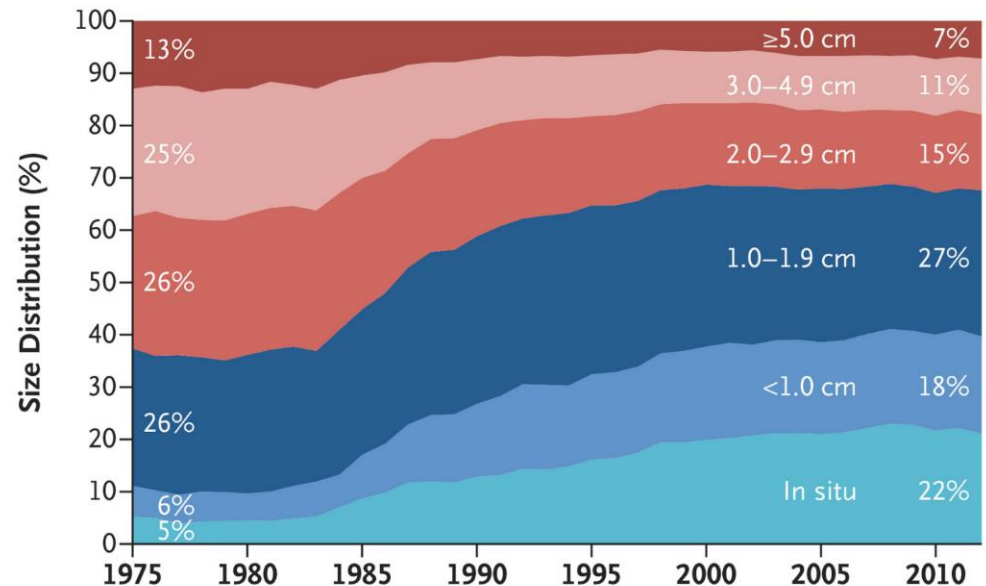


The perfect test case for de-implementation

Females

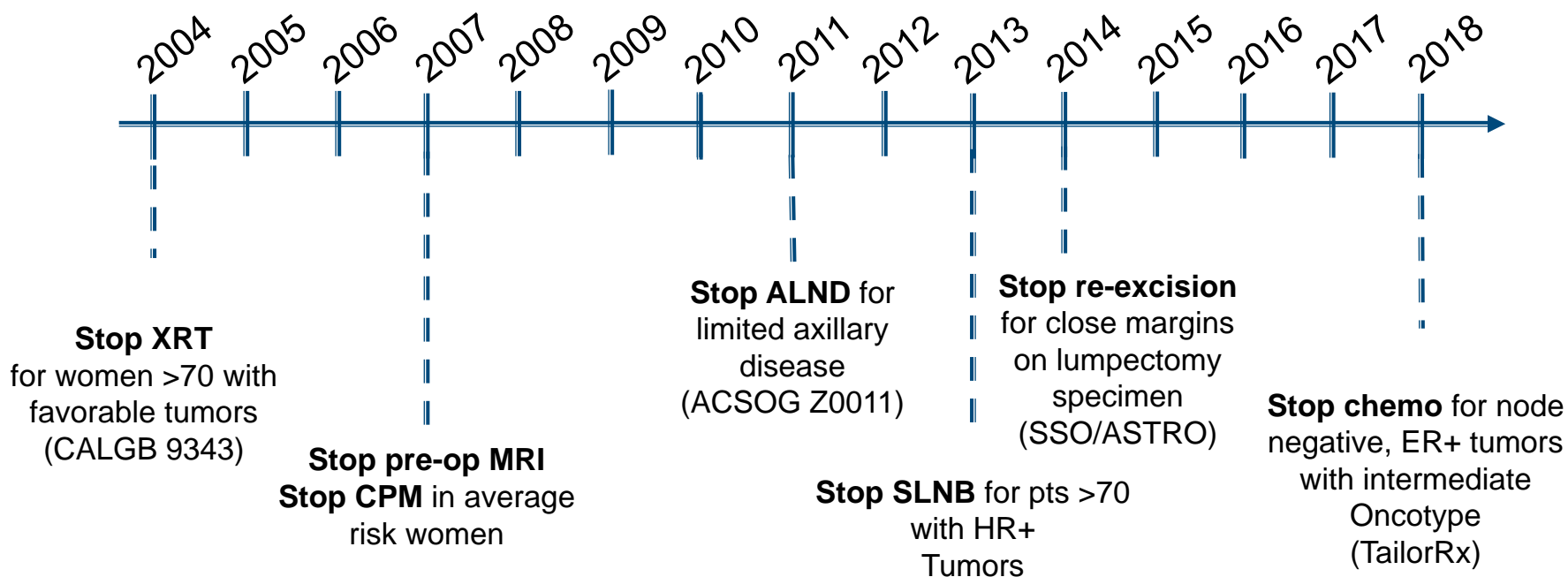
Breast	276,480	30%
Lung & bronchus	112,520	12%
Colon & rectum	69,650	8%
Uterine corpus	65,620	7%
Thyroid	40,170	4%
Melanoma of the skin	40,160	4%
Non-Hodgkin lymphoma	34,860	4%
Kidney & renal pelvis	28,230	3%
Pancreas	27,200	3%
Leukemia	25,060	3%
All Sites	912,930	100%

A Tumor Size Distribution

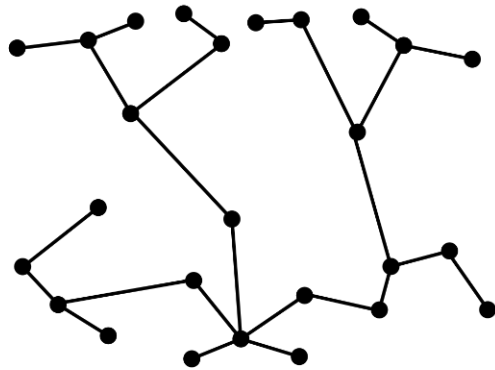


Welch et al. Breast-cancer tumor size, overdiagnosis, and mammography screening effectiveness. *NEJM*. 2016.

