National Cancer Institute

BEHAVIORAL RESEARCH

CANCER CONTROL AND POPULATION SCIENCES

The presentation will begin shortly

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National Cancer Institute

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CANCER CONTROL AND POPULATION SCIENCES

Decision-Making Steering Committee Speaker Series

Steven J. Katz, M.D., M.P.H.

July 10, 2014

National Institutes of Health

National Cancer Institute

The charge for the webinar:

Help lead a discussion regarding the most challenging issues in cancer prevention, treatment and/or survival that may involve decision-making by practitioners, patients and/or caregivers

The Challenge of Individualizing Treatments for Breast Cancer

Steven J. Katz MD, MPH
Professor, Departments of Medicine and Health Management and Policy

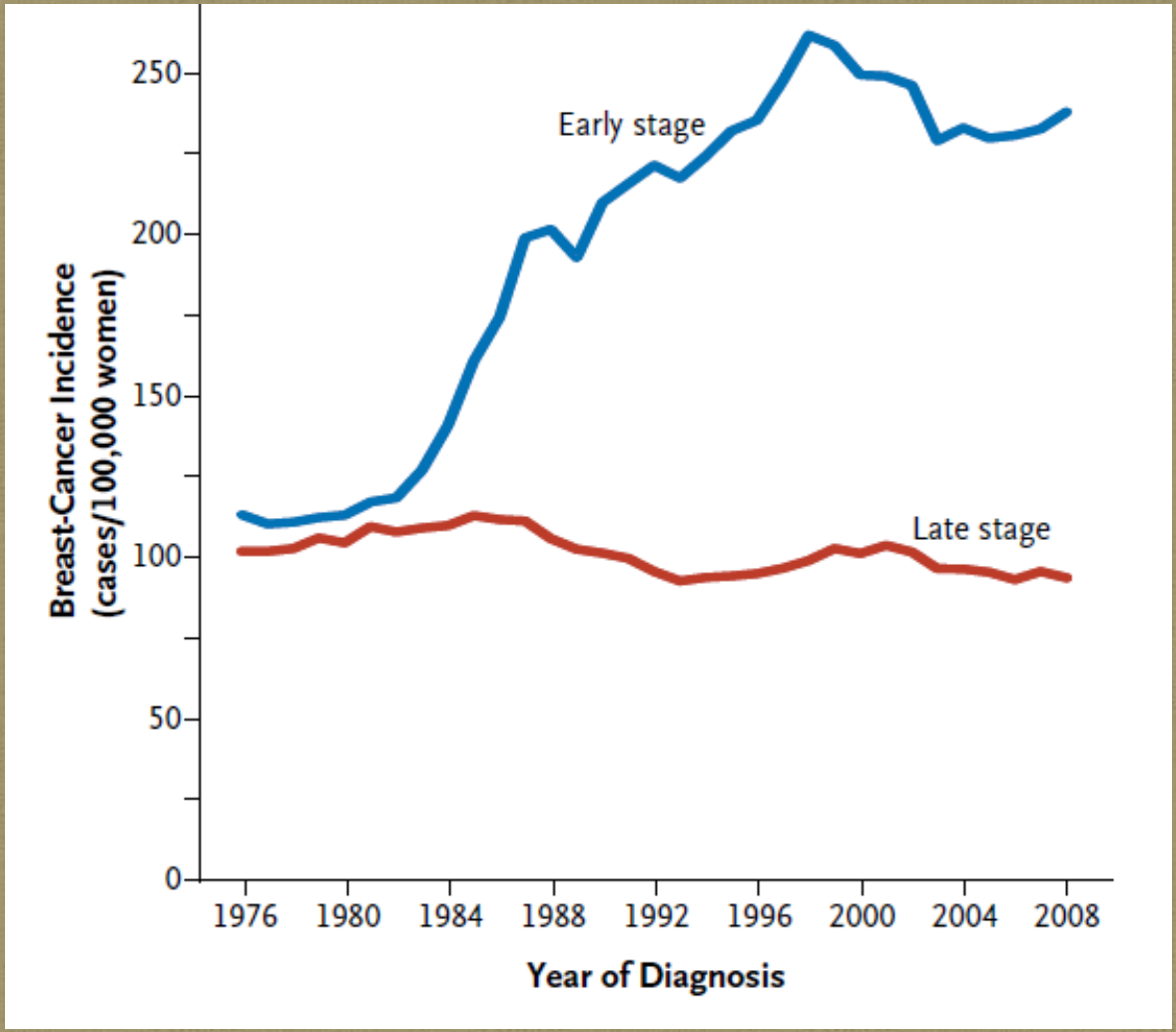
Agenda

- Describe a clinical treatment context
- Explore challenges to communication and decision-making in that context
- Elucidate a research agenda going forward

