Prostate Cancer Diagnosis Pathway Map
Version 2022.01

Disclaimer: The pathway map is intended to be used for informational purposes only. The pathway map is not intended to constitute or be a substitute for medical advice and should not be relied upon in any such regard. Further, all pathway maps are subject to clinical judgment and actual practice patterns may not follow the proposed steps set out in the pathway map. In the situation where the reader is not a healthcare provider, the reader should always consult a healthcare provider if he/she has any questions regarding the information set out in the pathway map. The information in the pathway map does not create a physician-patient relationship between Ontario Health (Cancer Care Ontario) and the reader.
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Target Population
- Patients who present with signs or symptoms suspicious of prostate cancer.

Pathway Map Considerations
- Primary care providers play an important role in the cancer journey and should be informed of relevant tests and consultations. Ongoing care with a primary care provider is assumed to be part of the pathway map. For patients who do not have a primary care provider, Health Care Connect is a government resource that helps patients find a doctor or nurse practitioner.
- Throughout the pathway map, a shared decision-making model should be implemented to enable and encourage patients to play an active role in the management of their care. For more information see Person-Centered Care Guideline and EBS #19-2 Provider-Patient Communication.
- Hyperlinks are used throughout the pathway map to provide information about relevant Ontario Health (Cancer Care Ontario) tools, resources and guidance documents.
- The term ‘health care provider’, used throughout the pathway map, includes primary care providers and specialists, e.g. family doctors, nurse practitioners, and emergency physicians.
- Multidisciplinary Cancer Conferences (MCCs) may be considered for all phases of the pathway map. For more information on Multidisciplinary Cancer Conferences, visit MCC Tools.
- For more information on wait time prioritization, visit Surgery.
- Clinical trials should be considered for all phases of the pathway map.
- Psychosocial oncology (PSO) is the interprofessional specialty concerned with understanding and treating the social, practical, psychological, emotional, spiritual and functional needs and quality-of-life impact that cancer has on patients and their families. Psychosocial care should be considered an integral and standardized part of cancer care for patients and their families at all stages of the illness trajectory. For more information, visit EBS #19-3.*

Pathway Map Disclaimer
This pathway map is a resource that provides an overview of the treatment that an individual in the Ontario cancer system may receive.

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* Note. EBS #19-2 and EBS #19-3 are older than 3 years and are currently listed as 'For Education and Information Purposes'. This means that the recommendations will no longer be maintained but may still be useful for academic or other information purposes.
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#### Suspicion

Patients ≥ 40 years old presenting with symptoms of metastatic prostate cancer which include any unexplained:
- Suspicious lower back pain with reproducible percussion tenderness
- Severe bone pain
- Weight loss, especially in the elderly

**EBS #24-3**

Digital Rectal Exam (DRE)  
Prostate Specific Antigen (PSA) Test

**Results**

Yes

- Prostate hard or irregular on DRE and/or PSA >20 ng/mL

Urgent

Urologist

or

DAP

No

- Normal DRE PSA 10 ng/mL to 20 ng/mL

Consider other metastatic cancers

- Normal DRE PSA <10 ng/mL

Consider other metastatic cancers

**EBS #24-3**

Repeat PSA Test 6–8 weeks

**Results**

Abnormal

- Prostate hard or irregular on DRE and age-based PSA elevated but <10 ng/mL

Urgent

Urologist

or

DAP

- Prostate normal on DRE and PSA between 10 ng/mL to 20 ng/mL

Semi-Urgent

- PSA > 20 ng/mL

Urgent

- Prostate normal on DRE & age-based PSA elevated but <10 ng/mL

**EBS #24-3**

Repeat PSA Test 6–8 weeks

**Results**

Abnormal

Identify and treat cause for elevated PSA  
Digital Rectal Exam (DRE)

**EBS #24-3**

Normal

### Note

1. Age-based PSA values (upper limit of normal): 40-50 years: 2.5 ng/mL, 50-60 years: 3.5 ng/mL, 60-70 years: 4.5 ng/mL, 70 years and over: 6.5 ng/mL

2. Discussion about benefits and risks of prostate specific antigen (PSA) testing should occur with the patient, refer to CCO Position Statement on Prostate Cancer Screening and Supporting Documents

3. There is no evidence to support the use of TRUS in prostate cancer diagnosis

4. Risk Calculators: Refer to EBS #24-3 Nomograms

5. Refer to EBS #24-3 for details on urgency of referral.
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### Initial Presentation and Referral

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**Initial Presentation and Referral**

1. **Biopsy required?**
   - **Low suspicion** or biopsy contraindicated (e.g., if medically unfit for biopsy, limited life expectancy, or other possible causes for elevated prostate specific antigen PSA, etc.)
   - **MRI negative**
     - Repeat targeted with or without systematic biopsy
     - CCO Recommendation Report
   - **MRI positive**
     - MRI negative or PI-RADS 1, 2, and 3
     - Multiparametric MRI, if not done within last year
     - Follow up to Page 5
   - **Some MRI negative or PI-RADS 1, 2, and 3**
     - Systematic Prostate Biopsy Aided by Transrectal Ultrasound (TRUS) (10-12 core samples)
     - CCO Recommendation Report
     - Follow-up by Urologist or Primary Care Provider
   - **High suspicion and patient medically fit for biopsy**
     - Multiparametric MRI
     - Follow up to Page 5

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**From Page 3**

**A**

**B**

**C**

Follow-up by Urologist or Primary Care Provider

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**Repeat systematic biopsy at discretion of urologist and with patient consultation**

**Repeat targeted with or without systematic biopsy**

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**American College of Radiology Committee on Prostate Imaging Reporting and Data System Version 2.1 (PI-RADS™ v2.1)**
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**Risk Assessment and Staging**

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**Recommended Staging Imaging Tests**

- **Bone Scan and X-Ray of suspicious areas**
- **CT Pelvis/Abdomen**

**Consider Staging Imaging Tests**

- **Bone Scan and X-Ray of suspicious areas**
- **CT Pelvis/Abdomen**

**Metastatic prostate cancer?**

- Negative Bone Scans and CT
- Positive Bone Scans and/or CT

**Extraprostatic extension of prostate cancer?**

- Yes (>T3)
- No (<T3)

**Bone Scan and X-Ray of suspicious areas**

- **CT Pelvis/Abdomen**

**Staging Imaging Tests**

- **Bone Scan and X-Ray of suspicious areas**
- **CT Pelvis/Abdomen**

**Symptomatic for metastases**

**Intermediate Risk, if any of:**
- PSA 10ng/mL – 20ng/mL
- Gleason score 7
- T2b-c
- Asymptomatic for metastases

**Low Risk, if all of:**
- PSA < 10ng/mL
- Gleason score ≤ 6
- T1-T2a
- Asymptomatic for metastases

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**Positive for prostate cancer**

**C**

**Prostate Cancer Risk Stratification (D’Amico)**

**High Risk, if any of:**
- PSA >20ng/mL
- Gleason score ≥ 8
- ≥ T3a

**Positive Bone Scans and/or CT**

**Negative Bone Scans and CT**

**Proceed to Treatment Pathway Map Page 10**

**Proceed to Treatment Pathway Map Page 5**

**Proceed to Treatment Pathway Map Page 4**

**Proceed to Treatment Pathway Map Page 3**

**Prostate MRI (if suspicion of T3) Guideline 27.3**