

Making Informed Decisions about Prostate Cancer Treatment

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Disclosures

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Agenda

Background and rationale for shared decision making approach

Unique properties of the decision aid in this program

Results with patients

How to discuss this decision with your doctor

How to optimize outcomes if you choose surgery

Background

AUA guidelines on localized CAP

“Counseling ... should incorporate **shared decision making** and explicitly consider cancer severity, **patient values and preferences**, life expectancy, pre-treatment general functional and genitourinary symptoms....”

(Strong Recommendation; Evidence Level: Grade A)

Shared Decision Making: Part of the solution

Shared decision making (SDM) is a process of communication in which clinicians and patients work together to make optimal healthcare decisions that align with what matters most to patients.

SDM requires three components:

- clear, accurate, and unbiased medical evidence about reasonable alternatives—including no intervention—and the risks and benefits of each;
- clinician expertise in communicating and tailoring that evidence for individual patients;
- **Patient values, goals, informed preferences, and concerns, which may include treatment burdens**

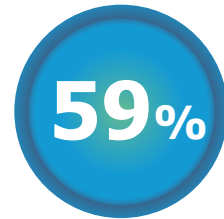
NATIONAL QUALITY FORUM

Patient reported outcomes versus “preferences”



Patient top goals for breast cancer treatment

LIVE AS LONG
AS POSSIBLE



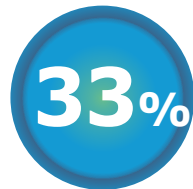
AVOID LENGTHY
TREATMENT



KEEP
BREAST



LOOK NATURAL
WITHOUT CLOTHES



MINIMIZE
RECOVERY TIME

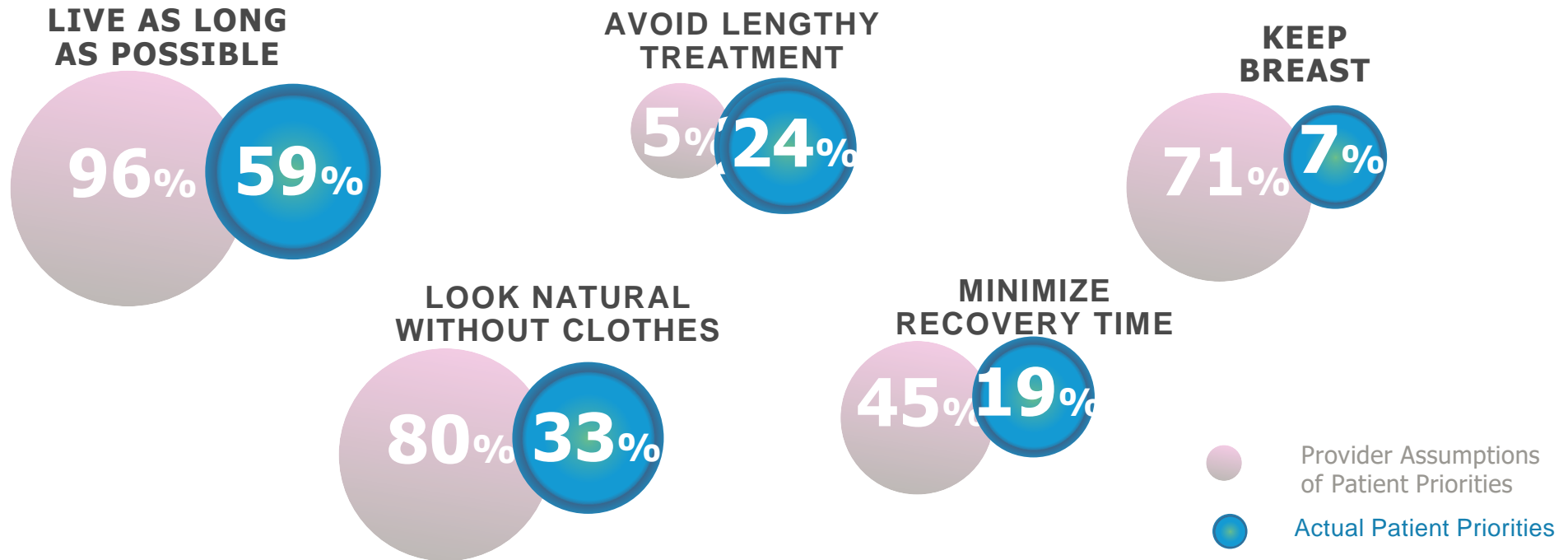


Provider Assumptions
of Patient Priorities



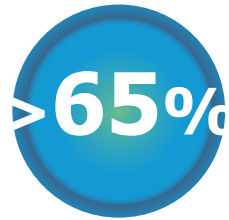
Actual Patient Priorities

Physician perception of top goals



400 million treatment choices

MISUNDERSTANDING RISKS & SIDE EFFECTS



Patients overestimate the benefits of and/or underestimate the harms of treatments and screenings



Advanced cancer patients don't understand that their chemotherapy won't cure them