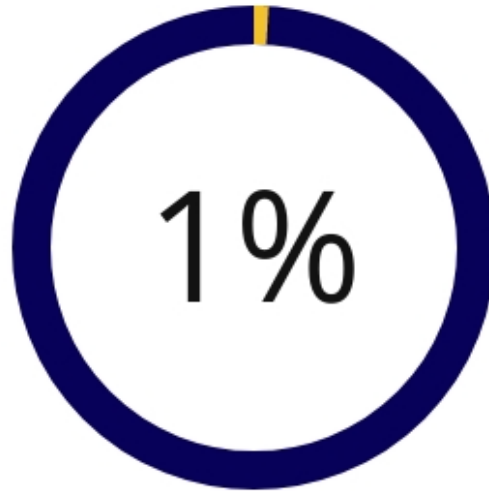
A long history of de-escalation recommendations



Breast cancer care primarily occurs in the community

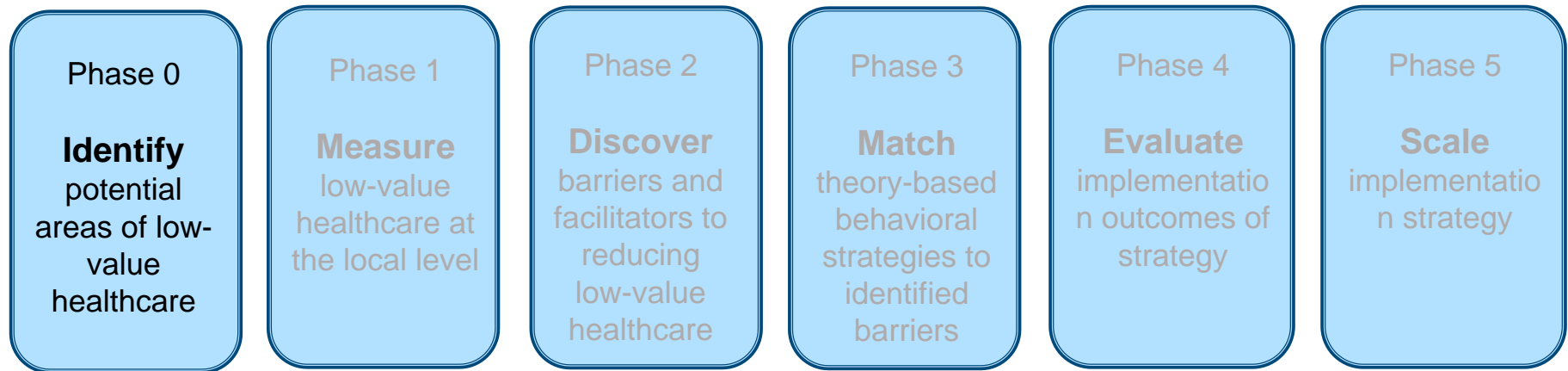


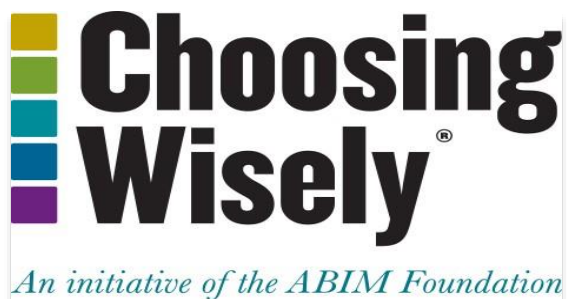
DECENTRALIZED



A Framework for De-implementation in Surgery

Ton Wang, MD,† Michael S. Sabel, MD,* and Lesly A. Dossett, MD, MPH*†✉*





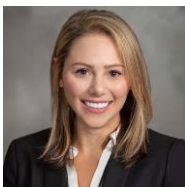
ENGAGING CLINICIANS AND PATIENTS

80⁺ 
PARTNERS
— PUBLISHED —

550⁺
RECOMMENDATIONS

70 CONSUMER ORGANIZATIONS
— DISTRIBUTED —

110⁺ 
PATIENT-FRIENDLY MATERIALS
TO MILLIONS OF CONSUMERS



Research Letter

July 23, 2020

Scope and Characteristics of Choosing Wisely in Cancer Care Recommendations by Professional Societies

Alison S. Baskin, BA¹; Ton Wang, MD, MS^{2,3}; Nicholas L. Berlin, MD, MPH^{2,3}; [et al](#)

[» Author Affiliations](#) | [Article Information](#)

JAMA Oncol. 2020;6(9):1463-1465. doi:10.1001/jamaoncol.2020.2066

Alison Baskin, BA
4th Year Medical Student
General Surgery Applicant

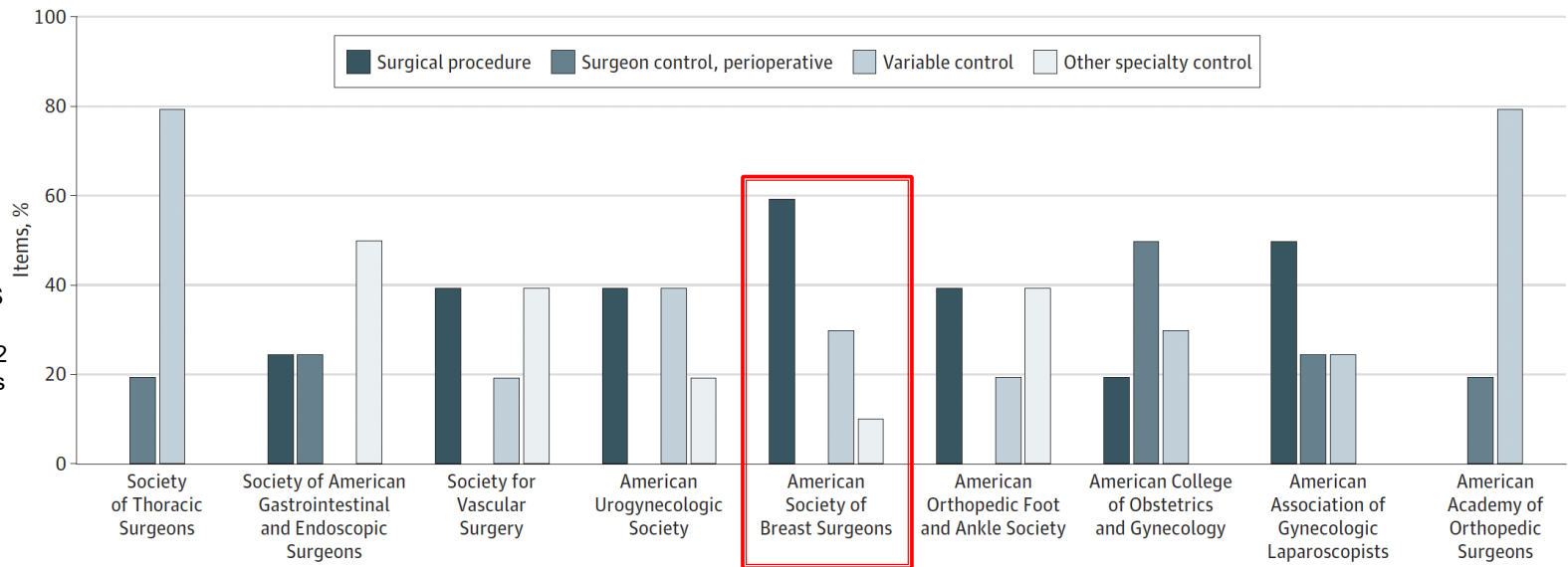
Diagnosis and staging (n = 27)	Laboratory (n = 9)	Breast (n = 5)
	Imaging (n = 14)	Colorectal (n = 1)
	Combination (n = 4)	Hematologic (n = 1)
		Lung (n = 2)
		Ovarian (n = 1)
		Prostate (n = 4)
		Kidney, hepatic, or adrenal (n = 2)
		Skin or soft tissue (n = 6)
		Thyroid (n = 3)
		Urological (n = 1)
		Nonspecific (n = 1)