Breast cancer treatment decision context

- Incident-episodic disease
- Virtually all of the treatments that confer lifetime benefits are initiated and largely completed in the first year of diagnosis
- Most decisions are made within the first few weeks of diagnosis
- Patients receive multi-modal therapies directed by different specialists
- Mature evidence base on management and treatment
- Cancer treatment is widely dispersed in the community

Welch et al BC incidence US



The challenge in patients with favorable prognosis

- Net benefit of treatment options is often small and difficult to formulate for individual patients
- Management and treatment options are morbid and burdensome
- Increasing recognition of potential harm if treatment is too aggressive
- Primum non nocere- *First do no harm*
- Studies underway to evaluate strategies to reduce morbidity and burden on patients
- Need to understand communication and decision-making in the exam room

Primum non nocere- first do no harm

- Surgery: Less vs more
- Radiation: Omit, less vs more
- Chemotherapy: Omit

HEALTHLEADERS MEDIA

Breakthroughs

April 2010

BREAKTHROUGHS:
The Impact of Personalized Medicine Today

The Big Picture 2
In the Middle of a Personalized Bridge

Beth Israel Deaconess Medical Center 11
Case Study 1

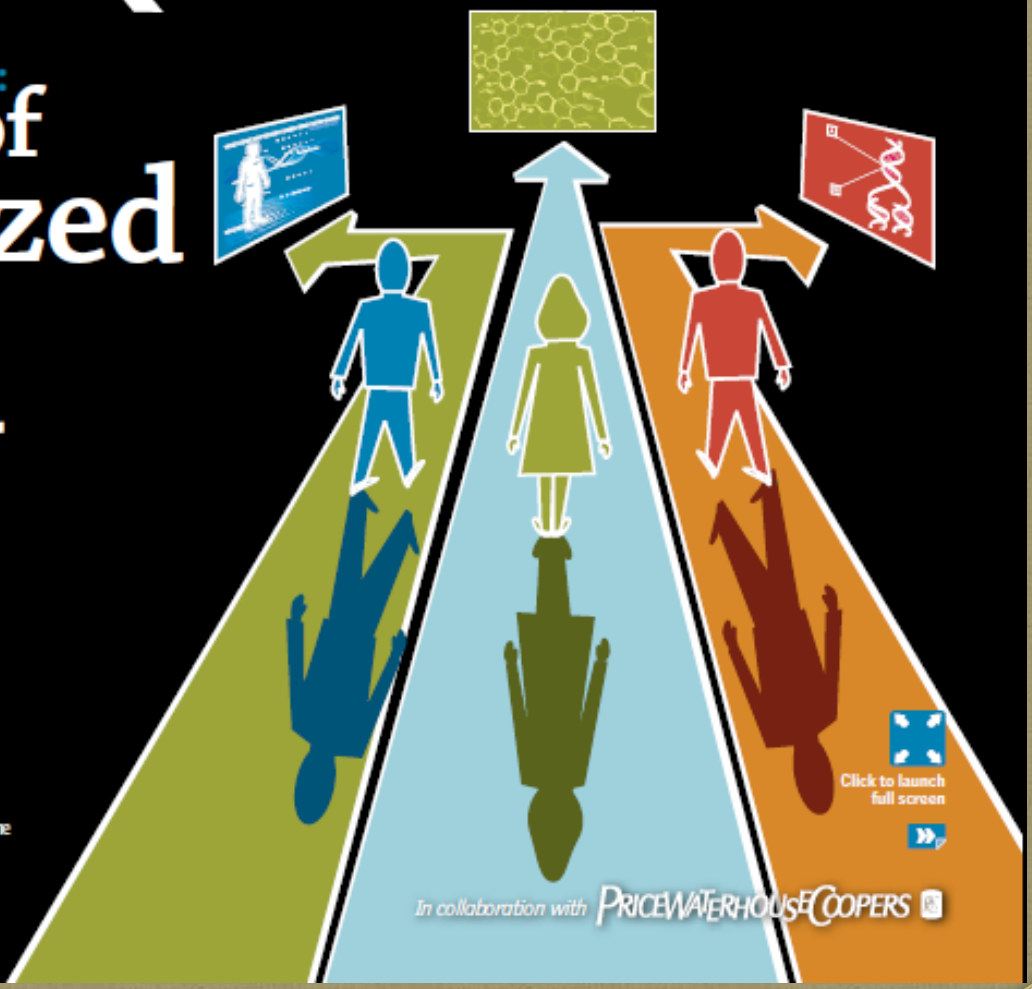
The Ohio State University Medical Center 18
Case Study 2