Patients fully informed re: risks of over-Dx & Tx

REGRETTING DECISIONS AND THE OUTCOMES



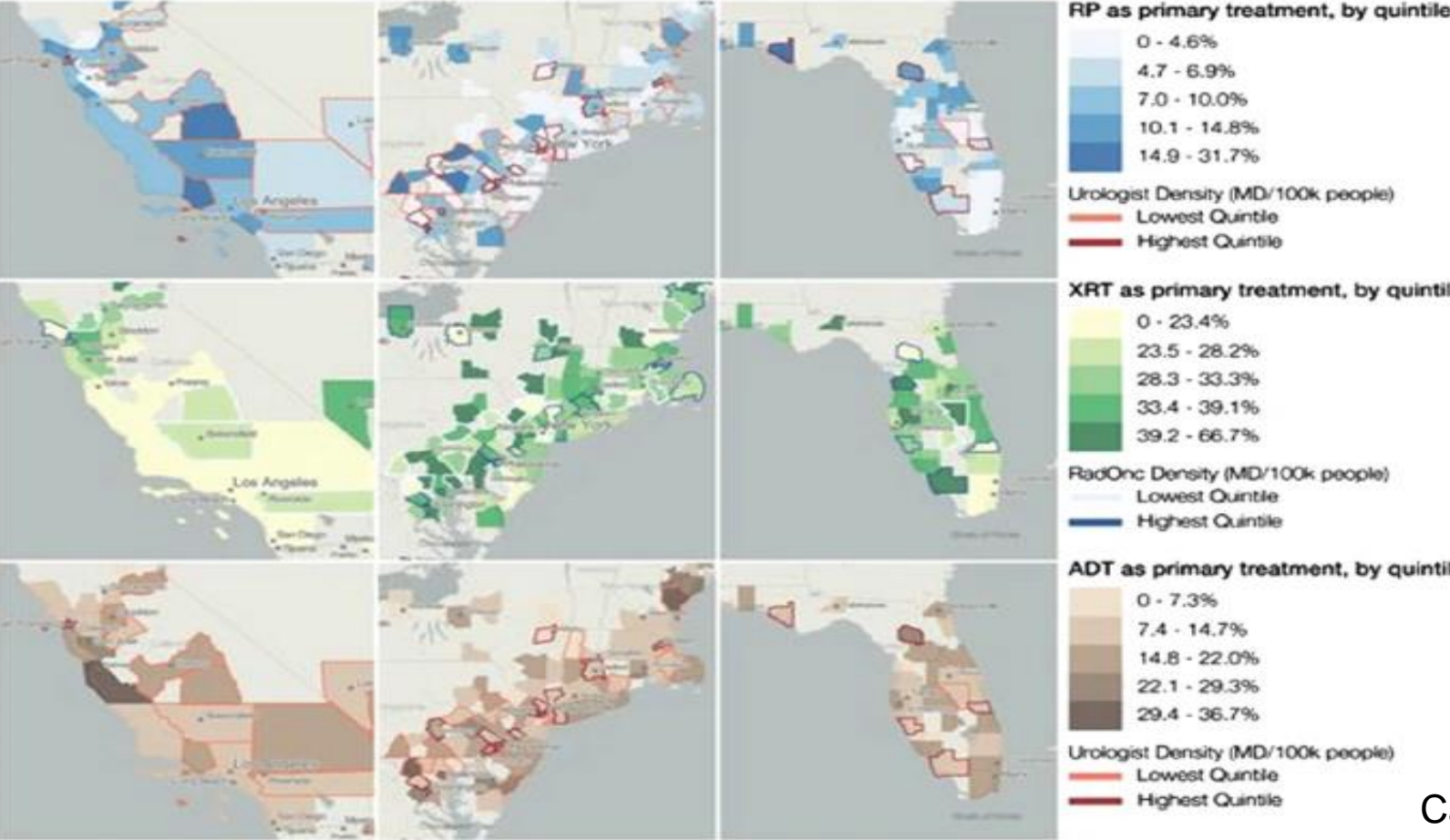
Men regret their choice of prostate cancer treatment after three years



women regret their breast reconstruction

Problem: Unwarranted Practice Variations

Primary Treatment for Prostate Cancer



Making visits better: Decision Aids

Increase patient involvement

Increase patient knowledge

Clarify values, increase concordance between values and choices

Reduce decisional conflict, regret (? lawsuits)

Preference assessment is additive to these effects

Shirk Medical Decision Making 2018

O'Connor Cochrane Collaboration 2006

Unique properties of this decision aid

Prostate cancer decision making: “Bounded rationality”?

Complex decision

Time constraints

Limits on human computational ability

“ A wealth of information creates a poverty of attention”

Can software expand these “bounds?”

Simon, Am Economic Review, 1978

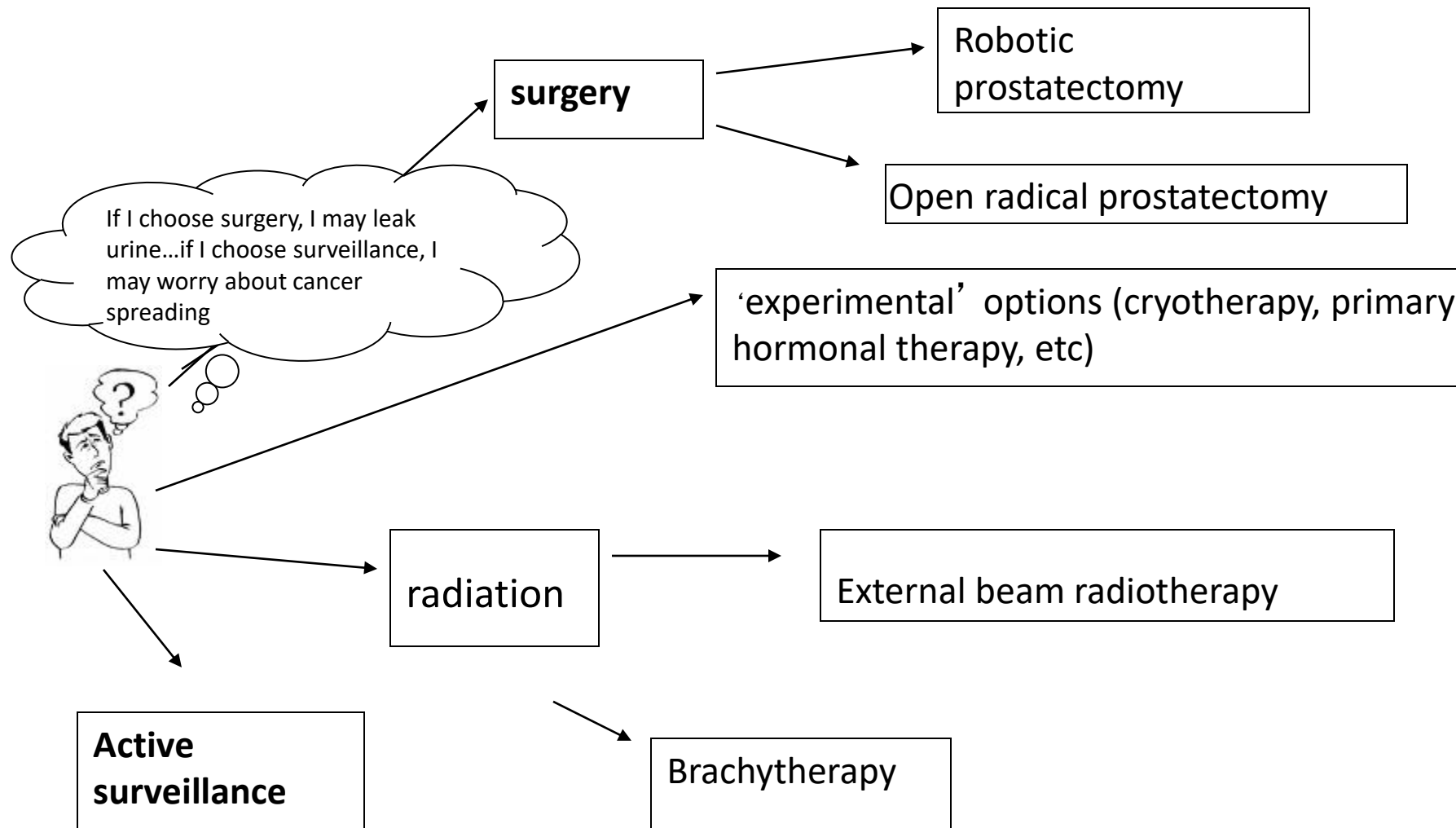
Software solution: decision analysis

“Rational model”

