Clinical Recommendations

Prostate Cancer: ESMO Clinical Recommendations for Diagnosis, Treatment and Follow-up

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Incidence and Mortality

The crude annual incidence of prostate cancer in the European Union (EU) is 78.9/100,000 men. It is the most common cancer in men. The mortality in the EU is 30.6/100,000 men/year. Though the incidence and survival rates vary widely between different EU States, mortality rates are similar.

Subclinical prostate cancer is common in men >50 years. Screening of healthy men using prostate-specific antigen (PSA) testing increases the incidence and leads to overdiagnosis. According to two recently published randomized trials, the effect of screening and early intervention on mortality is still controversial and population screening cannot be recommended currently.

diagnosis

Serum PSA should be measured and digital rectal examination (DRE) performed in appropriately counselled patients in whom there is clinical suspicion of prostate cancer.

The decision whether or not to have a prostate biopsy should be made in the light of PSA level, DRE findings, prostate size, ethnicity, age, comorbidities, patient values and history of previous biopsy. Prostate biopsy should be performed under transrectal ultrasound 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 comorbidities should be assessed. Clinical T stage should be evaluated by DRE. Men with a diagnosis of apparently localized prostate cancer should be categorized as low, intermediate or high risk, where low risk equals all of T1/2a, Gleason <7 and PSA <10, and high risk equals any of T3/4, Gleason >7 and PSA >20.

Generally, there is no need for pelvic imaging in low-risk patients. Those with high-risk disease who may be candidates for radical treatment should have CT/MRI of the pelvis. 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 different options.

For low-risk disease the treatment options include radical prostatectomy, external beam radiotherapy, brachytherapy with permanent implants and active surveillance with selected delayed intervention. Palliative options include watchful waiting and hormone therapy.

For low-risk disease, active surveillance with selected delayed intervention has given 99% disease-specific survival at 8 years [III, B].

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) [II], but these results may not be generalizable to screen-detected cancers.

In this trial, radical prostatectomy increased the rate of erectile dysfunction by 35% (80% versus 45%) and urinary leakage by 28% (49% versus 21%), in comparison with watchful waiting [II], but these results may not be generalizable to high-volume surgical centres.

External beam radiotherapy should be delivered using conformal, preferably image-guided, techniques, to a minimum target dose of 74 Gy given in 2.0 Gy fractions or the equivalent [II, B].

In nonrandomized prospective series, brachytherapy with permanent implants results in similar long-term survival to radical prostatectomy, with less urinary incontinence and erectile dysfunction [III, B].

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 [III, B].

Adjuvant radiotherapy immediately following radical prostatectomy has not been shown to improve survival or freedom from metastatic disease compared with salvage radiotherapy at time of PSA progression.

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

Long-term hormone therapy (androgen suppression or bicalutamide monotherapy) is a standard treatment [II, B].

Patients receiving external beam radiotherapy should receive androgen suppression with a luteinizing hormone-releasing hormone (LHRH) agonist before, during and after radiotherapy [II, A], for a ≥6 months. The optimal duration of hormonal treatment in not known.

Patients receiving long-term bicalutamide monotherapy should be given breast bud irradiation (8–10 Gy in one fraction) to prevent painful gynecomastia [II, A].

metastatic disease

Androgen suppression using bilateral orchectomy or an LHRH agonist should be first-line treatment [I, A]. 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. Also, they should receive second-line (e.g. antiandrogen), third-line (e.g. corticosteroid) and be considered for fourth-line hormonal therapy (e.g. oestrogen). 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 (1 × 8 Gy has equal pain-reducing efficacy to multifraction schedules) [II, A].

Radioisotope therapy with strontium 89 should be considered for patients with painful bone metastases from castration-refractory disease [II, A]. Intravenous bisphosphonates should be considered for patients with bone pain resistant to palliative radiotherapy and conventional analgesics [III, B]. MRI of the spine to detect subclinical cord compression should be considered in men with castration-refractory prostate cancer with vertebral metastases and back pain [III].

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.

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literature

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