# Breakthroughs in Diagnosing Prostate Cancer

Carolyn Fronczak, MD, MSPH
Urologist, Boulder Medical Center
303-731-3674

Stephen Siegel, MD
Urologist, Boulder Medical Center
303-997-3624

Boulder Community Health

Boulder Medical Center

# Topics to Cover

Boulder Community Health

- Multidisciplinary approach to prostate cancer
- Epidemiology - incidence and risk factors
- PSA screening
- Elevated PSA, now what??
- Noninvasive testing before biopsy
  - MRI
  - Genomic markers
- Additional prostate evaluation if no prostate cancer
- Diagnosis - Gleason score, Grade, Stage
- Treatment Options

Boulder Medical Center

Boulder Medical Center + Rocky Mountain Cancer Centers™ =

# MULTIDISCIPLINARY APPROACH

# Multidisciplinary Approach

Boulder Community Health

- Urologists
- Radiation oncologists
- Medical oncologists
- Radiologists
- Genetic testing and counseling

Boulder Medical Center

# Multidisciplinary Approach

Boulder Community Health

- Significant Benefits
  - Improved outcomes
  - Shared decision making
  - More patient satisfaction with treatment decision
  - Offer multimodal therapies

Boulder Medical Center

# Topics to Cover

Boulder Community Health

- Multidisciplinary approach to prostate cancer
- Epidemiology - incidence and risk factors
- PSA screening
- Elevated PSA, now what??
- Noninvasive testing before biopsy
  - MRI
  - Genomic markers
- Additional prostate evaluation if no prostate cancer
- Diagnosis- Gleason score, Grade, Stage
- Treatment Options

Boulder Medical Center

# Prostate Cancer

Boulder Community Health

## #1 cancer

**Estimated New Cases**

| | | Males |
|---|---|---|
| Prostate | 248,530 | 26% |
| Lung & bronchus | 119,100 | 12% |
| Colon & rectum | 79,520 | 8% |
| Urinary bladder | 64,280 | 7% |
| Melanoma of the skin | 62,260 | 6% |
| Kidney & renal pelvis | 48,780 | 5% |
| Non-Hodgkin lymphoma | 45,630 | 5% |
| Oral cavity & pharynx | 38,800 | 4% |
| Leukemia | 35,530 | 4% |
| Pancreas | 31,950 | 3% |
| **All Sites** | **970,250** | **100%** |

## #2 killer

**Estimated Deaths**

| | | Males |
|---|---|---|
| Lung & bronchus | 69,410 | 22% |
| Prostate | 34,130 | 11% |
| Colon & rectum | 28,520 | 9% |
| Pancreas | 25,270 | 8% |
| Liver & intrahepatic bile duct | 20,300 | 6% |
| Leukemia | 13,900 | 4% |
| Esophagus | 12,410 | 4% |
| Urinary bladder | 12,260 | 4% |
| Non-Hodgkin lymphoma | 12,170 | 4% |
| Brain & other nervous system | 10,500 | 3% |
| **All Sites** | **319,420** | **100%** |

Boulder Medical Center

Siegel RL, CA Cancer J Clin. 2021 Jan;71:7-33.

# Risk Factors

Boulder Community Health

- Male gender and older age
- Family history
  - Father w prostate ca 2x more likely
  - Brother w prostate ca 4x more likely
  - Father and brother w prostate ca 8x more likely
- Ethnicity
  - African Americans 1.6 x more likely to have disease
  - Americans 2.2 x more likely to die of disease

Boulder Medical Center

# Risk Factors

Boulder Community Health

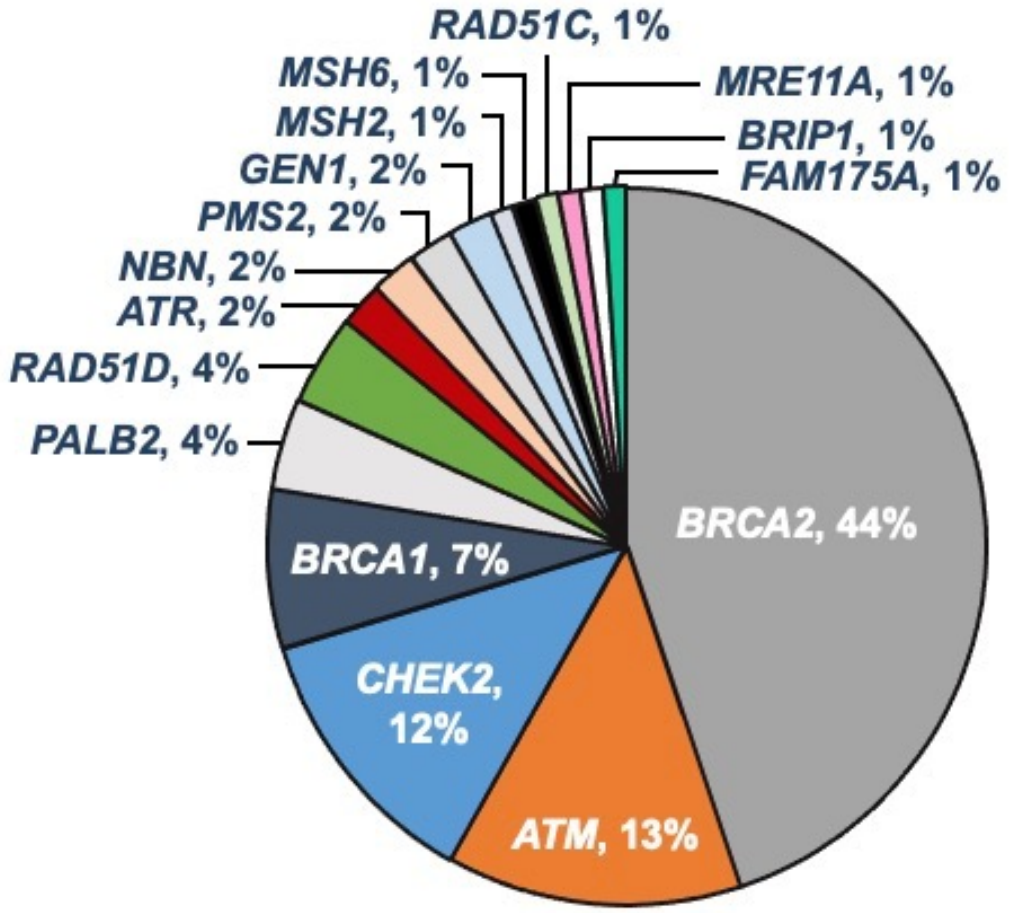
- Family history
- Cancers
  - Metastatic prostate cancer
  - Ovarian cancer
  - Male or female breast cancer
  - Colorectal
  - Endometrial cancer
  - Pancreatic cancer
- Ashkenazi Jewish ancestry
- Multiple cancers in family

Boulder Medical Center

# Risk Factors

Boulder Community Health

- Germline mutations
- BRACA2
- 11.8% metastatic prostate cancer
- 6% localized high-risk prostate cancer
- 2% low-to-intermediate-risk prostate cancer
- Future = targeted treatment using PARP inhibitors




Boulder Medical Center

Pritchard CC, Mateo J, Walsh MF, De Sarkar N, Abida W, Beltran H, et al. Inherited DNA-Repair Gene Mutations in Men with Metastatic Prostate Cancer. N Engl J Med. 2016;375(5):443-53.

# Topics to Cover

Boulder Community Health

- Multidisciplinary approach to prostate cancer
- Epidemiology - incidence and risk factors
- PSA screening
- Elevated PSA, now what??
- Noninvasive testing before biopsy
  - MRI
  - Genomic markers
- Additional prostate evaluation if no prostate cancer
- Diagnosis- Gleason score, Grade, Stage
- Treatment Options

Boulder Medical Center

# What is the PSA?

Boulder Community Health

- Prostate specific antigen (PSA)
- PSA is a blood test.
- Measures the amount of PSA in the blood stream.
- Secreted by normal and abnormal prostate cells.

