

Albertsen and colleagues set out to determine whether the decline in the reported incidence of low-grade prostate cancer between 1992 and 2002 was in part due to Gleason-score reclassification over this time period. Histology specimens from a population-based cohort of 1,858 men diagnosed with prostate cancer between 1990 and 1992 were reread by a single pathologist blinded to the original Gleason score, and prostate cancer mortality rates were calculated for the contemporary and historical scores.

Contemporary Gleason scores were significantly higher than matched historical scores. Consequently the Gleason-score standardized mortality rate was 28% lower using contemporary scores compared with the historical scores. The data show a tumor-grade shift over the time period studied, which the authors propose is attributable not to selective identification of more aggressive tumors, but to a change in interpretation of biopsy specimens using the Gleason system. They suggest a number of factors which influence an increase in biopsy Gleason scores and caution that researchers who rely on comparisons between mortality rates from new data and historical case series need to be wary of the possible effect of Gleason score reclassification.

Carol Lovegrove

Original article Albertsen PC *et al.* (2005) Prostate cancer and the Will Rogers phenomenon. *J Natl Cancer Inst* **97**: 1248–1253

Congenital penile anomalies on the increase

A study of 4,837,224 males born between 1988 and 2000 has confirmed that the incidence of congenital penile anomalies in the US is rising. Furthermore, the study showed that white race, high socioeconomic status, private insurance and northeast geographic location significantly increased the odds of these anomalies.

Nelson and colleagues analyzed data from the Nationwide Inpatient Sample database, and found that the incidence of congenital penile anomalies increased significantly from 7.0/1,000 to 8.3/1,000 over the course of the study—a 12% increase.

Penile anomalies were seen almost twice as often in white newborns compared to those of Hispanic race. Multivariate analysis revealed that the odds of identifying anomalies were 19%

higher in the highest socioeconomic category compared to the lowest category. The incidence also varied dramatically with geographic region, with the highest incidence seen in the northeast US and the lowest in the west.

The most common anomaly identified was HYPOSPADIAS, with the same demographic factors associated with a higher incidence.

The authors discuss the potential limitations of their study, including ascertainment bias, coding irregularities, and administrative data sources. Although the increasing incidence of congenital penile anomalies demonstrated in this study has been previously observed, there is little known regarding the underlying causes. Genetic, hormonal and environmental factors have been proposed, and the authors hope that their findings will encourage further research into possible etiologies.

Tamsin Osborne

Original article Nelson CP *et al.* (2005) The increasing incidence of congenital penile anomalies in the United States. *J Urol* **174**: 1573–1576

Serum testosterone and prostate cancer risk

Parsons and colleagues at the Johns Hopkins Medical Institutions have shown that higher levels of calculated serum free testosterone and free testosterone index are associated with an increased risk of prostate cancer.

The team analyzed serial serum testosterone concentrations obtained over a period of nearly 40 years from a cohort of aging men participating in the Baltimore Longitudinal Study of Aging (BLSA). A total of 2,958 samples from 794 men were included in the analysis. All samples were obtained in the morning following an overnight fast in order to reduce intraparticipant and inter-participant variation. Patients were followed up for a median of 18.5 years.

Using a Cox proportional hazards regression model with simple updating, the authors showed that men with hypogonadal levels of free testosterone had a prostate cancer risk 49% lower than men with eugonadal levels, suggesting that low levels of free testosterone might protect against prostate cancer.

Although the effect of testosterone replacement therapy on prostate cancer incidence is still not known, the authors conclude that their findings suggest older men on testosterone therapy

GLOSSARY

HYPOSPADIAS

Congenital defect in males where the urethral opening is on the underside of the penis or the perineum, rather than on the glans