Prostate cancer: ESMO Clinical Recommendations for diagnosis, treatment and follow-up

A. Horwich¹, C. Parker² & V. Kataja³
On behalf of the ESMO Guidelines Working Group*

¹,²Department of Clinical Oncology, Royal Marsden Hospital, Sutton, UK; ³Department of Oncology, Kuopio University Hospital, Kuopio, Finland

incidence and mortality

- The crude incidence of prostate cancer in the European Union is 78.9/100 000 men/year. It is the most common cancer in men.
- The mortality in the EU is 30.6/100 000 men/year.
- Subclinical prostate cancer is present in the majority of men.
- Screening of healthy men using prostate-specific antigen (PSA) testing increases the incidence (overdiagnosis). The effect of screening and early intervention on mortality is not known.

diagnosis

- Serum PSA should be measured and digital rectal examination (DRE) carried out in patients presenting with urinary symptoms.
- Prostate biopsy should be offered to men suspected to have a clinically significant prostate cancer, such as those with an abnormal DRE and elevated serum PSA.
- Prostate biopsy should be performed under transrectal ultrasound (TRUS) guidance, and a minimum of eight cores obtained.
- The extent of involvement of each core, and the Gleason score should be reported.

staging and risk assessment

- General health and co-morbidities should be assessed.
- Clinical T stage should be evaluated by DRE.
- Pelvic imaging using MRI or CT should be performed before radical treatment when Partin tables indicate >15% risk of nodal involvement.

- Bone scintigraphy should be performed if bone metastases are suspected clinically, if the Gleason score is >4 + 3 or serum PSA is >15 mg/l [III, B].

Treatment

localized disease (T1–2 N0/X M0/X)

- There is no general consensus as to what constitutes best treatment.

Patients should be informed of the potential benefits and harms of the various options.

- In the only randomized trial reported to date, radical prostatectomy improved overall survival at 10 years by 5% in comparison with watchful waiting (73% versus 68%, \( P = 0.04 \)), but these results may not be generalizable to screen-detected cancers.
- In the only randomized trial to date, radical prostatectomy increased the rate of erectile dysfunction by 35% (80% versus 45%), and urinary leakage by 28% (49% versus 21%), in surgical centers.
- For low-risk disease (T1–2a, Gleason <6, PSA <10 mg/l), active surveillance with selected delayed intervention has given 99% disease-specific survival at 8 years.
- External beam radiotherapy should be delivered using conformal techniques, to a minimum target dose of 70 Gy given in 2.0 Gy fractions or the equivalent [II, B]. In non-randomized prospective series brachytherapy with permanent implants results in similar long-term survival to radical prostatectomy with less chronic urinary symptoms and erectile dysfunction.
- Following radical prostatectomy patients should be monitored with a sensitive PSA assay, with salvage radiotherapy to the prostate bed given in the event of PSA failure.

locally advanced disease (T3–4 N0/X M0/X)

- Long-term hormone therapy (androgen suppression or bicalutamide monotherapy) is a standard treatment.

*Correspondence to: ESMO Guidelines Working Group, ESMO Head Office, Via L. Taddei 4, CH-6962 Viganello-Lugano, Switzerland

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• Patients receiving external beam radiotherapy should receive androgen suppression before, during and after radiotherapy [II, A], for a minimum of 6 months duration.
• Patients receiving long-term bicalutamide monotherapy should be given breast bud irradiation (8–10 Gy in one fraction) to prevent painful gynaecomastia [I, A].

metastatic disease
• Androgen suppression using bilateral orchiectomy or an luteinizing hormone-releasing hormone (LHRH) agonist should be first-line treatment.
• Short-course antiandrogen should be used to prevent disease flare on starting an LHRH agonist.
• Patients with castration-refractory disease should have continued androgen suppression
• Docetaxel using a 3-weekly schedule should be considered for symptomatic, castration-refractory disease [II, A].
• External beam radiotherapy should be offered for patients with painful bone metastases from castration-refractory disease. Fractioning 1 × 8 Gy or 10 × 3 Gy may be used with equal pain-reducing efficacy [II, A].
• Radioisotope therapy (e.g. strontium-89 or samarium-153 -EDTMP) should be considered for patients with painful bone metastases from castration-refractory disease [II, A].
• Patients with castration-refractory disease should receive second-line hormonal therapy (e.g. antiandrogen, corticosteroid) and be considered for third-line (e.g. oestrogen).
• Intravenous bisphosphonates (e.g. pamidronate) should be considered for patients with bone pain resistant to palliative radiotherapy and conventional analgesics [II, A].
• Patients with castration-refractory disease should be managed in collaboration with dedicated palliative care services.

note
Levels of evidence [I–V] and grades of recommendation [A–D] as used by the American Society of Clinical Oncology are given in square brackets. Statements without grading were considered justified standard clinical practice by the experts and the ESMO faculty.

literature