Boulder Medical Center

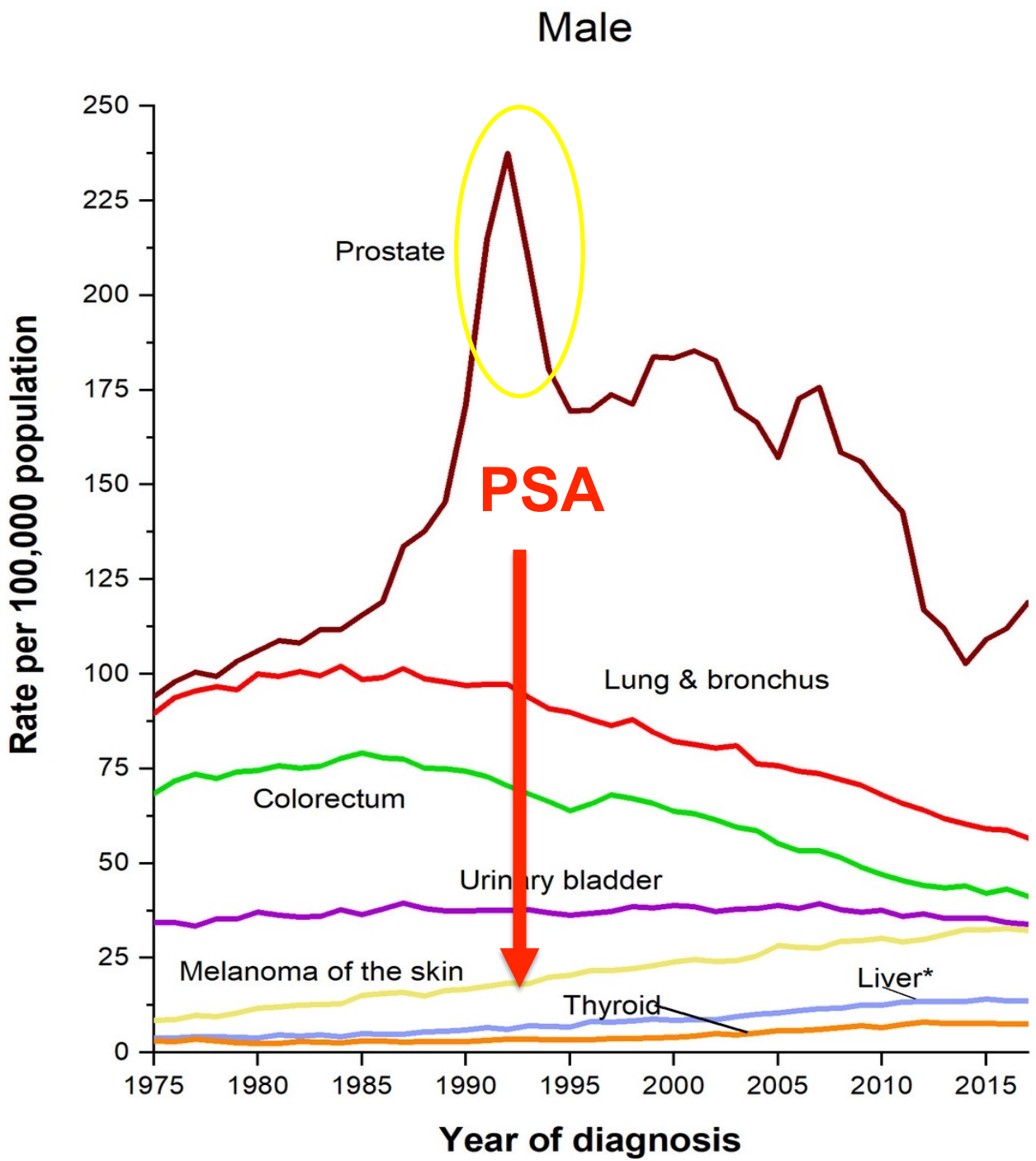
# PSA not a prostate cancer-specific marker

Boulder Community Health

- PSA can be higher in prostate cancer but also in:
  - Large prostates = Benign Prostate Hyperplasia (BPH)
  - Infections (prostatitis, urinary tract infections, epididymitis)
  - Recent ejaculation
  - Trauma
  - Recent urinary catheterization
  - Recent biking

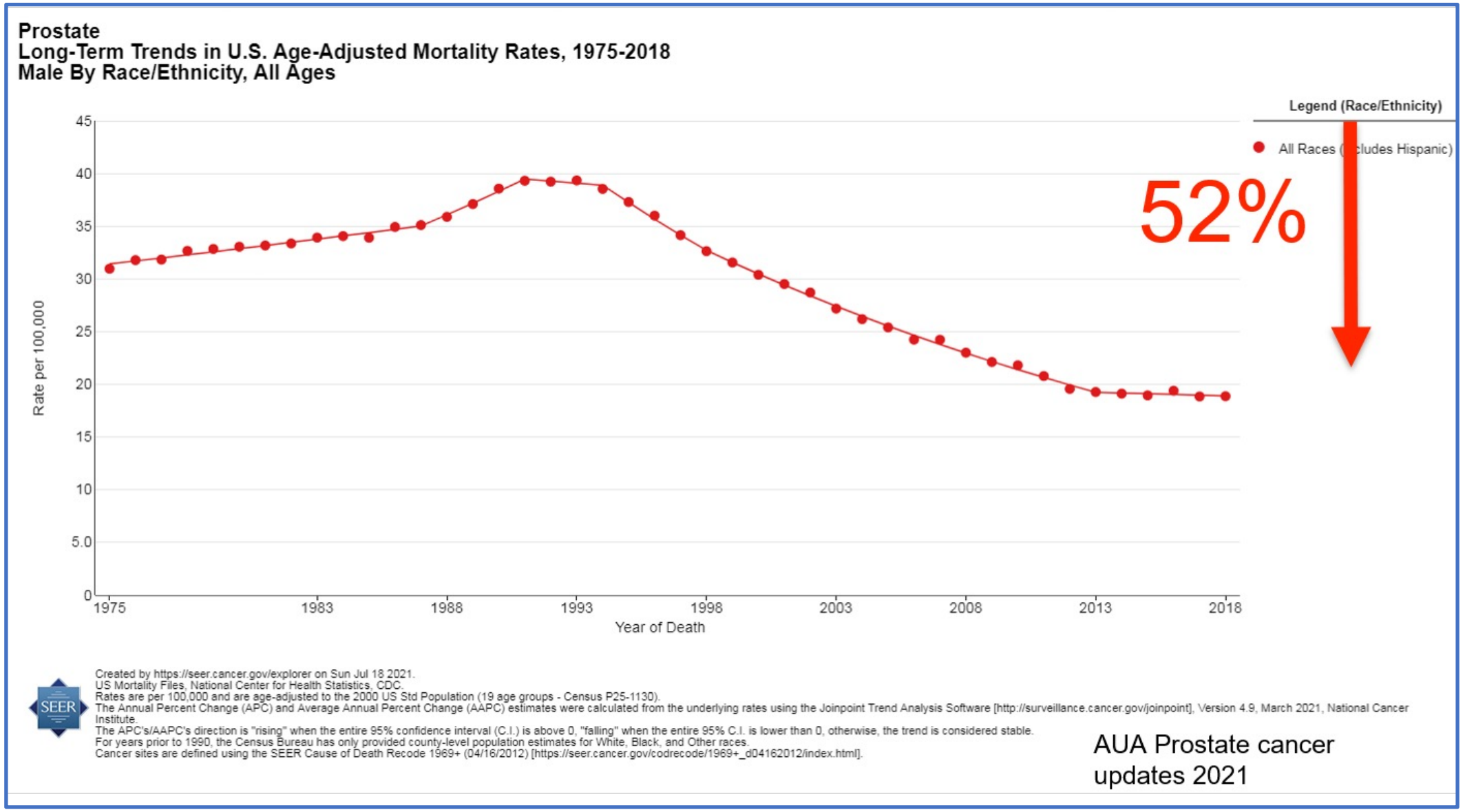
Boulder Medical Center

# History of PSA and Prostate Cancer




Siegel RL, CA Cancer J Clin. 2021 Jan;71:7-33.