Treatment (n = 35)	Surgical procedure (n = 6)	Brain (n = 1)
	Other procedure (n = 4)	Breast (n = 7)
	Radiation therapy (n = 9)	Cervical (n = 3)
		Endometrial (n = 1)
	Medication (n = 4)	Hematologic (n = 3)
		Lung (n = 1)
	Toxic effects management (n = 7)	Ovarian (n = 2)
	Combination (n = 5)	Prostate (n = 3)
		Skin or soft tissue (n = 1)
		Nonspecific (n = 13)

Baskin et al. Scope and characteristics of Choosing Wisely in cancer care recommendations by professional societies. *JAMA Oncology*. 2020.

Breast surgical societies support de-implementation

Figure. Surgical Deimplementation Recommendations, Classified by Extent of Surgeon Control



Lexi Antunez, MD, MS
Michigan Alum
General Surgery PGY2
Brigham and Women's





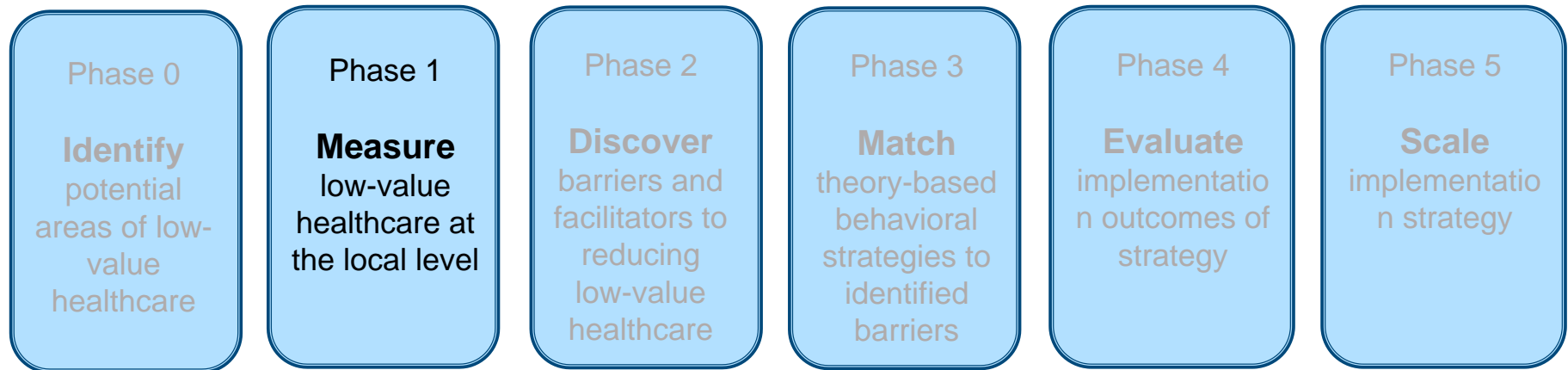
An initiative of the ABIM Foundation

4 surgical targets identified for de-implementation of low value breast cancer care

1. Axillary lymph node dissection (**ALND**) for limited nodal disease (RCT)
2. Re-excision for close but negative **margins** (Consensus Statement)
3. Contralateral prophylactic mastectomy (**CPM**) for unilateral cancer (Meta-analyses)
4. Sentinel lymph node biopsy (**SLNB**) in women ≥ 70 years old with hormone receptor positive (HR+) cancer (RCT)

A Framework for De-implementation in Surgery

Ton Wang, MD,† Michael S. Sabel, MD,* and Lesly A. Dossett, MD, MPH*†✉*





Ton Wang, MD, MS
PGY 6 General Surgery Resident



Sarah Shubeck, MD, MS
Breast Fellow MSKCC



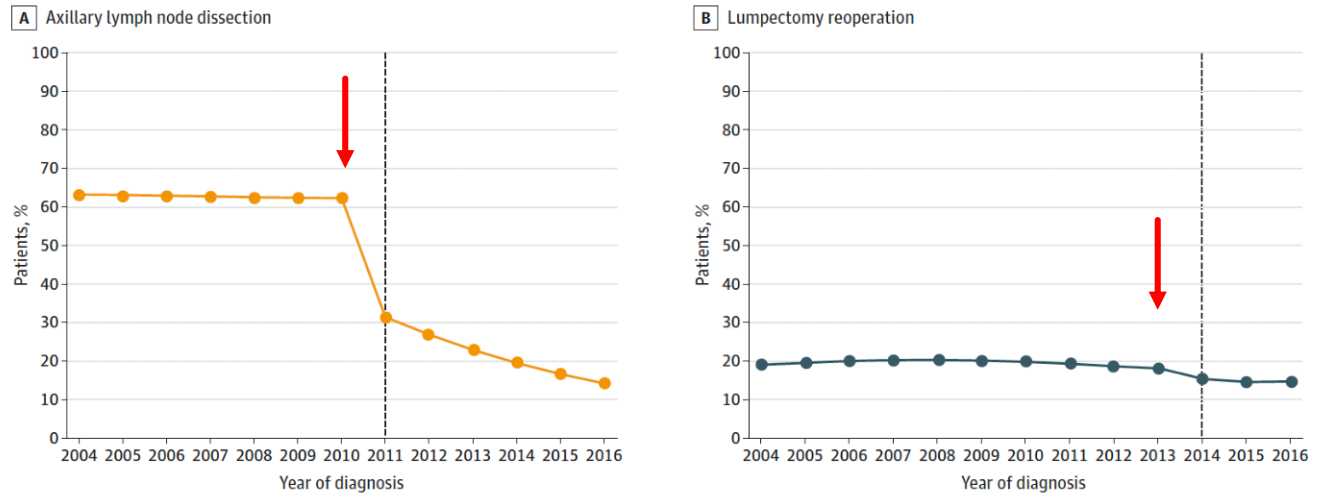
Brooke Bredbeck, MD
PGY 5 General Surgery Resident

