

**Feneley MR , Carruthers M. Is Testosterone Treatment Good for the Prostate? Study of Safety During Long-Term Treatment. J Sex Med 2012; 9: 2138-49.(21388)** Introduction. For men with androgen deficiency on testosterone replacement therapy (TRT), clinical concern relates to the development of prostate cancer (PCa). Aim. An updated audit of prostate safety from the UK Androgen Study was carried out to analyze the incidence of PCa during long-term TRT. Main Outcome Measures. Diagnosis of PCa in men receiving TRT, by serum prostate-specific antigen (PSA) testing and digital rectal examination (DRE), and its relation to different testosterone preparations. Methods. One thousand three hundred sixty-five men aged 28-87 (mean 55) years with symptomatic androgen deficiency and receiving TRT have been monitored for up to 20 years. All patients were prescreened for PCa by DRE and PSA along with endocrine, biochemical, hematological, and urinary profiles at baseline and every 6 months. Abnormal findings or rising PSA were investigated by transrectal ultrasound and prostate biopsy. The data were compared for the four different testosterone preparations used in TRT, including pellet implants, Restandol, mesterolone, and Testogel. Results. Fourteen new cases of PCa were diagnosed at one case per 212 years treatment, after 2,966 man-years of treatment (one case per 212 years). Time to diagnosis ranged from 1 to 12 years (mean 6.3 years). All tumors were clinically localized and suitable for potentially curative treatment. Initiating testosterone treatment had no statistically significant effect on total PSA, free PSA or free/total PSA ratio, and any initial PSA change had no predictive relationship to subsequent diagnosis of cancer. Conclusions. The incidence of PCa during long-term TRT was equivalent to that expected in the general population. This study adds to the considerable weight of evidence that with proper clinical monitoring, testosterone treatment is safe for the prostate and improves early detection of PCa. Testosterone treatment with regular monitoring of the prostate may be safer for the individual than any alternative without surveillance.