# Mortality from Prostate Cancer



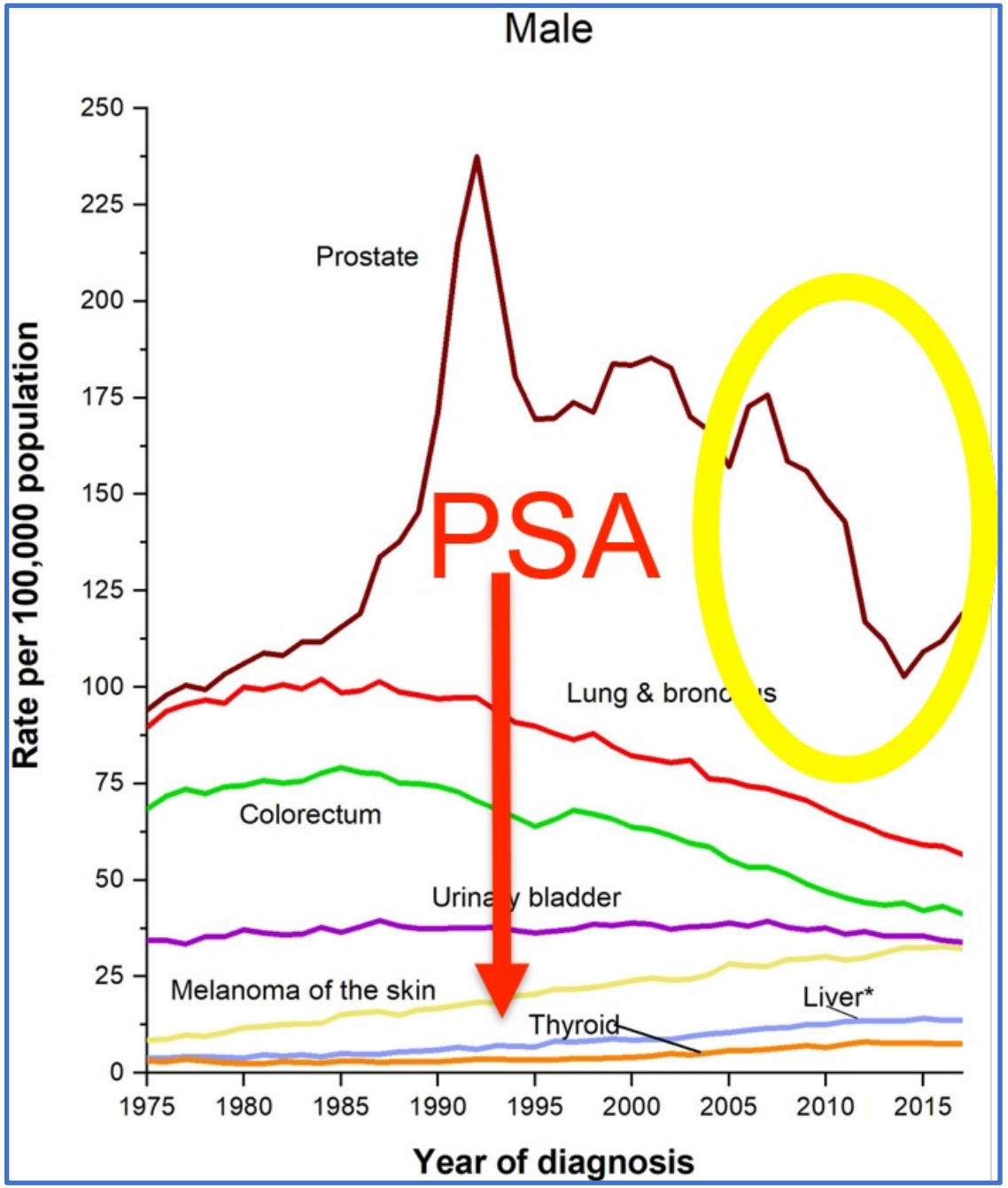
# US Preventative Task Force 2008-2012

Boulder Community Health

- Discouraged use of PSA
- Task force
  - Panel of 16 experts:
    - –family medicine, general internal medicine, nurses, obstetrician-gynecologists, occupational medicine physicians, and pediatricians.
  - **PANEL DID NOT INCLUDE UROLOGISTS OR CANCER SPECIALISTS**


Boulder Medical Center

# Incidence of Prostate Cancer



# Outcome from Task Force

Boulder Community Health

## MORE DEATHS FROM PROSTATE CANCER

Prostate cancer **DEATHS INCREASED** in 2018 for the first time in 2 decades from an estimated 26,730 in 2017 to 29,430 in 2018.

For 2022, the estimate is 34,500 deaths from prostate cancer.

Boulder Medical Center

# Revised Task Force Recommendations

Boulder Community Health

- For men >70yrs
  - USPTF continues to recommend against PSA testing.
  - **SHARED DECISION MAKING**


Boulder Medical Center

# PSA Screening Recommendations

Boulder Community Health

Age < 40

- No reason to screen.

Ages 40 - 54

- No screening if at "average risk" but you should be screened if:
  - A family history of a first degree relative (sibling or parent) with prostate, breast, ovarian or pancreatic cancer
  - African-American

Ages 55 - 69

- This is the age group where screening is ***most important***. This should be a ***shared discussion*** with your physician.

Boulder Medical Center

# PSA Screening Recommendations

Boulder Community Health

Ages > 70

- Continue screening if you are in excellent health with a 10 -15 year life expectancy, otherwise no screening is necessary.
- This should be a ***shared discussion*** with your physician.

- According to the American Cancer Society, if your PSA is:
  - less than 2.5, you can have your blood tested every four years
  - greater than 2.5, it should be done every two years

Boulder Medical Center

# Topics to Cover

Boulder Community Health

- Multidisciplinary approach to prostate cancer
- Epidemiology - incidence and risk factors
- PSA screening
- Elevated PSA, now what??
- Noninvasive testing before biopsy
  - MRI
  - Genomic markers
- Additional prostate evaluation if no prostate cancer
- Diagnosis- Gleason score, Grade, Stage
- Treatment Options

Boulder Medical Center

# Individualized Decision Making

Boulder Community Health

- Maximize detection of lethal prostate cancer in a patient with life expectancy of greater than 10 -15yrs
- Accurately characterize the biology of the tumor
- Risk stratification of the cancer
  - Minimize immediate treatment (over-treatment) of indolent cancers.
  - Proceed with treatment of potentially lethal prostate cancers.

Boulder Medical Center

# Initial evaluation

Boulder Community Health

- Digital rectal exam (DRE) + PSA
- A DRE should be done in all men with an abnormal PSA.
- If abnormal DRE and elevated PSA —
  - Positive predictive value for prostate cancer is 48.6% vs 22.4% for men elevated PSA and a normal DRE.
- Only 25% of men with PSA 4-10 ng/mL have a subsequent positive biopsy.
- If a new high PSA is observed, then repeat the test.
    - 5 days pelvic rest prior to test and at least 1 month from last PSA

Boulder Medical Center

# Abnormal DRE, normal PSA

Boulder Community Health

- Some prostate cancers do not make PSA.
- Positive predicative value of an abnormal DRE in men with normal PSA only 4%– 21%.
- BUT an abnormal DRE should be evaluated!!