JAMA Surgery | Original Investigation

Variations in Persistent Use of Low-Value Breast Cancer Surgery

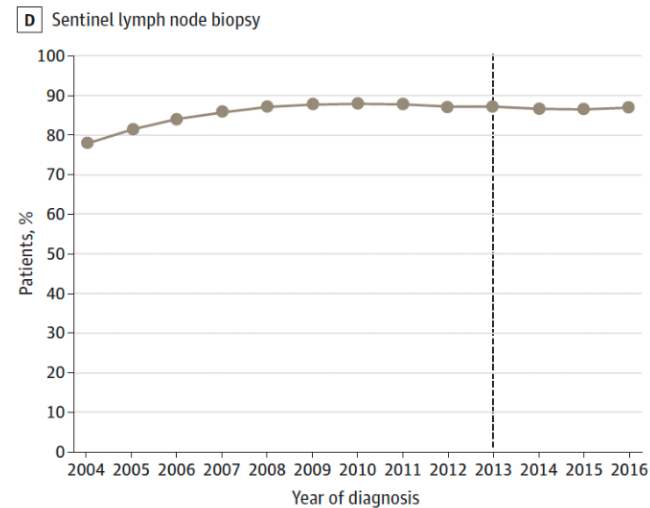
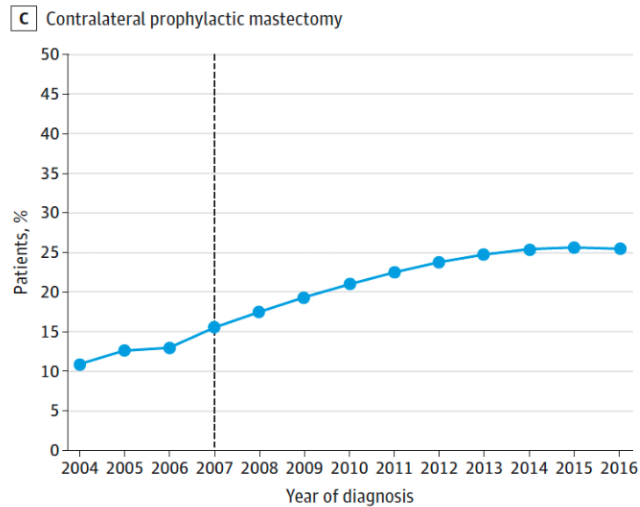
Ton Wang, MD, MS; Brooke C. Bredbeck, MD; Brandy Sinco, MS; Sarah Shubeck, MD, MS; Alison S. Baskin, BA;
Ted Skolarus, MD, MPH; Lesly A. Dossett, MD, MPH

Figure 1. Trends in Deimplementation of Low-Value Breast Cancer Operations Over Time for Patients Meeting Criteria for Omission of Procedure



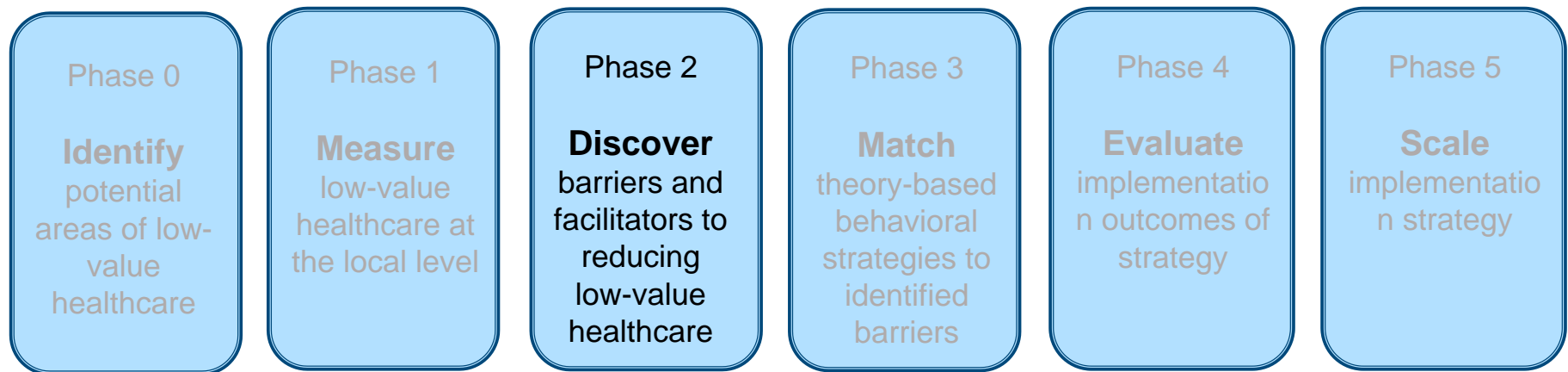
Variations in Persistent Use of Low-Value Breast Cancer Surgery

Ton Wang, MD, MS; Brooke C. Bredbeck, MD; Brandy Sinco, MS; Sarah Shubeck, MD, MS; Alison S. Baskin, BA;
Ted Skolarus, MD, MPH; Lesly A. Dossett, MD, MPH