Partners HealthCare 24
Case Study 3

Vanderbilt University Medical Center 28
Case Study 4

Roundtable 33
The Promise of Personalized Medicine

Executive Summary 45



What is individualized treatment?

- Individualized care is achieved when
  - The right evaluative tests are ordered and the results are interpreted the right way
  - Treatment decisions determined by evidence-based clinical indications that address expected net benefit
  - Decision quality is high: the patient is adequately informed, satisfied with the process, and her preferences are incorporated into the decisions

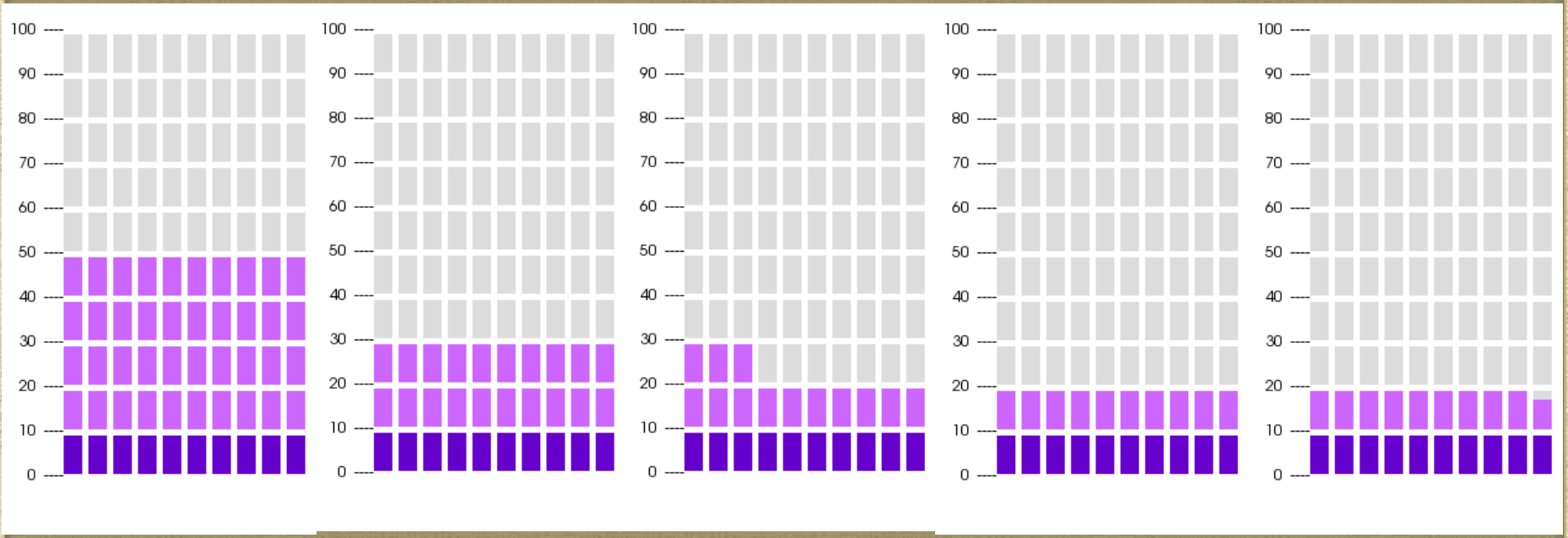
Focus on the clinical encounter

- Two thirds of women report that all treatment decisions are made by the end of the first encounter
- The encounter is intense
  - Meeting doctors for the first time
  - Immediate appraisal of rapport trust affinity
  - Unstructured communication process
  - Complex array of interconnected treatment options
  - Increasingly complex evaluative information
- Influencing the outcomes of these encounters is very challenging