Boulder Medical Center

# Topics to Cover

Boulder Community Health

- Multidisciplinary approach to prostate cancer
- Epidemiology - incidence and risk factors
- PSA screening
- Elevated PSA, now what??
- Noninvasive testing before biopsy
  - MRI
  - Genomic markers
- Additional prostate evaluation if no prostate cancer
- Diagnosis- Gleason score, Grade, Stage
- Treatment Options

Boulder Medical Center

# Noninvasive Pre-diagnostic Testing

Boulder Community Health

- Men (and their urologist) want to avoid a biopsy if possible.
- A prostate biopsy is still considered "gold standard".
- BUT noninvasive options to determine if a biopsy is needed are always discussed.

**Goal - NOT just find prostate cancer, but find potentially lethal prostate cancer.**

Boulder Medical Center

# Prostate MRI

Boulder Community Health

- Multiparametric (mp) MRI of the prostate
  - Anatomic evaluation - a "window" into the prostate

- Benefits
  - Characterize suspicious lesions felt on DRE
  - Evaluate elevated PSA to help decide on the need for biopsy
  - Perform targeted biopsy of a suspicious lesion
  - Reduced biopsy rate of benign tissue (PIRAD1 and PIRAD2 tissue)
  - Reduce the identification of low-risk prostate cancer by 87%
  - Increase finding intermediate/high-risk tumors by 18%
  - Active surveillance to follow lesions

Boulder Medical Center

Pokorny et al,. Eur Urol 2014;66:22-29.
Ahmed et al. Lancet 2017; 389:815

# mpMRI PI-RADS score

Boulder Community Health

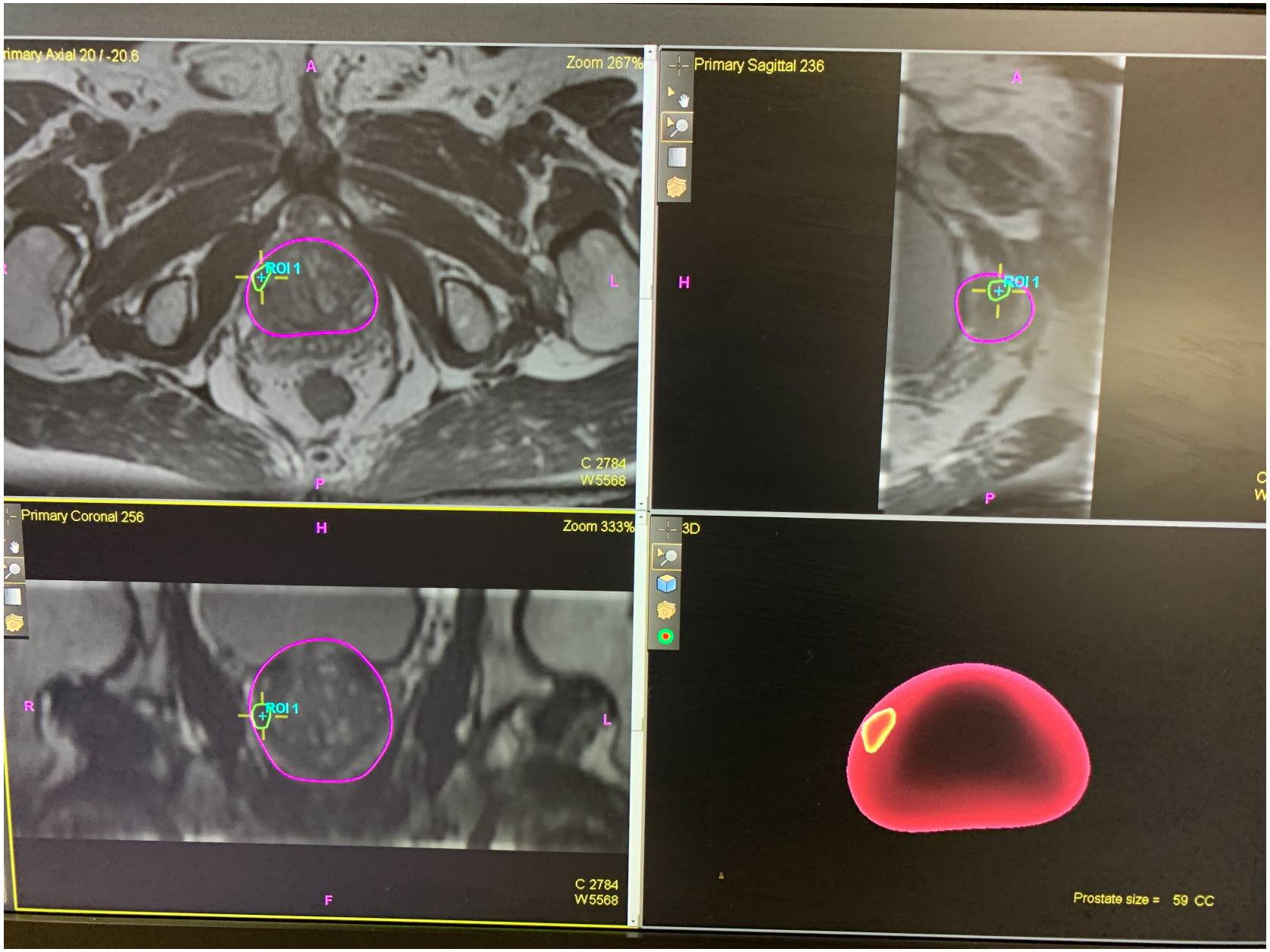
## Prostate Imaging – Reporting and Data System version 2

| PI-RADS classification | Definition | Total T2 + DWI + DCE score | Total T2 + DWI + DCE + MRS score |
|---|---|---|---|
| I | Most probably benign | 3 - 4 | 4 - 5 |
| II | Probably benign | 5 - 6 | 6 - 8 |
| III | Indeterminate | 7 - 9 | 9 - 12 |
| IV | Probably malignant | 10 - 12 | 13 – 15 |
| V | Most probably malignant | 13 - 15 | 17 - 20 |