A Framework for De-implementation in Surgery

Ton Wang, MD,† Michael S. Sabel, MD,* and Lesly A. Dossett, MD, MPH*†✉*



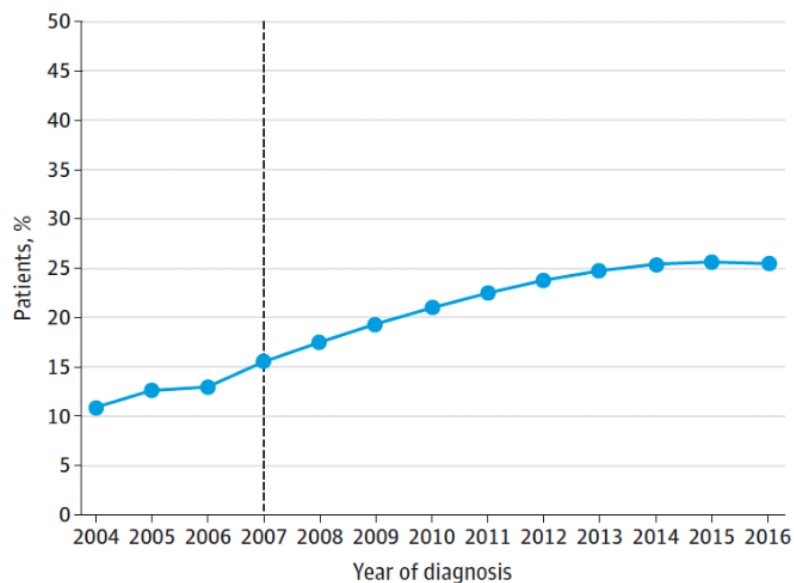


An initiative of the ABIM Foundation

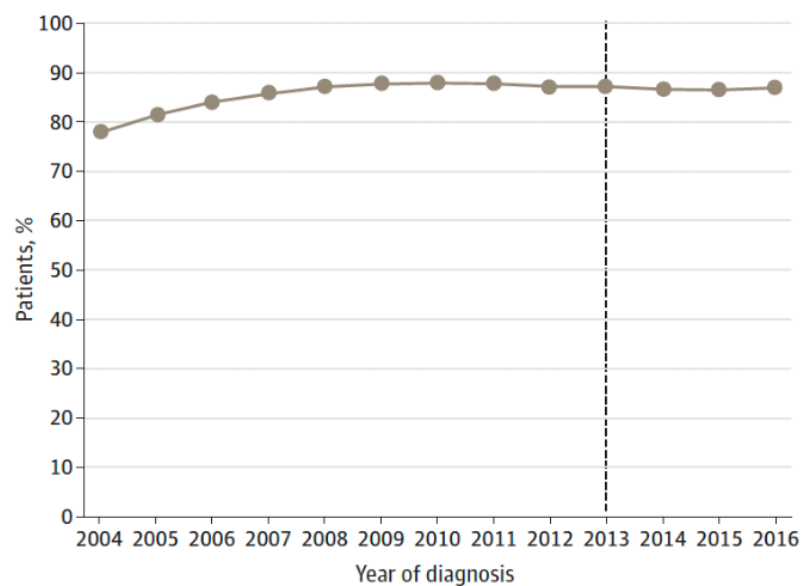
4 surgical targets identified for de-implementation of low value breast cancer care

1. Axillary lymph node dissection (**ALND**) for limited nodal disease
2. Re-excision for close but negative **margins**
3. Contralateral prophylactic mastectomy (**CPM**) for unilateral cancer
4. Sentinel lymph node biopsy (**SLNB**) in women ≥ 70 years old with hormone receptor positive (HR+) cancer

C Contralateral prophylactic mastectomy

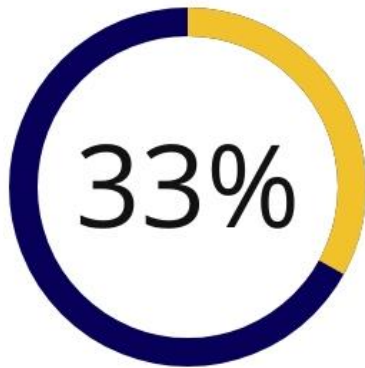


D Sentinel lymph node biopsy



Wang et al. Variations in persistent use of low-value breast cancer surgery. *JAMA*. 2021.

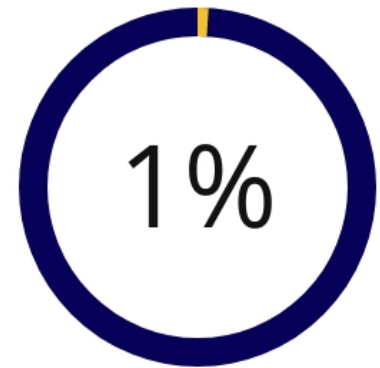
Older women with early-stage breast cancer



Common

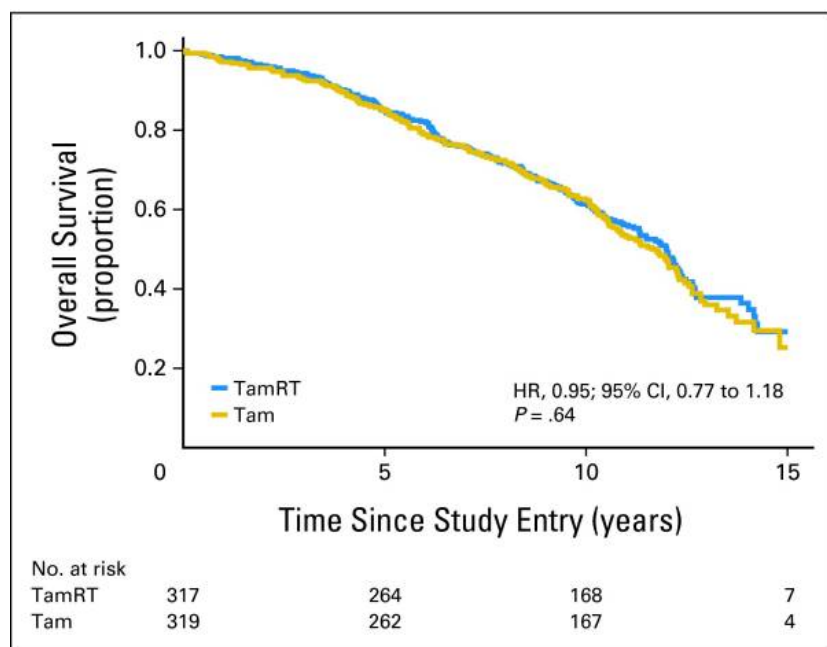


**Favorable
Histology**



**Low Risk of
Death**

Neither axillary staging nor adjuvant radiotherapy improve survival



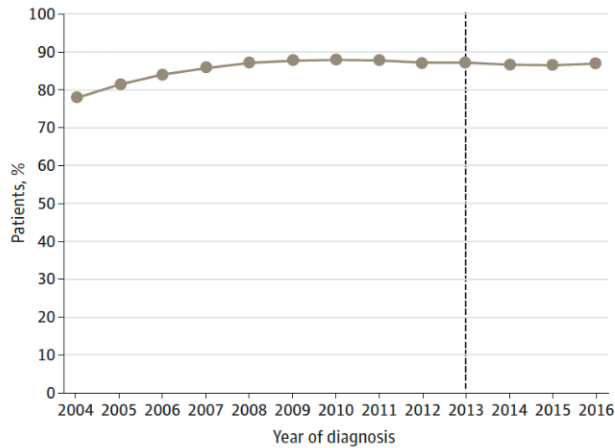
Stratified by age and axillary staging;
randomized to lumpectomy/TAM +/- XRT

SLNB: Don't routinely use sentinel node biopsy in clinically node negative women ≥ 70 years of age with early-stage hormone receptor positive invasive breast cancer. **(Society of Surgical Oncology, 2016)**

Radiotherapy: Breast irradiation may be omitted in patients ≥ 70 years of age with ER+, clinically node-negative, T1 tumors who receive adjuvant endocrine therapy **(National Comprehensive Cancer Network, 2004, category 1)**