Challenges to the patient: Ms. Landry

- 60 yr old principal
- Abnormal mammogram
- Core biopsy:
- invasive breast cancer,
- low grade tumor,
- ER positive, HER2 negative
- Surgical path: 2 cm tumor, SN negative.

Net benefits of treatments in favorable prognosis scenario



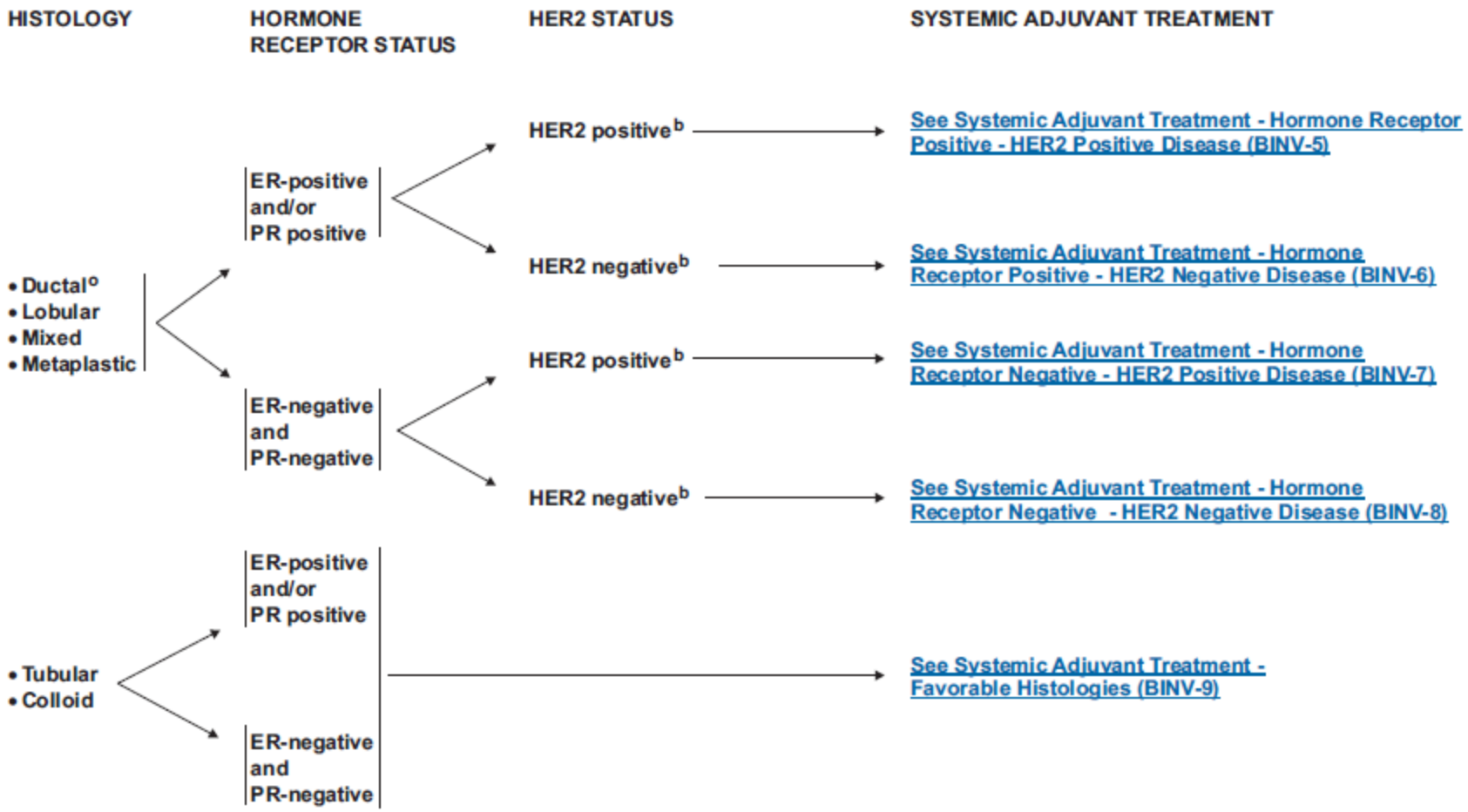
Breast Cancer: distant spread or death at 10 years

