

## Prostate cancer

Prostate cancer is the most common adult male cancer other than skin cancer and the second most common cause of adult male cancer death after lung cancer. It is principally a disease of older men, almost an inevitable part of aging, with autopsy studies showing the majority of old men have a trace of cancer if thoroughly assessed. About one in nine men will have the diagnosis made during their life and nearly a third of them will die from their disease. In South Australia about 1000 new diagnoses are made every year. Not all prostate cancers will progress but if found early, they should be curable and later death prevented.

Screening for prostate cancer is controversial but there is increasing evidence to support it. The previous advice was for men to have an annual DRE (digital rectal examination) and PSA (prostate specific antigen), a screening blood test for prostate cancer, from the age of 50 years or 45 years if there is a family history of prostate cancer. However an even earlier PSA at age 40 can be used as a predictor of prostate cancer and can be used to modify the frequency of PSA testing thereafter. Although most cases of prostate cancer are not genetically linked, having a first degree relative, a father or brother affected doubles a man's risk of getting prostate cancer and having two first degree relatives affected at least quadruples the risk. Early prostate cancer does not cause symptoms and men should not wait until symptoms to be checked. Men should also be aware that urinary symptoms are more likely to be due to benign enlargement not cancer.

If prostate cancer is suspected by the DRE or PSA this is investigated by transrectal ultrasound (TRUS) guided prostate biopsies. 0.5 mm biopsy cores are taken from the prostate under local anaesthetic with minimal discomfort and sent for histopathology. The grade of the cancer, measured by Gleason Score and amount of cancer is assessed. The pathologist grades the most common cancer pattern out of 5 and the next most common pattern out of five to give a Gleason Score of usually at least 3+3=6. This is technically moderate-grade cancer but lower grade disease is seldom seen and it is treated as low-grade disease with GS 3+4=7 and GS 4+3=7 treated as intermediate-grade disease and higher scores as high-grade disease. This Gleason Score, the number of biopsy cores infiltrated by cancer and the amount of cancer in each core is very important as treatment decisions are based on this.

Staging radiological studies, a MRI, CT and whole body bone scan may be recommended to look for evidence of spread beyond the prostate capsule, to pelvic lymph nodes and to bones. These tests are not required for low-grade disease with a low PSA because spread is so unlikely. It must be remembered that these tests are relatively crude and will not pick up very early microscopic disease.

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