SLNB is highly utilized at national, regional, and local levels

D Sentinel lymph node biopsy

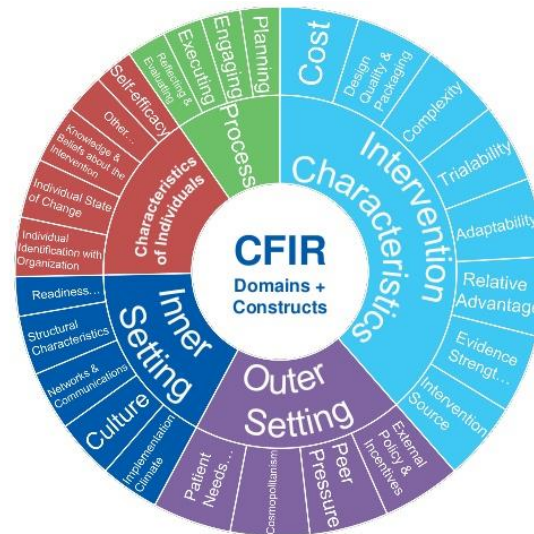


 NATIONAL
CANCER
DATABASE

Understanding behavior of individuals and organizations



Theoretical Domains Framework (TDF)



Consolidated Framework for Implementation Research (CFIR)

Determinants	Definitions	Questions
1. GUIDELINE FACTORS		
• Recommendation		
• Quality of evidence supporting the recommendation	How confident we are in the estimates of effects	What is the quality of the evidence supporting the recommendation and has it been assessed appropriately?
• Strength of recommendation	How confident we are that the desirable effects of adherence to the recommendation outweigh the undesirable effects	What is the strength of the recommendation, has it been assessed appropriately, and are the implications of the strength of the recommendation clearly communicated?
• Clarity	The clearness of the target population, the settings in which the recommendation is to be used and the recommended action	Is the recommended action (what to do) stated specifically and unambiguously? Is sufficient detail provided to allow the targeted healthcare professionals to perform the recommended action?
• Cultural appropriateness	The extent to which the recommendation is suitable in the social context where it is being implemented	Is the recommendation culturally appropriate?

Tailored Implementation in Chronic Diseases (TICD)

Original Investigation | Oncology

Patient Perspectives on Treatment Options for Older Women With Hormone Receptor-Positive Breast Cancer A Qualitative Study

JAMA
Network | **Open**

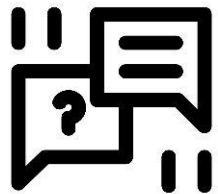
Ton Wang, MD; Nicole Mott, BS; Jacquelyn Miller, MA; Nicholas L. Berlin, MD, MPH; Sarah Hawley, PhD; Reshma Jagsi, MD, DPhil; Lesly A. Dossett, MD, MPH



Ton Wang, MD, MS
PGY 6 General Surgery Resident



Nicole Mott, BS
4th Year Medical Student
ENT Applicant



N=30

“Imagine you were recently diagnosed with breast cancer. Your doctor tells you that the cancer is small and is hormone receptor positive. The doctor recommends you undergo surgery to remove the tumor.”

Wang et al. Patient perspectives on treatment options for older women with hormone receptor-positive breast cancer. *JAMA Open*. 2020.

Patient Perspectives on Treatment Options for Older Women With Hormone Receptor-Positive Breast Cancer A Qualitative Study

Ton Wang, MD; Nicole Mott, BS; Jacquelyn Miller, MA; Nicholas L. Berlin, MD, MPH; Sarah Hawley, PhD; Reshma Jagsi, MD, DPhil; Lesly A. Dossett, MD, MPH

Accept age-based guidelines

Change in physiology

Decreased stamina

Competing comorbidities

Social perspective

Trust in research

Patient autonomy

“Well, if there is a recurrence **maybe it’s much closer to the end** of my lifetime anyway and **that wouldn’t be the thing that killed me.**”

“**I’m an older person and I wouldn’t want to put myself through a lot** for my treatment. But younger women, they have their whole life ahead of them and so they should go ahead and have it done.”

Patient Perspectives on Treatment Options for Older Women With Hormone Receptor-Positive Breast Cancer

A Qualitative Study

Ton Wang, MD; Nicole Mott, BS; Jacquelyn Miller, MA; Nicholas L. Berlin, MD, MPH; Sarah Hawley, PhD; Reshma Jagsi, MD, DPhil; Lesly A. Dossett, MD, MPH

Oppose age-based guidelines
Importance of health status
Improved longevity
Genetics
Need for further age stratification
Patient autonomy
Financial greed
Discrimination

“I think a lot of times **insurance companies are calling the shots**, and that’s where the research is coming from.”

“**How positive can they be**, whoever they are, to say that because I’m 72 the procedure wouldn’t be helpful.”

“I don’t get this age thing. **That’s just sort of a discrimination** of some sort to me...I find that slightly offensive.”

Patient Perspectives on Treatment Options for Older Women With Hormone Receptor-Positive Breast Cancer A Qualitative Study

Ton Wang, MD; Nicole Mott, BS; Jacquelyn Miller, MA; Nicholas L. Berlin, MD, MPH; Sarah Hawley, PhD; Reshma Jagsi, MD, DPhil; Lesly A. Dossett, MD, MPH

Treatment and factors
Sentinel lymph node biopsy
Supporting factors
Prognostic test
Peace of mind
Minimal risk
Opposing factors
Lack of benefit
Risk of harm
Trust in clinician and research

“I know my daughter, 10 years ago they did the lymph node test, so I was glad for that because she had peace of mind. **That’s what I would want, peace of mind.**”

“I would say that as you increase in age, **there’s just so many other things that are going to get you** and that just seems like **taking a risk** to have some damage that you don’t need.”

Original Investigation | Oncology

Patient Perspectives on Treatment Options for Older Women With Hormone Receptor-Positive Breast Cancer A Qualitative Study

JAMA
Network | **Open**[™]

Ton Wang, MD; Nicole Mott, BS; Jacquelyn Miller, MA; Nicholas L. Berlin, MD, MPH; Sarah Hawley, PhD; Reshma Jagsi, MD, DPhil; Lesly A. Dossett, MD, MPH

Radiotherapy

Supporting factors

Desire to eradicate cancer

Tolerable side effects

Avoid hormone therapy

Opposing factors

Availability of other therapies

Trust in clinician and research and
lack of benefit

Risks and fear

Inconvenience of treatment

Societal financial cost

“They just zap you and that’s it...I really wouldn’t worry about the radiation.”

“No way I’m going to run my life about going someplace daily for treatment. Yeah, that’s a major factor, I’m not going to revolve my life around my medical condition.”

Wang et al. Patient perspectives on treatment options for older women with hormone receptor-positive breast cancer. *JAMA Open*. 2020.