Death from other causes 10% at 10 years

NCCN® Practice Guidelines in Oncology – V.2.2010

Invasive Breast Cancer

Guidelines Index
Breast Cancer TOC
Staging, Discussion, References

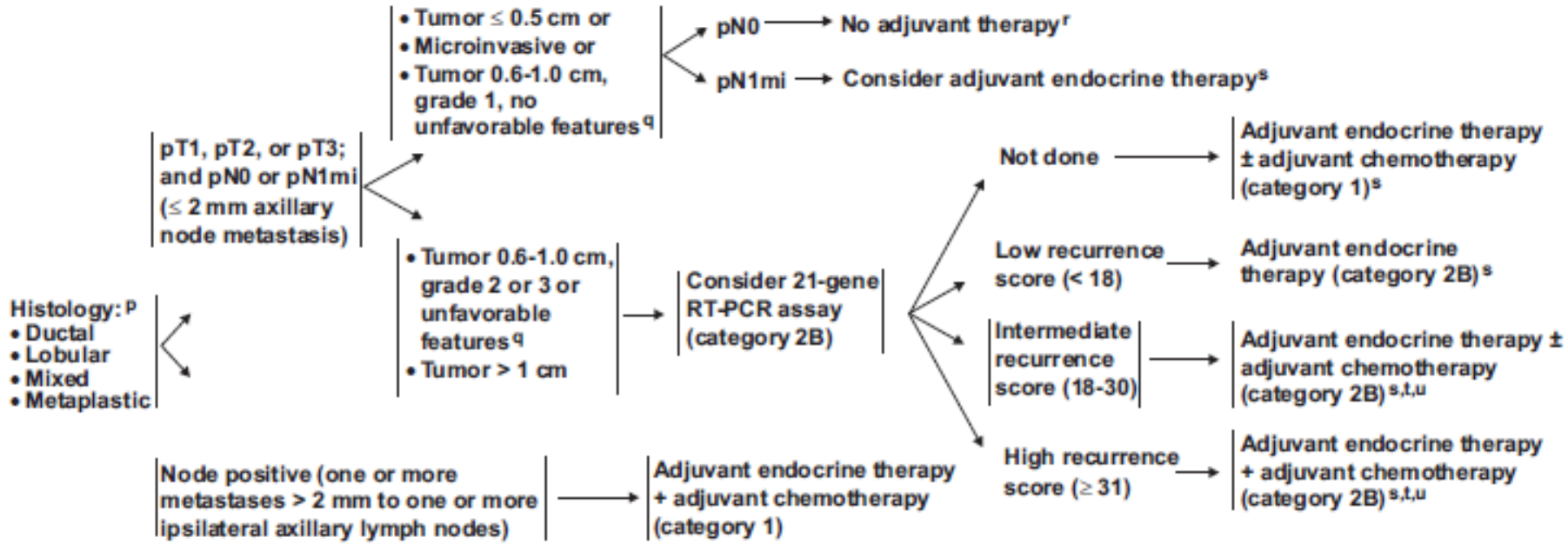


[b] See Principles of HER2 Testing (BINV-A).
[o] This includes medullary and micropapillary subtypes.

Note: All recommendations are category 2A unless otherwise indicated.
Clinical Trials: NCCN believes that the best management of any cancer patient is in a clinical trial. Participation in clinical trials is especially encouraged.

Invasive Breast Cancer

SYSTEMIC ADJUVANT TREATMENT - HORMONE RECEPTOR POSITIVE - HER2 NEGATIVE DISEASE[b]



See Adjuvant Endocrine Therapy (BINV-I) and Adjuvant Chemotherapy (BINV-J)

[b] See Principles of HER2 Testing (BINV-A).