**PI-RAD IV and V should have targeted biopsy**

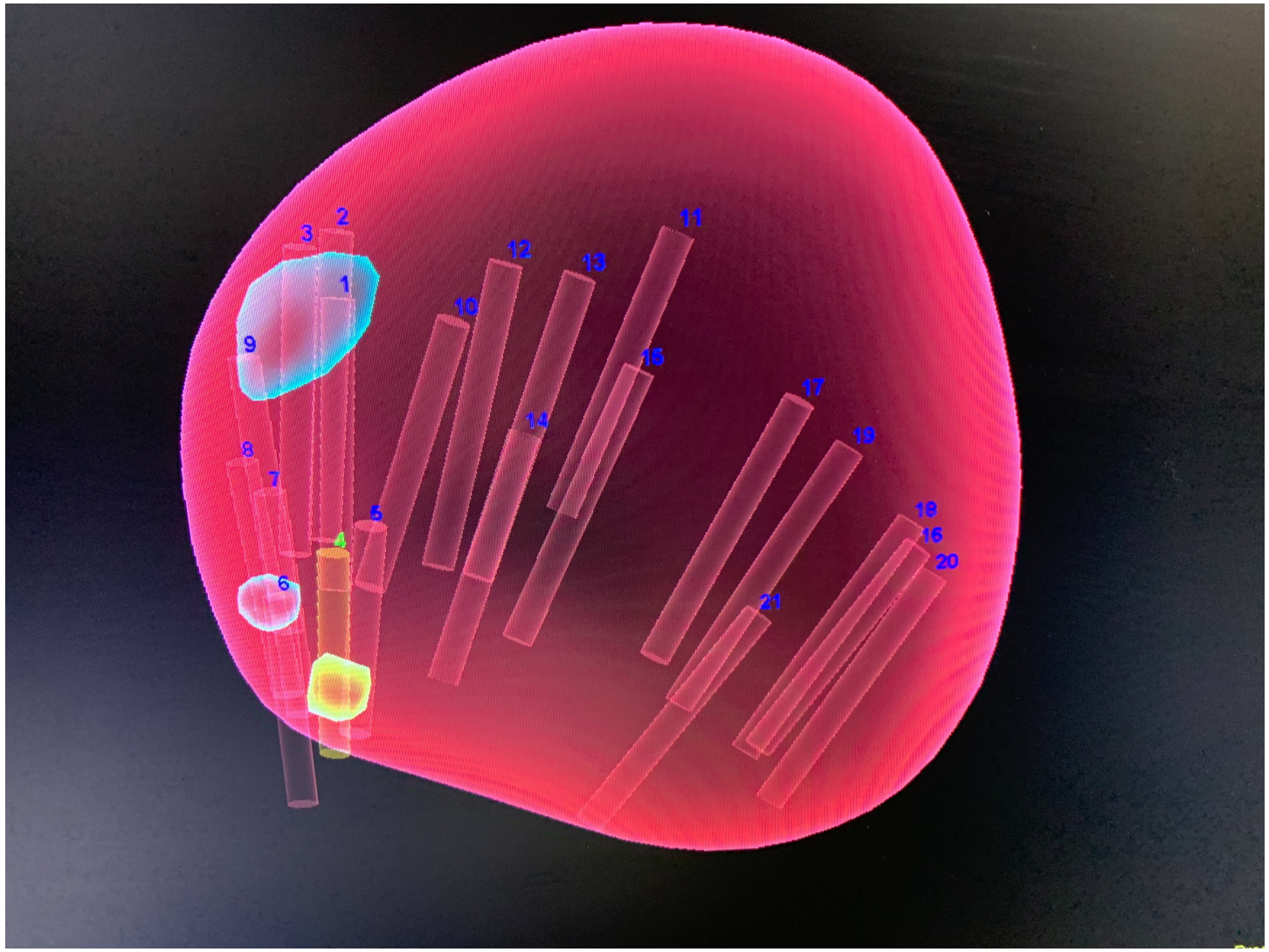
Boulder Medical Center

# MRI Fusion Biopsy Set Up



# MRI Fusion Biopsy Completed

Boulder Community Health




Boulder Medical Center

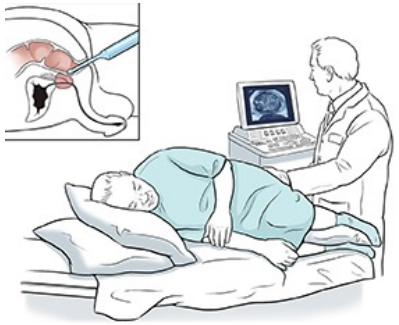
# Prostate MRI

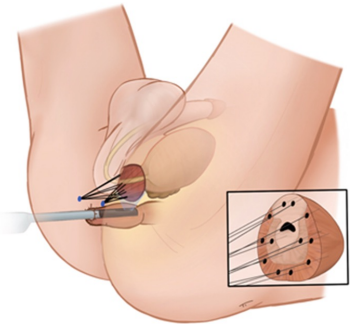
Boulder Community Health

- Not perfect (no test is)
- MRI before biopsy approach could miss 24% of potentially lethal prostate cancers.
- Interobserver variability
  - One radiologist scores prostate lesions one way and another radiologist scores the lesion another way.
  - Boulder Community Health radiologists read all our scans
    - Two Boulder Community Health radiologists often read each MRI

Boulder Medical Center

# Prostate Biopsy Technique





| Comparison | Transrectal | Transperineal |
|---|---|---|
| Infection | 0.38-4.2% | 0.6-1.03% |
| Urinary obstruction (need for foley) | 0-0.8% | 0.5-7.9% |
| Need for anxiolytic (valium) | NO | YES |
| Need for general or spinal anesthesia | NO | YES |
| Accuracy of detecting prostate cancer | Same | Same |
| Cost | Less expensive | More expensive |

# Topics to Cover

Boulder Community Health

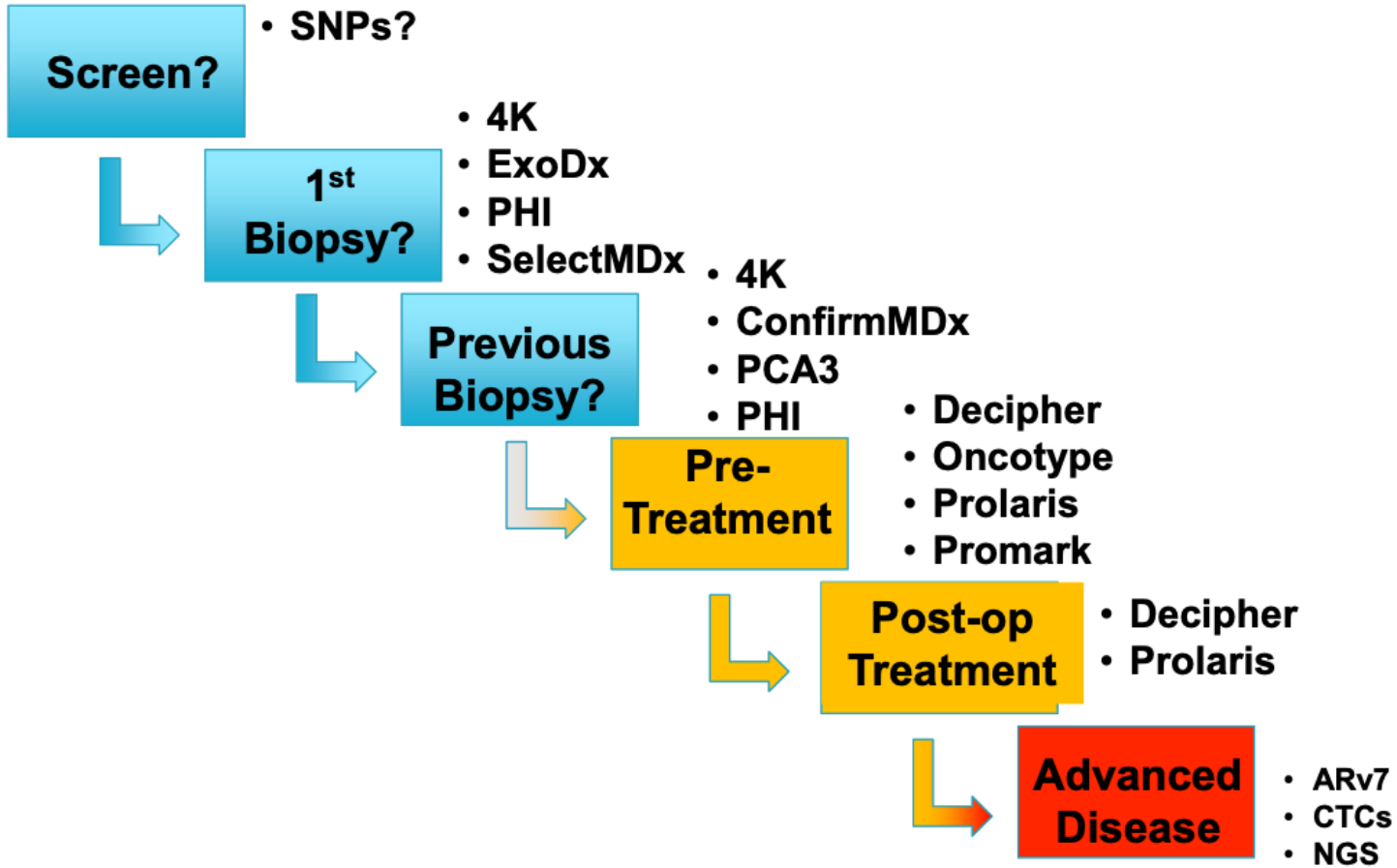
- Multidisciplinary approach to prostate cancer
- Epidemiology - incidence and risk factors
- PSA screening
- Elevated PSA, now what??
- Noninvasive testing before biopsy
  - MRI
  - Genomic markers
- Additional prostate evaluation if no prostate cancer
- Diagnosis- Gleason score, Grade, Stage
- Treatment Options