Nicole Mott, BS
4th Year Medical Student
ENT Applicant

ORIGINAL ARTICLE – BREAST ONCOLOGY

Annals of

SURGICAL ONCOLOGY

OFFICIAL JOURNAL OF THE SOCIETY OF SURGICAL ONCOLOGY

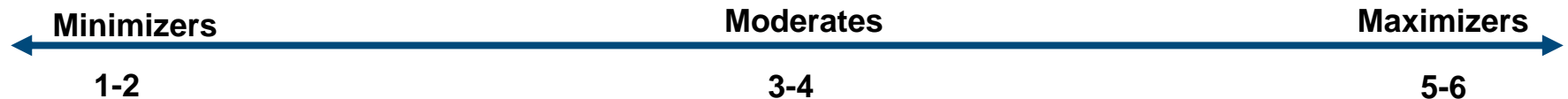


Medical Maximizing–Minimizing Preferences in Relation to Low-Value Services for Older Women with Hormone Receptor-Positive Breast Cancer: A Qualitative Study

Nicole Mott, BS¹, Ton Wang, MD^{2,3}, Jacquelyn Miller, MA³, Nicholas L. Berlin, MD, MPH^{2,3}, Sarah Hawley, PhD, MPH^{3,4,5,7}, Reshma Jagsi, MD, DPhil^{3,6,7}, Brian J. Zikmund-Fisher, PhD^{4,5,7}, and Lesly A. Dossett, MD, MPH^{2,3,7}

Sometimes medical action is clearly necessary, and sometimes it is clearly not necessary. Other times, reasonable people differ in their beliefs about whether medical action is needed.

In situations where it's not clear, on a scale of one to six where one is that you strongly lean towards waiting and seeing and six is that you strongly lean towards taking action, where do you think you fall?





Medical Maximizing–Minimizing Preferences in Relation to Low-Value Services for Older Women with Hormone Receptor-Positive Breast Cancer: A Qualitative Study

Nicole Mott, BS¹, Ton Wang, MD^{2,3}, Jacquelyn Miller, MA³, Nicholas L. Berlin, MD, MPH^{2,3}, Sarah Hawley, PhD, MPH^{3,4,5,7}, Reshma Jagsi, MD, DPhil^{3,6,7}, Brian J. Zikmund-Fisher, PhD^{4,5,7}, and Lesly A. Dossett, MD, MPH^{2,3,7}

Minimizers

“Is [SLNB] really worth it? You know, would I learn something that’s worth the risks?”

“I just don’t believe there would be a benefit, especially since the studies show that to extend life there’s really not a reason to do radiation, so.”

Maximizers

“Just to make sure it isn’t spreading and just to be safe.”

“I would do everything I could, including radiation, if that was going to increase my chances, I’d do it regardless. I’d fight.”



ORIGINAL ARTICLE – BREAST ONCOLOGY

Annals of
SURGICAL ONCOLOGY
OFFICIAL JOURNAL OF THE SOCIETY OF SURGICAL ONCOLOGY



Trends in Breast Cancer Treatment De-Implementation in Older Patients with Hormone Receptor-Positive Breast Cancer: A Mixed Methods Study

Ton Wang, MD^{1,2}, Alison Baskin, BA³, Jacquelyn Miller, MA², Allan Metz, BS³, Niki Matusko, BS¹, Tasha Hughes, MD, MPH^{1,2}, Michael Sabel, MD¹, Jacqueline S. Jeruss, MD, PhD¹, and Lesly A. Dossett, MD, MPH^{1,2}

Ton Wang, MD, MS
PGY 6 General Surgery Resident
Breast Fellowship Applicant

Low Utilizers (Neither SLNB or XRT)

“They’d have to show me there was a reason for it:
I’m not going to do radiation just for prevention, forget about that.”

“He didn’t seem to think it was necessary.” He might’ve mentioned it as something that could be done, but he didn’t think it was necessary.”

Higher Utilizers (Both SLNB and XRT)

“I wanted to know if it had spread or not. **I wanted to know.”**

“They pretty much said, ‘we would like to do the radiation,’ and so I did. **I just trusted them.”**

Wang et al. Trends in breast cancer treatment de-implementation in older patients with HR+ breast cancer: a mixed methods study. ASO. 2019.



Meg Smith, MD, MS
General Surgery Chief Resident
Incoming UM Vascular Fellow

Barriers and Facilitators to De-Implementation of the Choosing Wisely® Guidelines for Low-Value Breast Cancer Surgery

Margaret E. Smith, MD, MS^{1,2}, C. Ann Vitous, MA, MPH², Tasha M. Hughes, MD, MPH^{1,2}, Sarah P. Shubeck, MD, MS¹, Reshma Jaggi, MD, DPHil³, and Lesly A. Dossett, MD, MPH^{1,2}

TDF Domains

Knowledge

“I’m not aware of any specific data
supporting not doing a sentinel lymph node biopsy in these
women.”

Beliefs about consequences

“I see a lot of healthy 70-year-olds who are
motivated to live to 95. It’s long enough for the patient to have a recurrence
if you didn’t do a sentinel node and didn’t do some sort of therapy.”

Barriers and Facilitators to De-Implementation of the Choosing Wisely® Guidelines for Low-Value Breast Cancer Surgery

Margaret E. Smith, MD, MS^{1,2}, C. Ann Vitous, MA, MPH², Tasha M. Hughes, MD, MPH^{1,2}, Sarah P. Shubeck, MD, MS¹, Reshma Jagsi, MD, DPhil³, and Lesly A. Dossett, MD, MPH^{1,2}

TDF Domains

**Beliefs about
consequences**

“It would probably add four minutes to the surgery, so I think it’s kind of reasonable.”

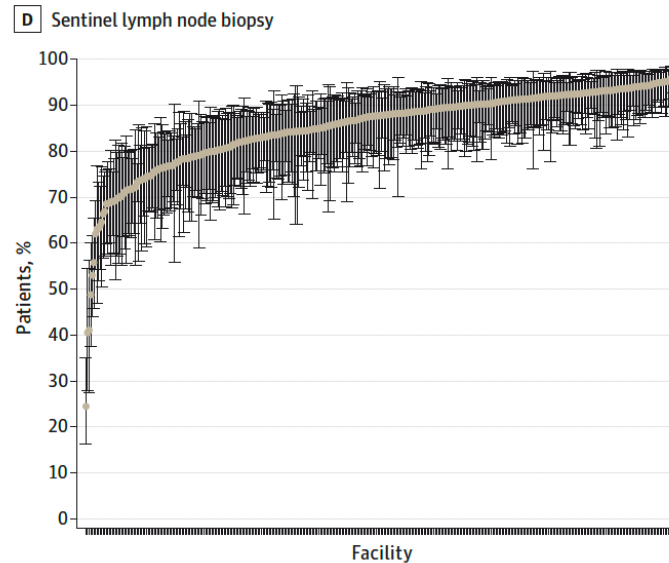
Social Influence

“If someone is going to lose sleep over not knowing, then yes, I would probably do it.”