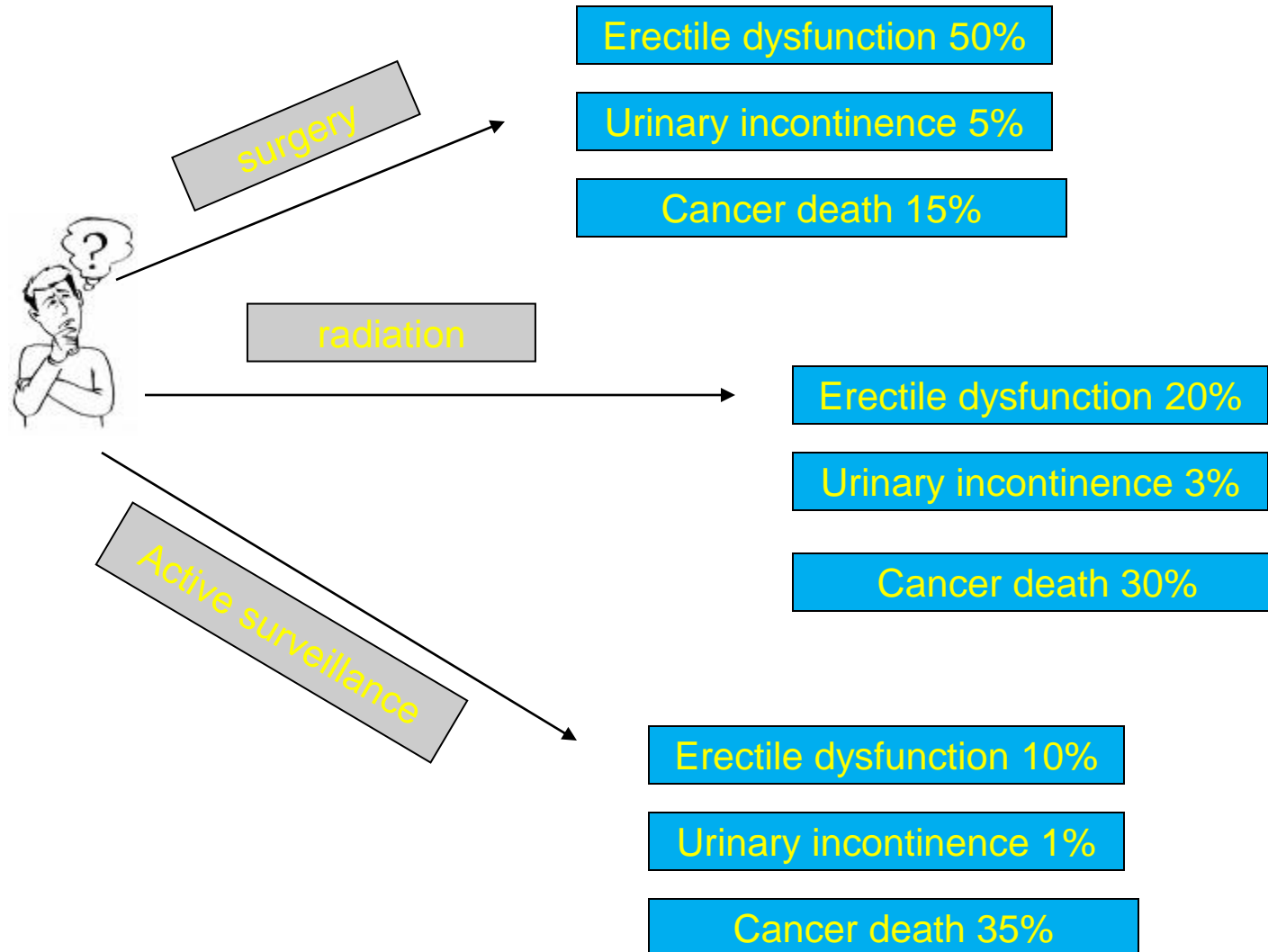
Accounts for all possible outcomes

Accounts for the probabilities of the outcomes

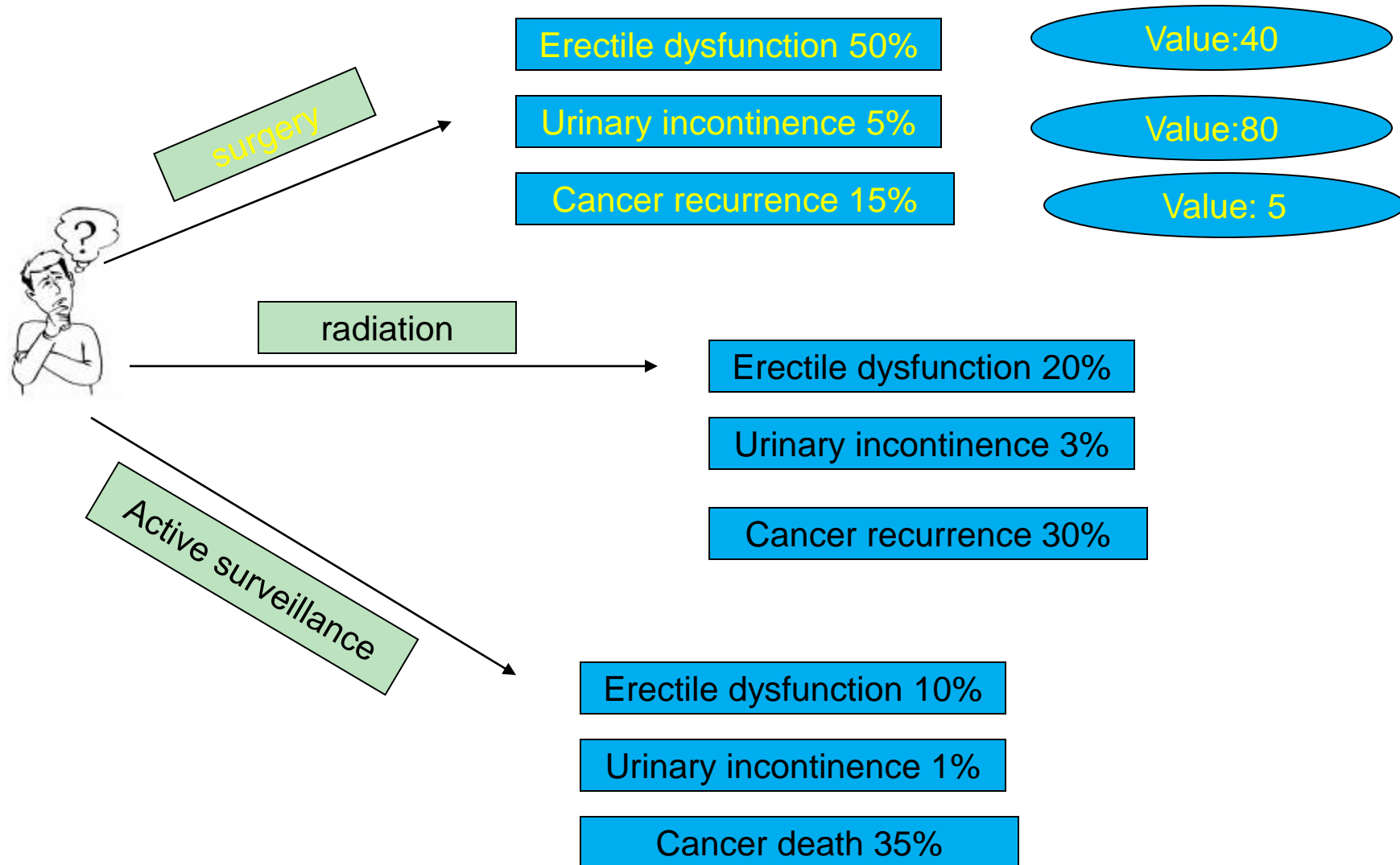
‘Weighs’ the desirability of the outcomes