[p] Mixed lobular and ductal carcinoma as well as metaplastic carcinoma should be graded based on the ductal component and treated based on this grading. The metaplastic or mixed component does not alter prognosis.

[q] Unfavorable features: angiolymphatic invasion, high nuclear grade, or high histologic grade.

[r] If ER-positive consider endocrine therapy for risk reduction and to diminish the small risk of disease recurrence.

[s] Evidence supports that the magnitude of benefit from surgical or radiation ovarian ablation in premenopausal women with hormone-receptor-positive breast cancer is similar to that achieved with CMF alone. Early evidence suggests similar benefits from ovarian suppression (ie, LHRH agonist) as from ovarian ablation. The combination of ovarian ablation/suppression plus endocrine therapy may be superior to suppression alone. The benefit of ovarian ablation/suppression in premenopausal women who have received adjuvant chemotherapy is uncertain.

[t] Chemotherapy and endocrine therapy used as adjuvant therapy should be given sequentially with endocrine therapy following chemotherapy. The benefits of chemotherapy and of endocrine therapy are additive. However, the absolute benefit from chemotherapy may be small. The decision to add chemotherapy to endocrine therapy should be individualized, especially in those with a favorable prognosis and in women age ≥ 60 y where the incremental benefit of chemotherapy may be smaller. Available data suggest sequential or concurrent endocrine therapy with radiation therapy is acceptable.

[u] There are insufficient data to make chemotherapy recommendations for those over 70 y old. Treatment should be individualized with consideration of comorbid conditions.