Boulder Medical Center

# Why is Genomic Testing Important?

Boulder Community Health

## Disease State Biomarkers (partial list)




Boulder Medical Center

# 4Kscore

Boulder Community Health

- Algorithm patient's age, family history, race, digital rectal exam, and previous biopsy status
- Panel of 4 known markers
  - total PSA
  - free PSA
  - intact PSA
  - hK2
- Gives percent likelihood of finding potentially lethal cancer on biopsy
- Biopsies can be avoided, high grade cancer detected, but 5-10% cancers are missed in reported trials

Boulder Medical Center

# SelectMDx

Boulder Community Health

- Urine assay for RNA
- Urine collected after digital rectal exam
- *DLX1* and *HOXC6* mRNA
- Has a 95% negative predictive value and 93% sensitivity for the detection of clinically significant prostate cancer
  - Translation - if low risk result, then highly likely there is no cancer, and the test has good accuracy for determining if there is cancer.
- Reduces the number of unnecessary biopsies
  - 53% prostate biopsies can be avoided

Boulder Medical Center

# ExoDX

Boulder Community Health

- Urinary exosomal RNA
- No DRE required
- For high-grade disease:
  - Excellent negative predictive value of 97.5% (if low risk, then 97.5% chance there is no cancer)

Boulder Medical Center

# ConfirmDx

Boulder Community Health

- If prostate biopsy comes back benign, can do additional genetic testing with ConfirmDx.
- Hypermethylation of the promoter regions of *GSTP1, APC,* and *RASSF1* is assessed in core biopsy tissue samples.
- Improve the stratification of men with prior negative biopsy being considered for repeat prostate biopsy.
  - Who needs to be followed more aggressively?

Boulder Medical Center

# Topics to Cover

Boulder Community Health

- Multidisciplinary approach to prostate cancer
- Epidemiology - incidence and risk factors
- PSA screening
- Elevated PSA, now what??
- Noninvasive testing before biopsy
  - MRI
  - Genomic markers
- Additional prostate evaluation if no prostate cancer
- Diagnosis- Gleason score, Grade, Stage
- Treatment Options

Boulder Medical Center

# Additional Evaluations

Boulder Community Health

- If no cancer found or low grade prostate cancer found and the man has bothersome urinary symptoms.

Boulder Medical Center

# Bothersome Urinary Symptoms

Boulder Community Health

- Evaluate urinary retention
- Evaluate bladder health

- Discuss medical vs surgical intervention
- Discuss minimally invasive treatment options

Boulder Medical Center

**International Prostate Symptom Score (I-PSS)**

**Patient Name:** _____ **Date of birth:** _____ **Date completed** _____

| In the past month: | Not at All | Less than 1 in 5 Times | Less than Half the Time | About Half the Time | More than Half the Time | Almost Always | Your score |
|---|---|---|---|---|---|---|---|
| **1. Incomplete Emptying** How often have you had the sensation of not emptying your bladder? | 0 | 1 | 2 | 3 | 4 | 5 | |
| **2. Frequency** How often have you had to urinate less than every two hours? | 0 | 1 | 2 | 3 | 4 | 5 | |
| **3. Intermittency** How often have you found you stopped and started again several times when you urinated? | 0 | 1 | 2 | 3 | 4 | 5 | |
| **4. Urgency** How often have you found it difficult to postpone urination? | 0 | 1 | 2 | 3 | 4 | 5 | |
| **5. Weak Stream** How often have you had a weak urinary stream? | 0 | 1 | 2 | 3 | 4 | 5 | |
| **6. Straining** How often have you had to strain to start urination? | 0 | 1 | 2 | 3 | 4 | 5 | |
| | None | 1 Time | 2 Times | 3 Times | 4 Times | 5 Times | |
| **7. Nocturia** How many times did you typically get up at night to urinate? | 0 | 1 | 2 | 3 | 4 | 5 | |
| **Total I-PSS Score** | | | | | | | 27 |

**Score:** 1-7: *Mild* 8-19: *Moderate* 20-35: *Severe*

| Quality of Life Due to Urinary Symptoms | Delighted | Pleased | Mostly Satisfied | Mixed | Mostly Dissatisfied | Unhappy | Terrible |
|---|---|---|---|---|---|---|---|
| If you were to spend the rest of your life with your urinary condition just the way it is now, how would you feel about that? | 0 | 1 | 2 | 3 | 4 | 5 | 6 |

# Urolift Center of Excellence

Boulder Community Health

UROLIFT® BPH Relief. In Sight.™

For Patients | For Physicians | Success Stories | About Us | Find a Physician | BPH Symptom Score

Dr. Carolyn Fronczak COE

Dr. Stephen Siegel COE

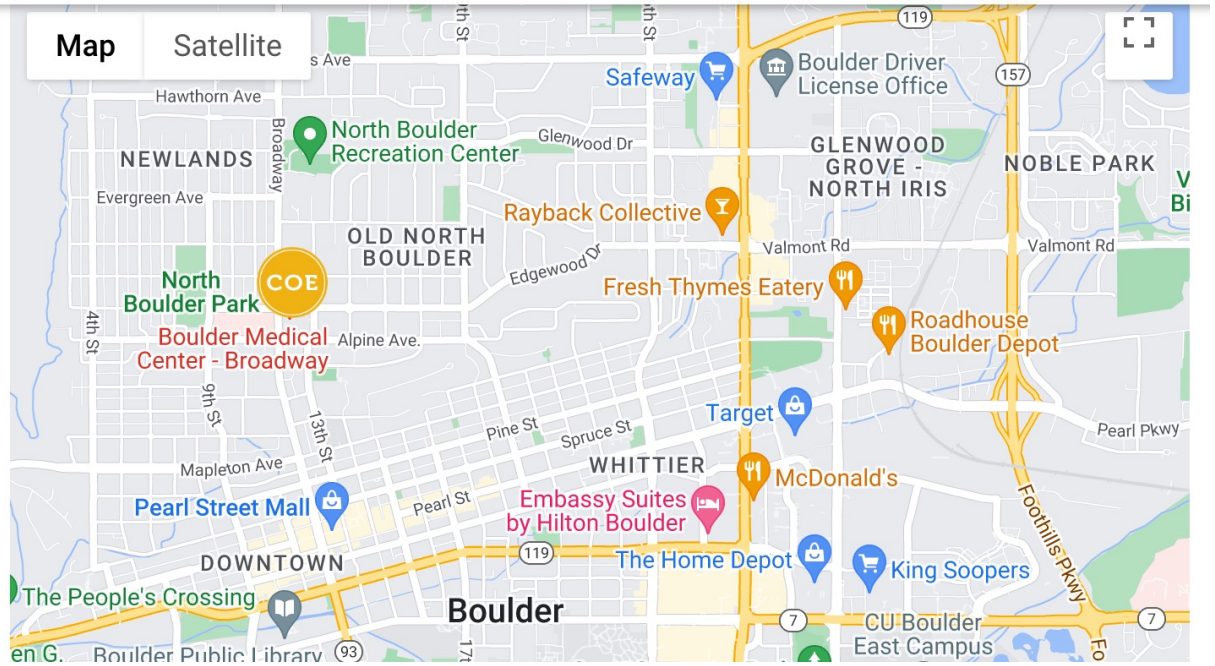
**Boulder Medical Center, P.C.**
2750 Broadway St.
Boulder, CO 80304

303-440-3093

Visit Practice Website

**Distance:** 4.28 miles

Get Directions →




Boulder Medical Center

# Topics to Cover

Boulder Community Health

- Multidisciplinary approach to prostate cancer
- Epidemiology - incidence and risk factors
- PSA screening
- Elevated PSA, now what??
- Noninvasive testing before biopsy
  - MRI
  - Genomic markers
- Additional prostate evaluation if no prostate cancer
- Diagnosis- Gleason score, Grade, Stage
- Treatment Options