Possible solution: decision analysis



Incorporating patient preferences

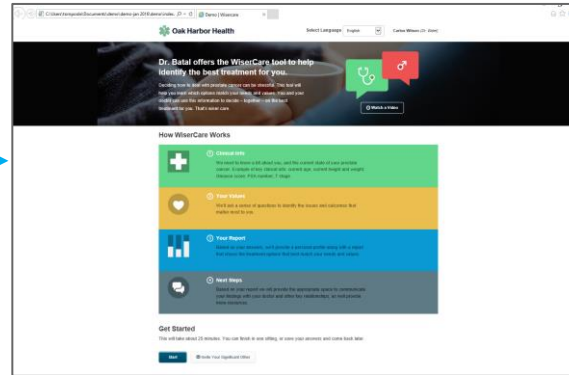


Workflow: Typical Patient/Physician Use

Before/Between Visits

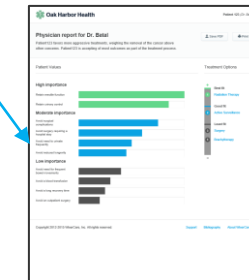
WiserCare is “prescribed” to a patient

- prior to or between clinic visits
- for a given medical condition
- with clinical inputs



WiserCare Online Patient Experience

WiserCare Patient Report



WiserCare Care Provider Preference Report

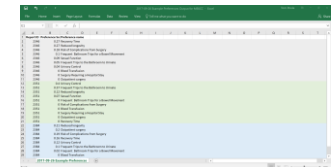
Visit or Treatment Consultation & Decision



WiserCare Reporting



CareConnect



Population Preference Data

Clinical Input

In order to determine which treatment options have the best chance of helping you, we need some information about your prostate cancer diagnosis. We will use the results from several medical tests that your doctor should have ordered for you. Note: PSA and Gleason score are important to get the most personalized, accurate experience.

What is your PSA?

[more info](#) ⓘ

·

What is the Gleason score?

[more info](#) ⓘ

+ =

What is the T-stage of your cancer?

[more info](#) ⓘ

- T1
- T2
- T3
- T4

What is your age?

What is your race?

- Black
- White
- Hispanic
- Asian
- Mixed Race

What is your weight?

pounds or kilograms

What is your height?

feet inches or centimeters

Quantifying Patient Preferences Prior to the Visit

Which of these outcomes is more acceptable to you?

Which of these outcomes is more acceptable to you?

Which of these outcomes is more acceptable to you?

1 year after treatment, your erections are much less frequent and / or firm than they are today.

AND

You live at least 15 years.

OR

1 year after treatment, you can have erections like you do today.

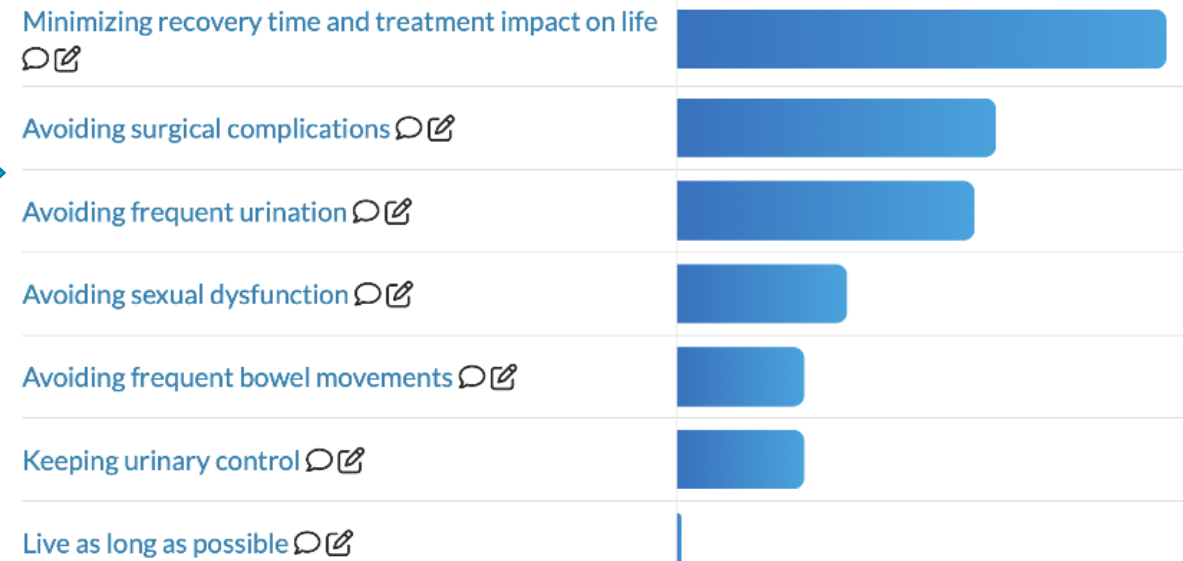
AND

You live for 10 years.