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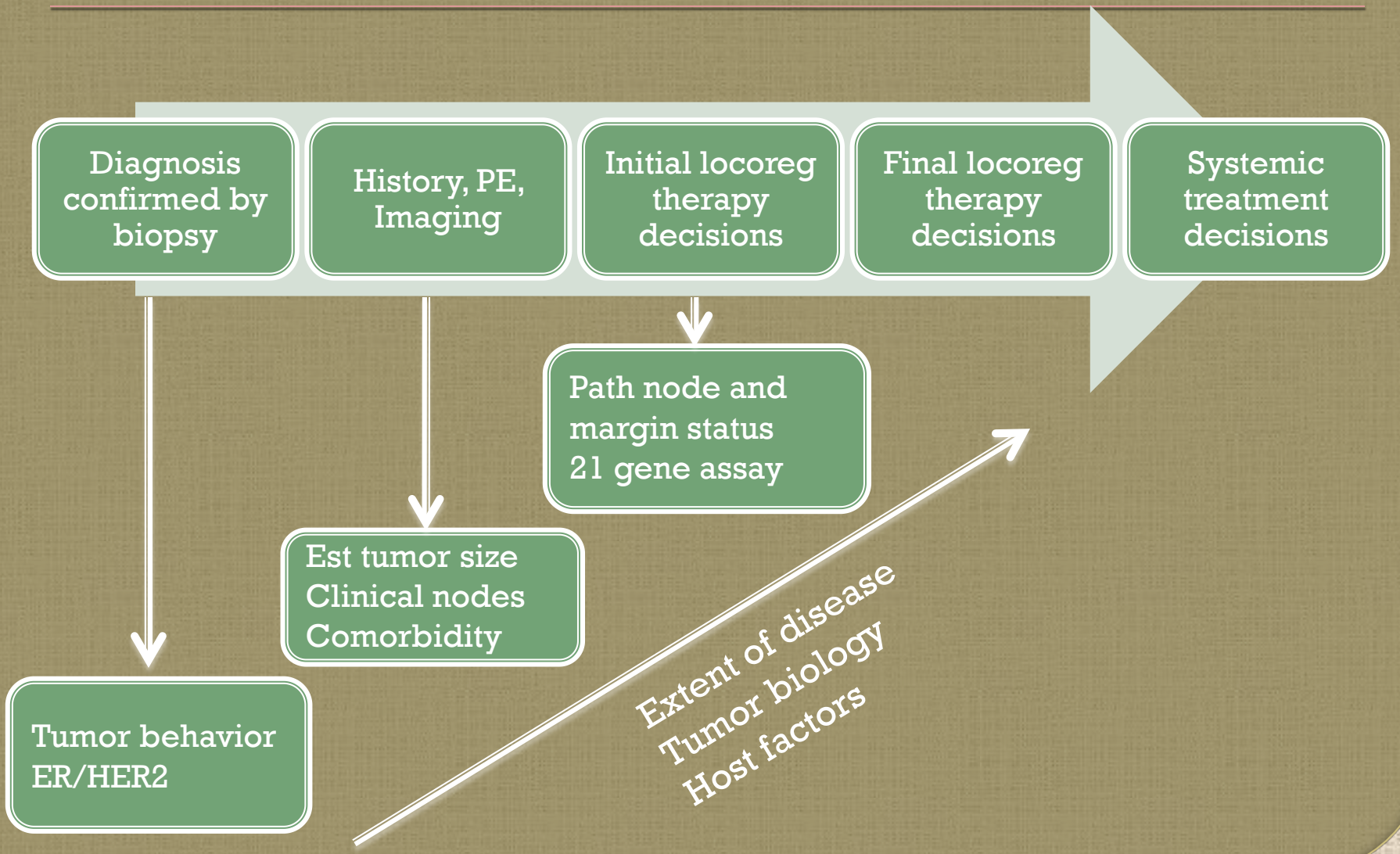
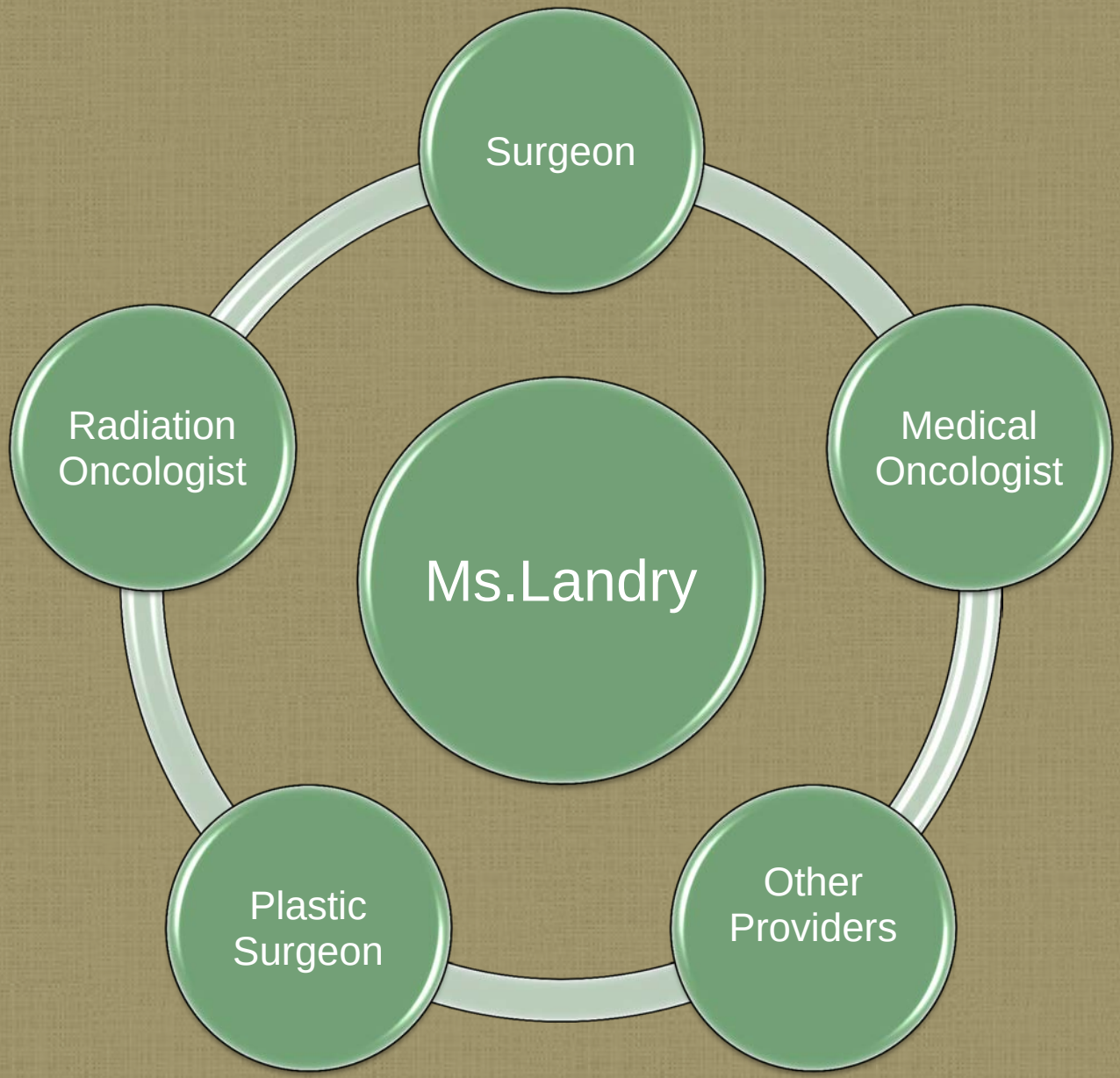
Timing of tests and treatment decisions