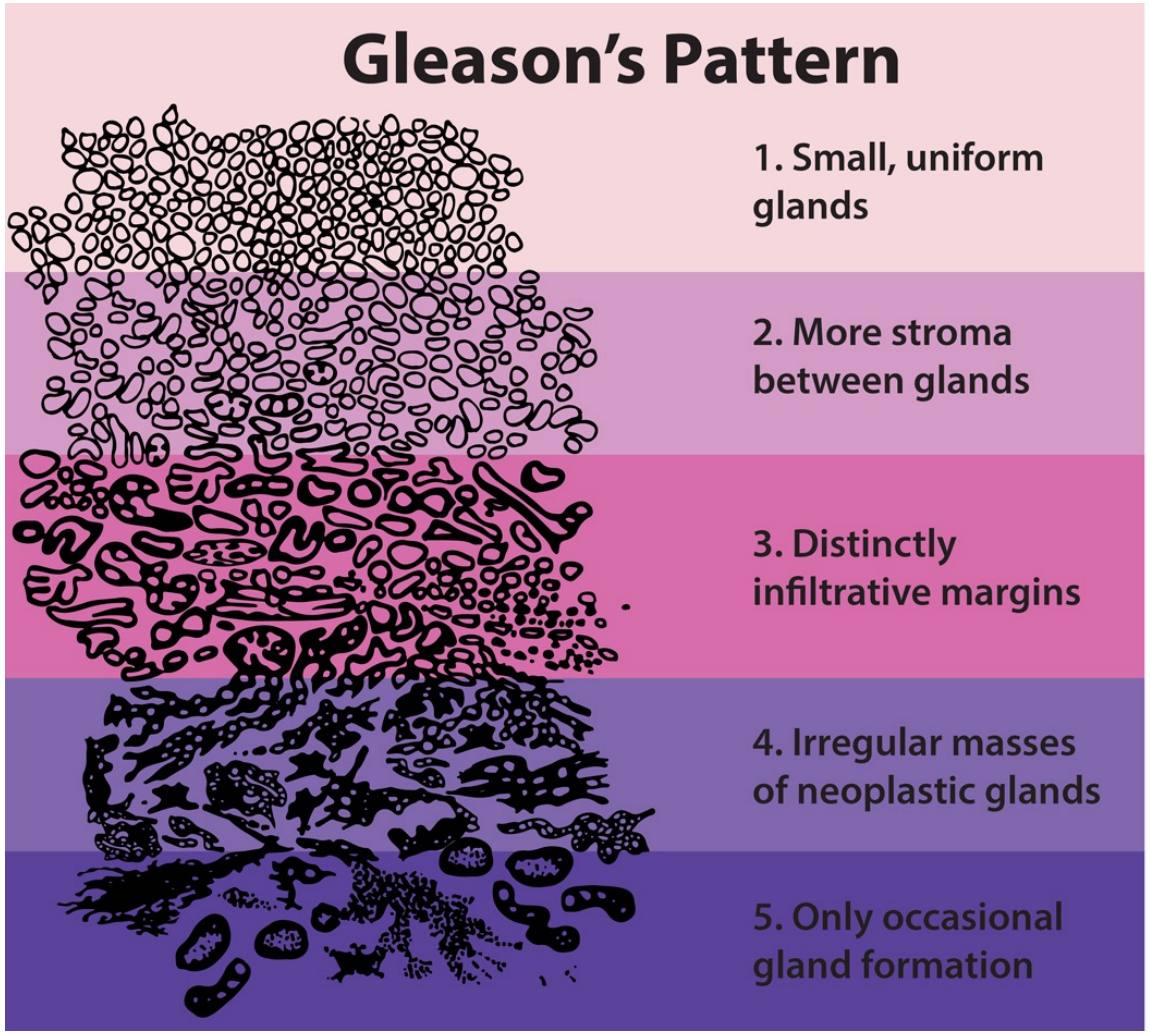
Boulder Medical Center

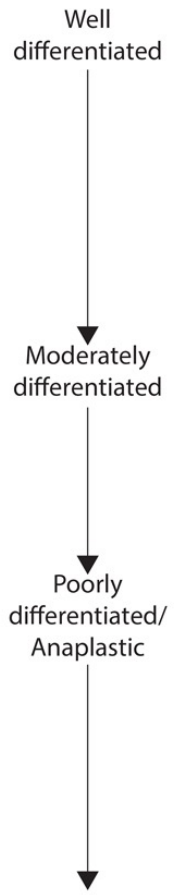
# Prostate Cancer Grading

Boulder Community Health

## Gleason score

- 3+3=6
- 3+4=7
- 4+3=7
- 4+4=8
- 4+5=9
- 5+4=9
- 5+5=10




## Grade group

- 1
- 2
- 3
- 4
- 5
- 5

Boulder Medical Center

# Prostate Cancer Risk Stratification

| | AUA Risk Category | NCCN Risk Category |
|---|---|---|
| **Very Low** | — | PSA ≤ 10 ng/mL, Gleason score ≤ 6, clinical stageT1c, < 3 positive biopsy cores, ≤ 50% in each core, and PSA density < 0.15 ng/mL/g |
| **Low** | PSA ≤ 10 ng/mL, Gleason score ≤ 6, and clinical stageT1c or T2a | PSA < 10 ng/mL, Gleason score ≤ 6, and clinical stageT1-T2a |
| **Intermediate** | PSA > 10-20ng/mL or Gleason score 7, or clinical stage T2b | PSA 10-20 ng/mL, Gleason score 7, or clinical stageT2b-T2c |
| **High** | PSA > 20ng/mL or Gleason score 8-10, or clinical stage ≥T2c | PSA > 20ng/mL or Gleason score 8-10, or clinical stage T3a |
| **Very High** | — | Clinical stage T3b-T4 |

# Prostate Cancer Risk Stratification

| | AUA Risk Category | NCCN Risk Category |
|---|---|---|
| **Very Low** | — | PSA ≤ 10 ng/mL, Gleason score ≤ 6, clinical stageT1c, < 3 positive biopsy cores, ≤ 50% in each core, and PSA density < 0.15 ng/mL/g |
| **Low** | PSA ≤ 10 ng/mL, Gleason score ≤ 6, and clinical stageT1c or T2a | PSA < 10 ng/mL, Gleason score ≤ 6, and clinical stageT1-T2a |
| **Intermediate** | PSA > 10-20ng/mL or Gleason score 7, or clinical stage T2b | PSA 10-20 ng/mL, Gleason score 7, or clinical stageT2b-T2c |
| **High** | PSA > 20ng/mL or Gleason score 8-10, or clinical stage ≥T2c | PSA > 20ng/mL or Gleason score 8-10, or clinical stage T3a |
| **Very High** | — | Clinical stage T3b-T4 |

# New Prostate Cancer Diagnosis

Boulder Community Health

- **Genomics adds helpful information**
- Each tumor is unique
- What is the REAL RISK of harm by not doing treatment?
- Can you wait and follow the tumor and decide later to do treatment?
- Tumors can get upstaged or downstaged
- Overall survival is “gold standard”…..BUT…

Boulder Medical Center

# New Prostate Cancer Diagnosis

Boulder Community Health

- **Metastasis free survival** is the STRONGEST surrogate for OVERALL survival in localized prostate cancer.