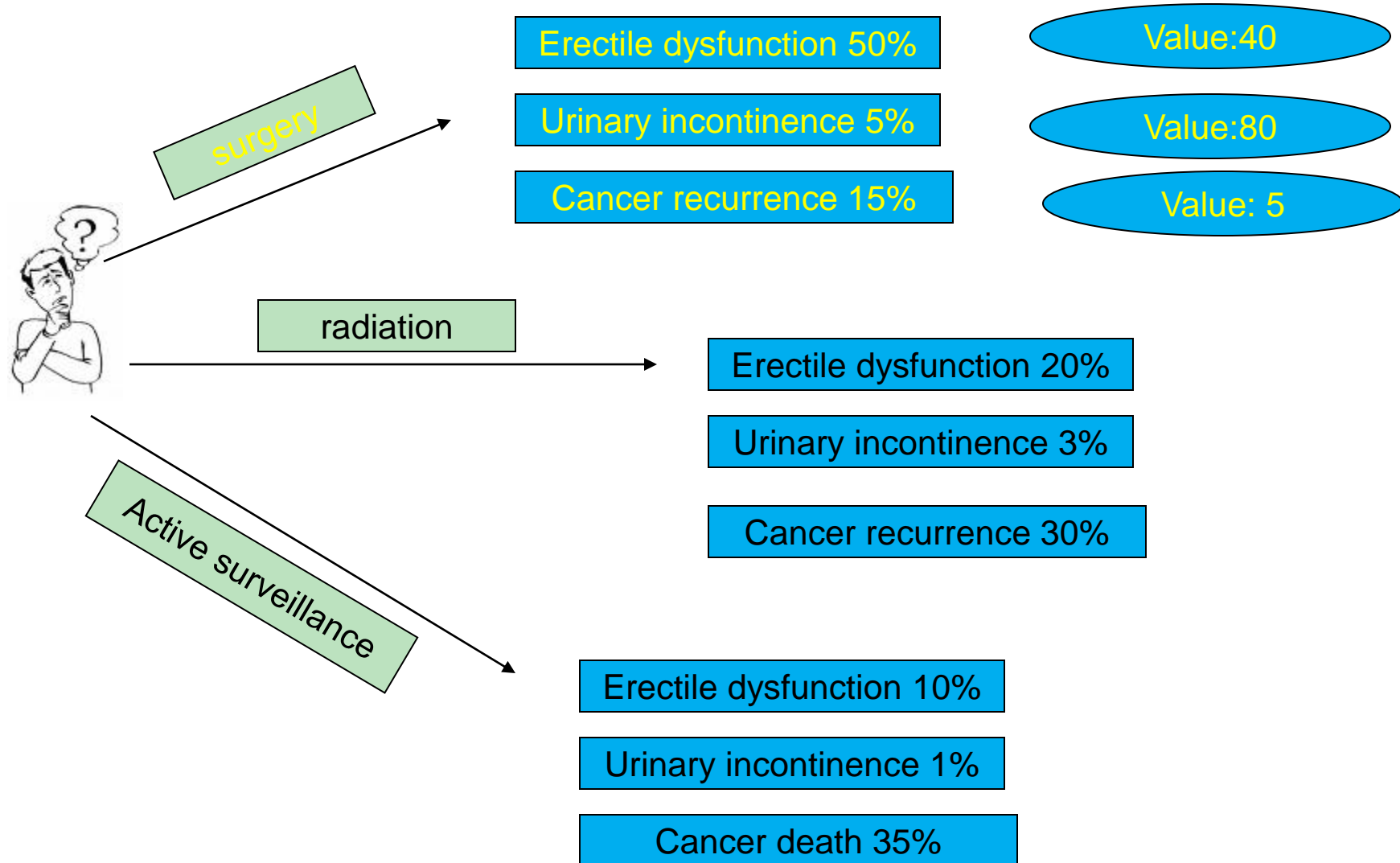


Question 1 of 13

The profile below is based on your answers in the last section. Your doctor will get a copy. This helps you and your doctor focus on what you care about most and ensures you get the right care for you.



Incorporating preferences



Your Personalized Treatment Fit

We think these treatments might be a good match given your diagnosis and your personal values. Treatments higher in this list are more likely to meet your needs than treatments lower in this list.



1

[Surgery](#)

Radical prostatectomy is a surgery that involves removing the prostate and seminal vesicles. Usually, as part of the surgery, the surgeon also performs a removal of nearby lymph nodes, called a lymphadenectomy. Radical prostatectomy can be done using assistance from a surgical robot (robotic prostatectomy) or via the traditional technique using only the surgeon's hands (open radical prostatectomy).

2

[External Beam Radiation Therapy](#)

Radiation therapy kills prostate cancer cells by damaging the cancer cell's DNA and inducing "programmed cell death." Radiation therapy can be delivered by several techniques, including ones that rely on traditional x-ray energy and ones that rely on protons to deliver energy. Radiation is painless, but must be carefully directed to avoid damaging normal tissue.

3

[Brachytherapy](#)

Radiation therapy kills prostate cancer cells by damaging the cancer cell's DNA and inducing "programmed cell death." Brachytherapy is a method of delivering high-dose radiation therapy using radioactive pellets (or "seeds"). There are some brachytherapy systems that do not leave seeds in the prostate but instead have them in a temporary container. A second container is placed in the prostate to deliver the radiation therapy.



Are you interested in these treatments?

Surgery

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[Learn More](#)

Is Surgery a treatment option you are interested in?

Yes No I don't know I'd like to talk to my doctor about this

External Beam Radiation Therapy

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[Learn More](#)

Is External Beam Radiation Therapy a treatment option you are interested in?

Yes No I don't know I'd like to talk to my doctor about this



Single center results: Decision Quality

WiserCare: Results in 109 men with prostate cancer

Reduction in Decisional Conflict by 37% , proportion with high conflict 25%→8% (p<0.0001)

Improvements in satisfaction with care, intention to stick with decision (85%→97%), decision satisfaction (79%→92%) (p<0.001)

Improvements in “knowing all options” and “able to discuss all options with MD”

Net Promoter score 63%→89%

Johnson JU 2016

Saigal unpublished data

Implementation across diverse settings

PCORI goals

Learning how to scale effective SDM programs

Getting PCORI funded comparative effectiveness data to patients

How to get PCORI data to patients?

PCORI- funded 3 year project to assess CE of prostate cancer treatments using population based data

Reflects modern treatment modalities

Racial variation in outcomes: African Americans with worse 1 year urinary continence outcomes

Potency rates after surgery: AMC, 86% CEASAR, 43% (1)

17 year lag from publication to practice(2)

How to get these data out there for patients?

Barocas 2017 (1)

Westfall 2007 (2)

How do you scale an effective shared decision making program?