Surgeon
Radiation Oncologist
Medical Oncologist
Ms.Landry
Plastic Surgeon
Other Providers

Rich research agenda: Psychology and sociology of treatment decision-making

- How well is management of beast cancer individualized?
- How are decisions made regarding tests and treatments?
- How are patient preferences constructed?
- What is the role played by informal decision support people?
- What factors influence clinician attitudes and recommendations for tests and treatments?
- What is the role of professional networks?

Implementation research agenda to improve treatment decision-making

- Are deliberation tools effective in improving the individualizing of management of care?
- What content and design is most effective?
- How do we integrate tools into clinic workflow?
- How do we leverage advances in EMR to most efficiently and effectively deploy decision support?


PRIMUM
NON
NOCERE

How are treatment decisions made? The role of patient and clinicians

How are decisions made?

How are decisions made?

Rational deliberation

Intuition

Rules

Our divided selves: Two mental systems of reasoning

- Rider: controls deliberative, systematic thinking; conscious higher brain functions; slower single cylinder response
- Elephant: controls visceral and intuitive thinking; more primitive largely subconscious lower brain function; rapid fire multi cylinder responses

Jonathan Haidt. The Happiness Hypothesis. 2007

Challenges for the rider

- Limited capacity to process information
  - Understanding known probabilities
  - Considering the interplay between likelihood and (largely imagined) consequences
  - Quantifying and processing uncertainty
- We takes mental shortcuts to reduce the complexity and burden of decision-making: Heuristics and counter-factual thinking

Counter-factuals in the exam room

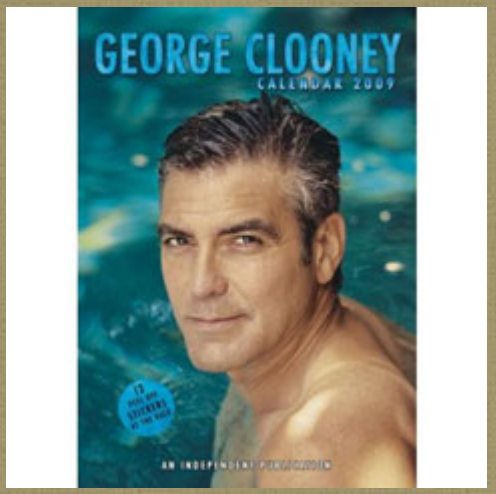
- Anticipated regret: I want chemotherapy because if I get a recurrence I will have done everything I could
- Anticipated regret is a problem because people cannot predict their reactions to future events
- Leads to more aggressive treatment decisions because it anchors on recurrence rather than net benefit of treatment

The paradox of choice

- The more choice, the less choosing
  - Decisions require more effort
  - Mistakes are more likely and their consequences more severe
  - The more options presented, the less good we feel about the option we chose
- Autonomy is valued but easily relinquished when decisions are difficult
- Going with standards or rules makes decision-making more manageable

Barry Schwartz, The Paradox of Choice. 2004

Who sets the rules and standards?



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Thank You

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