J Clin Oncol 35, 3097-3104, doi:10.1200/JCO.2017.73.9987 (2017)

Boulder Medical Center

# Decipher

Boulder Community Health

- Genomic test.
- Predicts metastasis in a prostate biopsy.
- Use RNA, 22 genes across 7 cancer pathways.
- Divides the results into high, intermediate, and low risk category.
- DECIPHER outperforms all other clinical risk factors for predicting metastasis
  - Better than PSA, stage, Gleason score, NCCN risk categories

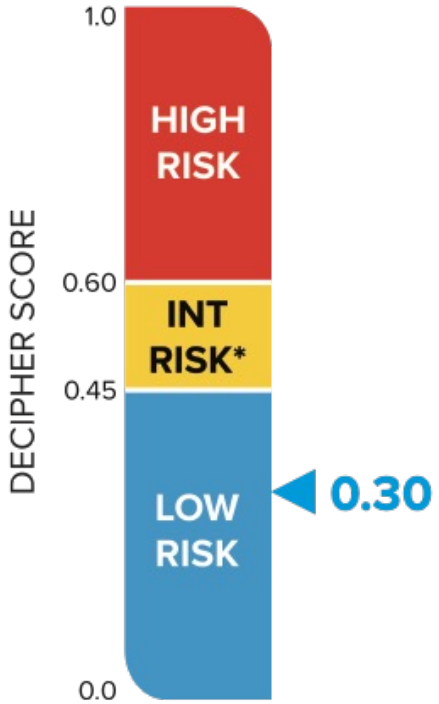
Boulder Medical Center

# Decipher Result

## CLINICAL AND PATHOLOGY DETAILS For reference only, not used in calculation of genomic risk

Specimen: **Needle Biopsy**
Clinical Stage: **T1c**
Most Recent PSA: **4.9 ng/mL**
Gleason Score: **3+4**
NCCN Risk Category: **Intermediate**

## DECIPHER GENOMIC RISK RESULTS




**GENOMIC RISK IS: LOW**

| 0.5% | 1.2% | 2.4% | 14.6% |
|---|---|---|---|
| *5-year* | *10-year* | *15-year* | *At RP* |
| **Risk of Metastasis** with RT† or RP‡ | | **Risk of Prostate Cancer Mortality** with RT or RP | **Risk of Adverse Pathology** |

**Clinical studies have shown that Decipher low-risk patients have a favorable prognosis.**

- These patients may be ideal candidates for active surveillance.[1-3,6]
- Patients considering definitive treatment may have excellent oncologic outcomes when treated with local therapy alone.[2-5,9]

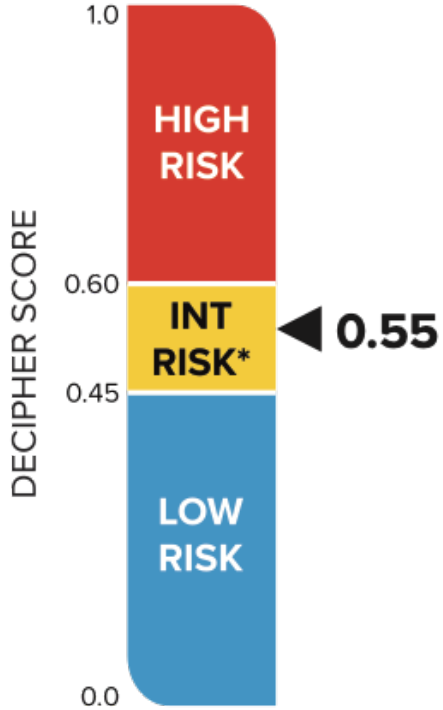
**The Decipher score is determined solely by genomic characteristics of the tumor, independent of the NCCN risk category. No other clinical or pathologic parameters factor into the score.**

# Decipher Result

**CLINICAL AND PATHOLOGY DETAILS** For reference only, not used in calculation of genomic risk

Specimen: **Needle Biopsy**
Clinical Stage: **T1c**
Most Recent PSA: **4.9 ng/mL**
Gleason Score: **3+4**
NCCN Risk Category: **Intermediate**

**DECIPHER GENOMIC RISK RESULTS**




| GENOMIC RISK IS: **INTERMEDIATE** | | | |
|---|---|---|---|
| **1.1%** | **2.7%** | **4.6%** | **28.4%** |
| *5-year* | *10-year* | *15-year* | *At RP* |
| **Risk of Metastasis** with RT† or RP‡ | | **Risk of Prostate Cancer Mortality** with RT or RP | **Risk of Adverse Pathology** |

**Clinical studies have shown that Decipher intermediate-risk patients have an average clinical risk and prognosis. Depending on life expectancy and overall health status:**

- These patients may not be ideal candidates for active surveillance.[1-3,6]
- These patients may benefit from definitive therapy.[2-5,9]

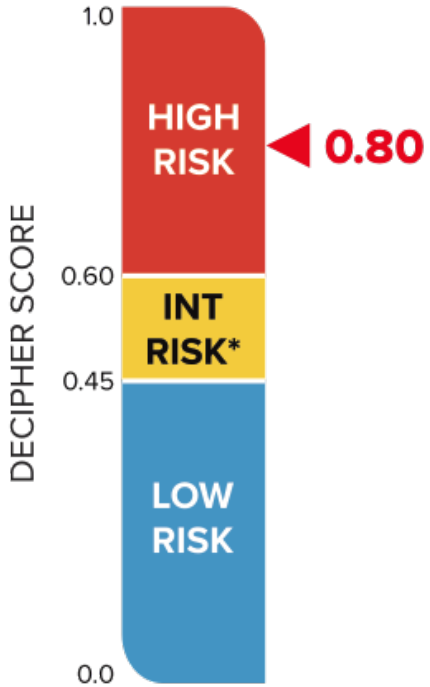
**The Decipher score is determined solely by genomic characteristics of the tumor, independent of the NCCN risk category. No other clinical or pathologic parameters factor into the score.**

# Decipher Result

**CLINICAL AND PATHOLOGY DETAILS** For reference only, not used in calculation of genomic risk

Specimen: **Needle Biopsy**
Clinical Stage: **T1c**
Most Recent PSA: **4.9 ng/mL**
Gleason Score: **3+4**
NCCN Risk Category: **Intermediate**

## DECIPHER GENOMIC RISK RESULTS




**GENOMIC RISK IS: HIGH**

| 2.6% | 6.5% | 8.8% | 48.1% |
|---|---|---|---|
| *5-year* | *10-year* | *15-year* | *At RP* |
| **Risk of Metastasis** with RT† or RP‡ | | **Risk of Prostate Cancer Mortality** with RT or RP | **Risk of Adverse Pathology** |

**Clinical studies have shown that Decipher high-risk patients have an unfavorable prognosis.**

- These patients may benefit from treatment intensification with multimodal therapy.[2-5,9,10]
- These patients may not be ideal candidates for active surveillance.[1-3,8]

**The Decipher score is determined solely by genomic characteristics of the tumor, independent of the NCCN risk category. No other clinical or pathologic parameters factor into the score.**

# Decipher Result

Boulder Community Health

- Decipher can also help guide:
  - If treatment with radiation, does patient need radiation treatment along with hormone therapy?
  - And what is the duration of hormone therapy?

Boulder Medical Center

# Topics to Cover

Boulder Community Health

- Multidisciplinary approach to prostate cancer
- Epidemiology - incidence and risk factors
- PSA screening
- Elevated PSA, now what??
- Noninvasive testing before biopsy
  - MRI
  - Genomic markers
- Additional prostate evaluation if no prostate cancer
- Diagnosis- Gleason score, Grade, Stage
- Treatment Options

Boulder Medical Center

# Which Treatment Option is Right for Me?

Boulder Community Health

**Attend the BCH lecture on Tuesday, June 28, 2022**

- Dr. Patrick Richard (radiation oncologist)
- Dr. Dario Pasalic (radiation oncologist)
- Dr. Stephen Siegel (urologic surgeon)

Boulder Medical Center + Rocky Mountain Cancer Centers =

**MULTIDISCIPLINARY APPROACH**

Boulder Medical Center

# Bolder Boulder 2022

Boulder Community Health


Boulder Medical Center

# Breakthroughs in Diagnosing Prostate Cancer

Carolyn Fronczak, MD, MSPH
Urologic Surgery, Boulder Medical Center
303-731-3674

Stephen Siegel, MD
Urologic Surgery, Boulder Medical Center
303-997-3624

Boulder Community Health

Boulder Medical Center