RE-AIM framework to estimate public health impact

Reach (proportion of the target population that participated in the intervention)

Effectiveness (success rate if implemented as in guidelines; defined as positive outcomes minus negative outcomes)

Adoption (proportion of settings, practices, organizations and plans that will adopt this intervention)

Implementation fidelity (extent to which the intervention is implemented as intended in the real world)

Maintenance (extent to which a program is sustained over time)

The Consolidated Framework for Implementation Research (CFIR) used to predict and study organizational features in the 3 health systems that can affect RE-AIM outcomes

Effectiveness

Decision Quality

Treatment choice in men with low risk disease

Expansion sites

Olive View Medical Center- County hospital with large number (55%) of Hispanic patients, lower socioeconomic status than seen at UCLA (mean annual income <\$10,000)

Vanderbilt University Medical Center- Academic medical center with no EMR integration, also more diverse population than UCLA (double the representation of Black patients)

Study outcomes

Reach (proportion of the target population that participated in the intervention) : 80% (1,961 men invited to use)

Adoption (proportion of settings, practices, organizations and plans that will adopt this intervention): 100%

Implementation fidelity (extent to which the intervention is implemented as intended in the real world) : 58% (1,137 men completed)

Maintenance (extent to which a program is sustained over time): 100%

Effectiveness

Net Promoter Score: physician 82%, healthcare system 74%

Decisional Conflict Score after visit: median (IQR) 1.6 (0-10.9)

---Values Clarity : 0 (0-25) Effective Decision: 0 (0-18.8)

Satisfaction with Cancer Care: median (IQR) 93.8 (81.3-100)

Visit efficiency

Median time spent with physician

- 24 minutes after implementation vs 33 minutes pre-implementation, $p=0.01$

Patients needing more than one urology clinic visit to make a treatment decision

- 13% after vs 46% before, $p<0.001$

Physician Wins

High Net Promoter Scores

Probably better patient adherence to plan

More efficient visits

Subgroup analyses

9% of men still had difficulty making a decision after using the program (DCS score >37)

No difference by age, language preference or cancer risk

These men reported lower satisfaction with care, and had much higher proportion of “detractor” ratings for physician and hospital

Qualitative work indicated to understand how doctor patient relationship interacted with effectiveness of SDM program

Conclusions

Successful scaling of a shared decision making program across a diverse patient population is feasible using the tools of implementation science

Software based shared decision making aids can be used to increase the effective impact of newly published clinical data

Such programs can result in excellent decision quality outcomes for patients and benefits for physician practice

How to speak with your doctor about making this decision

Don't make the right decision;
make the decision right.

Ellen Langer, PhD

Optimizing outcomes if you decide on surgery for prostate cancer

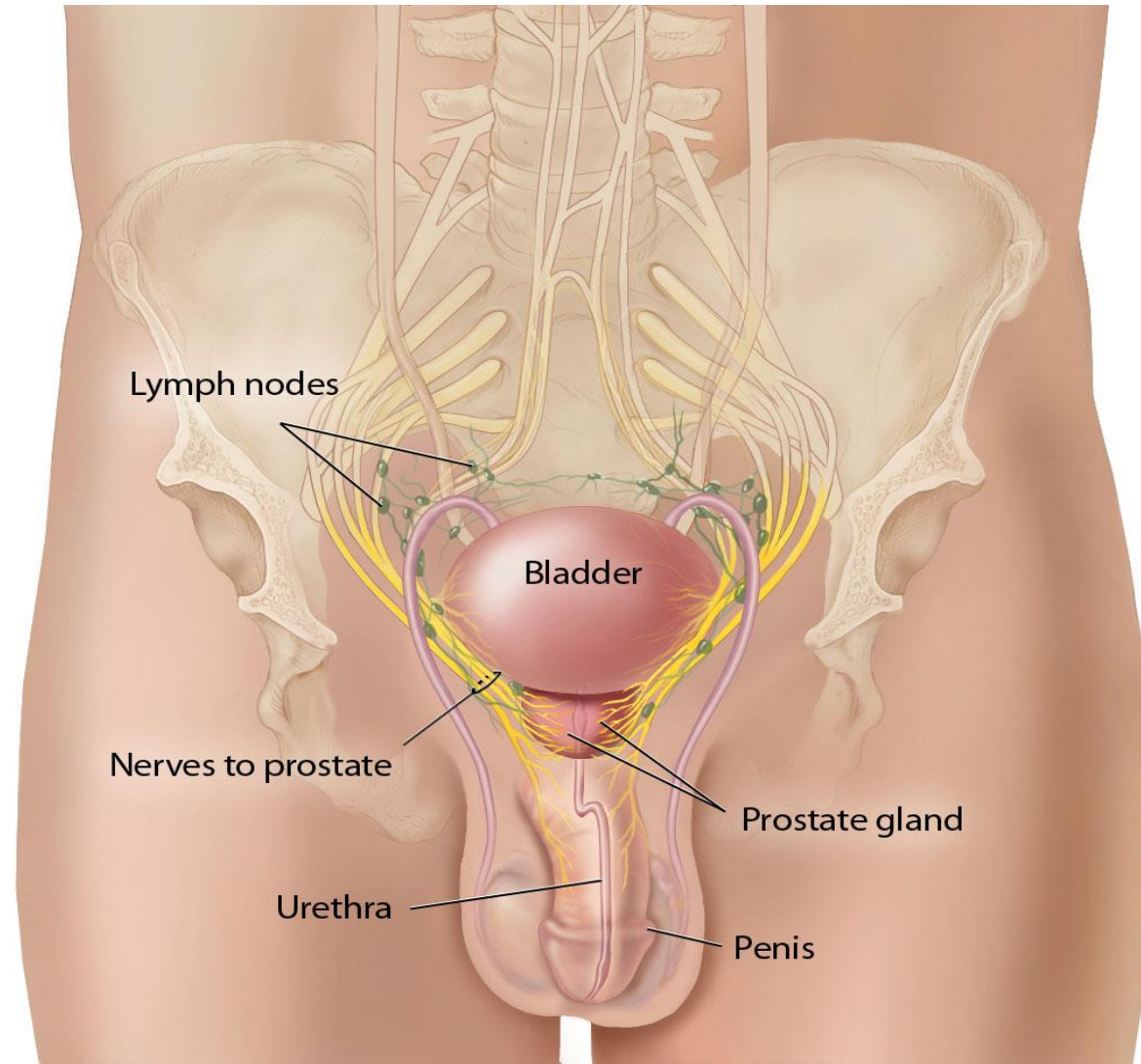
So you have decided on surgery for prostate cancer...

Men have many competing goals of treatment:

- Return to their sexual health baseline
- Maintain urinary control
- Cancer free
- Get back to normal life as soon as possible

How can you maximize your chances?

Why is this so complicated?



Sexual Health

Several factors come into play:

Things you can't control:

- Baseline sexual health
- Other medical conditions (diabetes, high blood pressure)
- Age

Things you may be able to impact:

whether “nerve sparing” is possible,
post treatment rehabilitation approach, surgeon experience,

Is nerve sparing possible?

Typically determined based on physical exam, risk calculators, and during surgery

Pre-operative prostate MRI may be able to offer better planning

“meta analysis” of 9 studies on this topic found that pre operative MRI changed the nerve sparing plan overall in about a third of cases

One study found that one in four patients who had nerves taken could probably have one spared due to MRI that suggested organ-confined disease

Penile “rehabilitation”

This is a formal program to maximize recovery of sexual health after surgery

Men start with low dose PDE-5 inhibitor, vacuum devices, or injections on a protocol after surgery

One meta analysis of 11 studies found that these protocols improved the proportion of men who “improved” in their erectile function by a factor of 2

Data are less clear on whether this impact allows better spontaneous erections

“Pre-habilitation” of benefit?