JAMA Surgery | Original Investigation

Variations in Persistent Use of Low-Value Breast Cancer Surgery

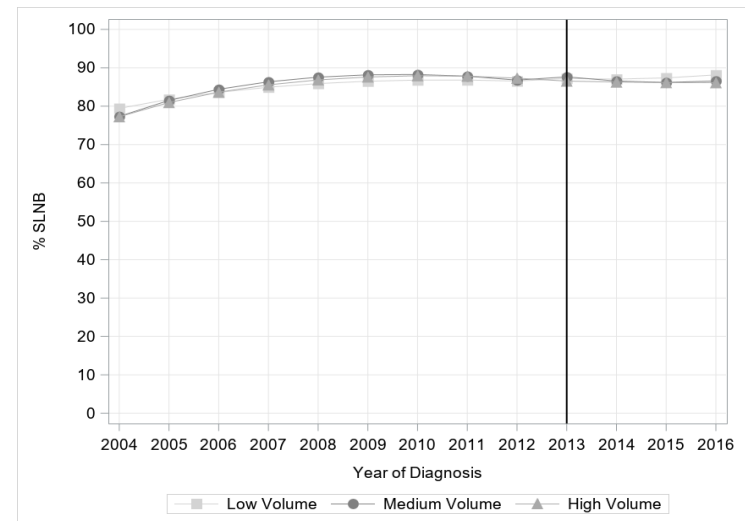
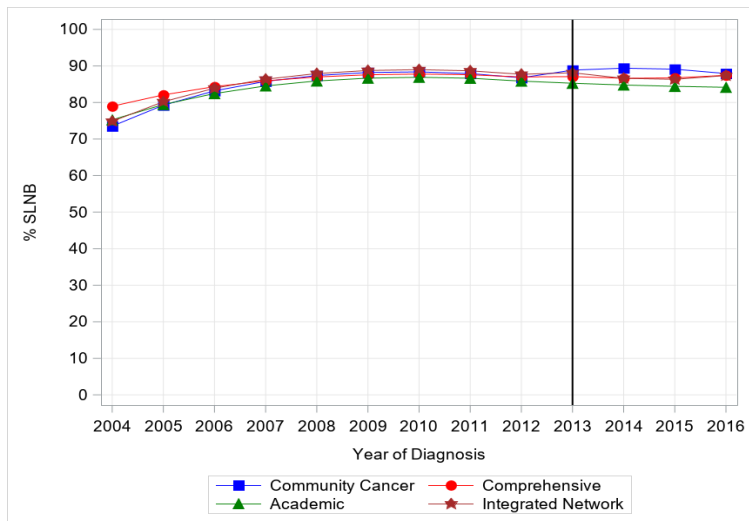
Ton Wang, MD, MS; Brooke C. Bredbeck, MD; Brandy Sinco, MS; Sarah Shubeck, MD, MS; Alison S. Baskin, BA;
Ted Skolarus, MD, MPH; Lesly A. Dossett, MD, MPH



Wang et al. Variations in persistent use of low-value breast cancer surgery. *JAMA*. 2021.

Variations in Persistent Use of Low-Value Breast Cancer Surgery

Ton Wang, MD, MS; Brooke C. Bredbeck, MD; Brandy Sinco, MS; Sarah Shubeck, MD, MS; Alison S. Baskin, BA;
Ted Skolarus, MD, MPH; Lesly A. Dossett, MD, MPH



When making decisions about medical care, do you tend to lean towards doing **only what is necessary** or do you lean towards doing **everything possible**?

(n=1806)

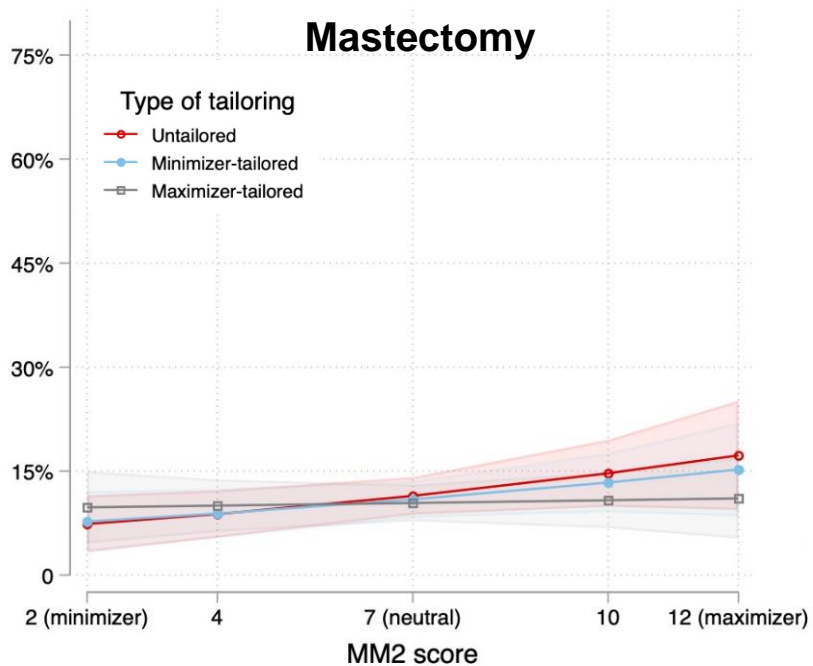
Minimizers
(n=601)

May choose mastectomy to avoid additional future treatment while underestimating the procedure's increased morbidity.

Moderates
(n=602)

Maximizers
(n=603)

May choose mastectomy due to belief it is “better” at treating breast cancer and wanting to “remove it all” from their body.



Reflects current practice
Not sensitive to tailored messaging

Mott et al. Tailored messaging to promote de-implementation of low-value breast cancer care in older women. *Manuscript in preparation.*

Improved patient education and transparency

ORIGINAL ARTICLE – BREAST ONCOLOGY

Gaps in Online Breast Cancer Treatment Information for Older Women

Alison S. Baskin, BA¹, Ton Wang, MD, MS^{2,3}, Nicole M. Mott, BS¹, Sarah T. Hawley, PhD, MPH⁴, Reshma Jagsi, MD, DPhil^{4,5}, and Lesly A. Dossett, MD, MPH^{2,3}



- **0 hospital websites and 1 national organization** included information on omitting SLNB
- **2 hospital websites and 2 national organizations** included information on possible omission of adjuvant radiotherapy

Improved provider education regarding risks and costs

Statewide registry
Retrospective cohort study
(2012-2019)



Women ≥ 70 undergoing
breast cancer surgery
(n=10,812)



74% Lumpectomy
26% Mastectomy



75% received SLNB
and/or adjuvant radiation



SLNB + Radiation (32%)



2.4-fold increased odds of
adjuvant radiation with SLNB
(50% vs 29%)

SLNB Axillary Staging only



30% for 30-day costs

Adjuvant Radiotherapy only



57% for 90-day costs



Thank You!