Surgeon volume

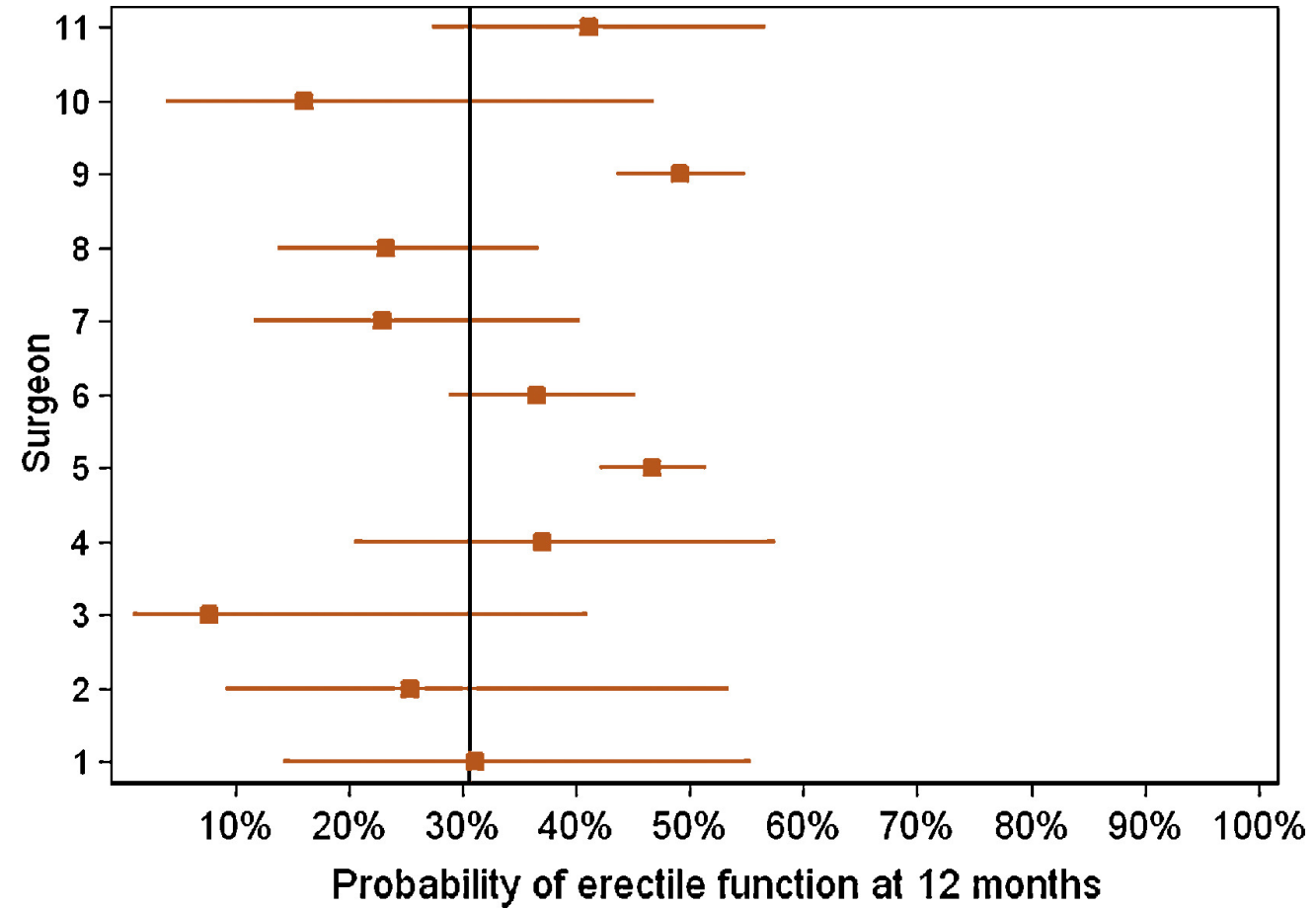
Complex topic: generally, more is better, but volume is not always a measure of better surgeon. 8% of high volumes surgeons were in the top 1% of surgical complications in one study.

Memorial Sloan Kettering did a careful study of sexual health and urinary health outcomes and volume, and found an improvement in surgeons with higher (100 cases) vs lower volume

Some evidence that surgeons with good sexual health outcomes had better urinary health outcomes, and no sacrifice in cancer control

But...

Variation of sexual function outcomes by surgeon



Urinary control

After surgery, it takes time for the external sphincter muscle to heal

Newer surgical approaches (Hood sparing, Retzius sparing) can improve early continence rates

Kegel exercises are the mainstay of treatment

Protocols vary

Patients who follow a protocol are more likely to recover early, and overall more likely to recover urinary control

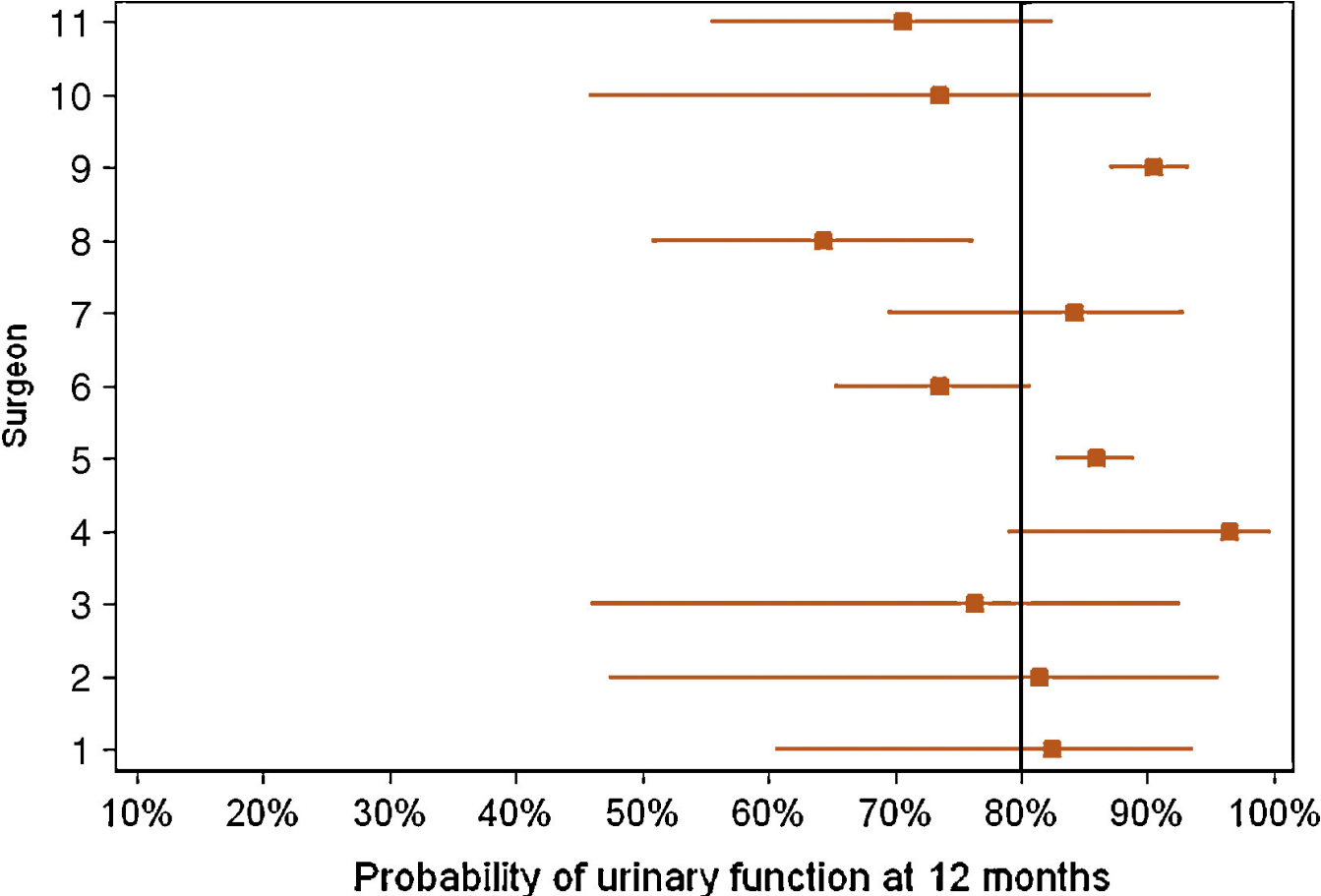
Urinary control

Weaker evidence supports:

starting Kegel's *before* surgery

biofeedback

Variation in urinary function



Cancer control

Surgeon experience matters

One large study of ~8,000 patients treated by 72 surgeons found that results plateaued after 250 cases (18% recurrence rate with surgeons with lower experience vs 11 % with highest volume experience)

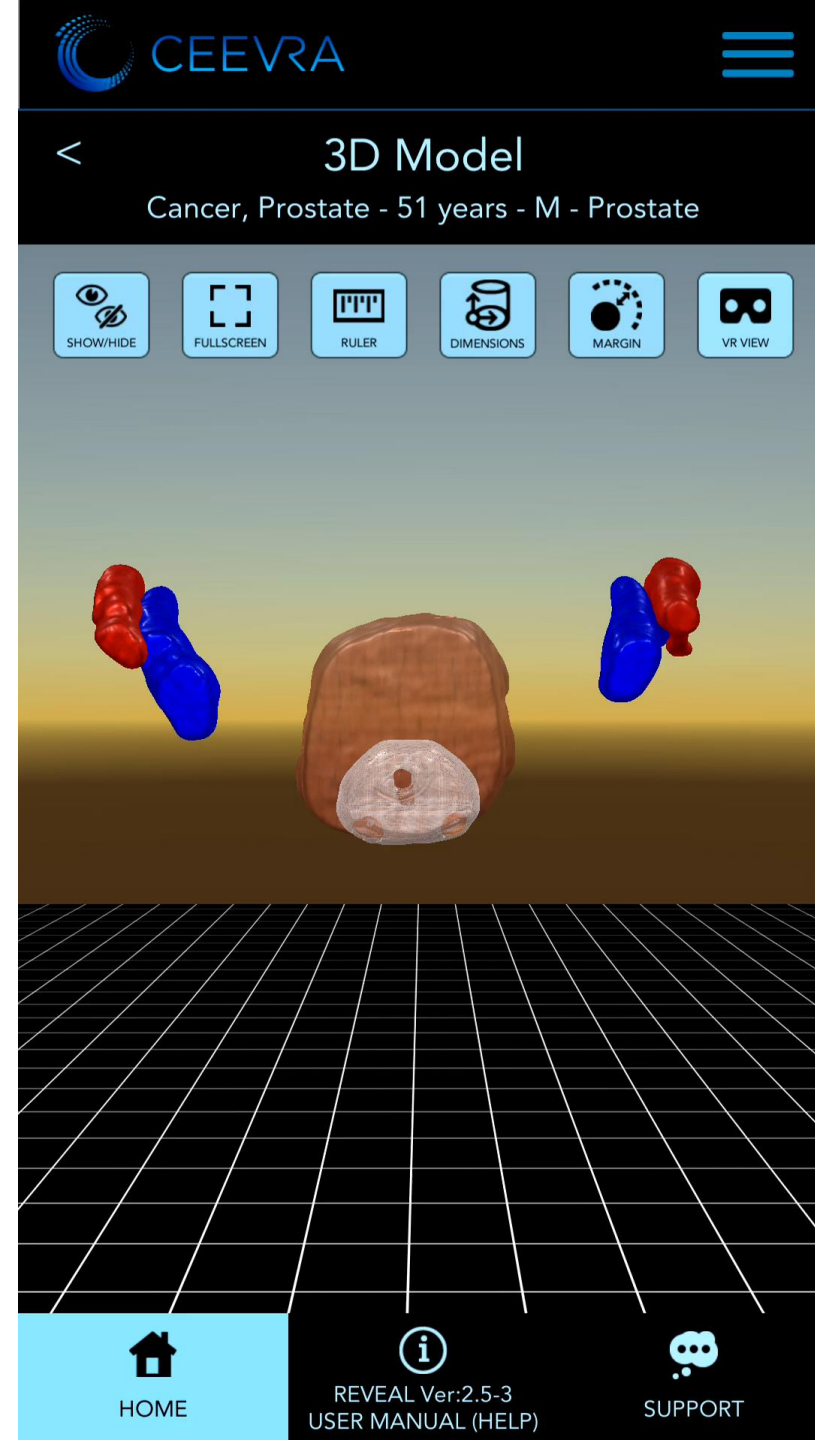
Confirmed in several meta analyses

How do you select a surgeon?

3D Virtual reality intraoperative guidance: the future?

In patients with *kidney* tumors:

- Reduced operative time
- Reduced blood loss
- Fewer complications
- Improved tumor margins
- Shortened hospital stay



Getting home and back to normal

Blood loss: less with robotic surgery

Opioids: One large study found that $\frac{3}{4}$ of post op pain meds were never used

84% of patients required less than 15 narcotic pain medication tablets (e.g. oxycodone)

Opioids are constipating, addicting, cause lethargy

Questions?