

All 844 patients diagnosed with localized prostate cancer between 1 January 1989 and 31 December 1998 in Geneva, Switzerland, were enrolled in this study; 47 patients were later lost to follow-up. In total, 158 patients underwent prostatectomy, 205 underwent radiotherapy, 378 were managed using a strategy of watchful waiting, 72 received hormone therapy, and 31 were managed using other treatment regimens. The mean duration of follow-up was 6.7 years. Cox proportional hazards analysis, adjusted for age, sector of care, period of diagnosis, method of detection, lymph-node status, clinical tumor stage, tumor differentiation, and PSA value, revealed that management strategy influenced 5-year prostate-cancer-specific mortality only slightly. By contrast, long-term prostate-cancer-specific mortality was strongly influenced by treatment option. In comparison with patients who underwent prostatectomy, significantly increased risks of death from prostate cancer at 10 years were seen in patients who underwent radiotherapy (hazard ratio [HR] 2.3, 95% CI 1.2–4.3; $P < 0.05$), hormone therapy (HR 4.4, 95% CI 2.2–8.8; $P < 0.001$) or watchful waiting (HR 2.0, 95% CI 1.1–3.8; $P < 0.05$). The long-term cancer-specific survival benefit associated with surgery was even more apparent in those patients younger than 70 years old and in those with poorly differentiated tumors.

Original article Merglen A *et al.* (2007) Short- and long-term mortality with localized prostate cancer. *Arch Intern Med* 167: 1944–1950

The histone demethylase JHDM2A is essential for spermatogenesis in mice

A research group at the Howard Hughes Medical Institute has described a critical role for JHDM2A (JmJC-domain-containing histone demethylase 2A) in spermatogenesis. Okada and colleagues used a loss-of-function mouse model to characterize the expression patterns and protein interactions of JHDM2A.

The group found that mice lacking the functional *Jhdm2a* gene were infertile and had smaller testes and lower sperm counts than normal mice. The sperm found in the epididymis of mutant mice all had abnormal head shape and nuclear structure, and 98.5%

of sperm were immotile. Mice possessing the mutant *Jhdm2a* gene were also found to show deficient chromatin condensation, an essential stage of sperm maturation; the expression of TNP1 (transition nuclear protein 1) and PRM1 (protamine 1), which have been shown to be required for chromatin condensation, was decreased in *Jhdm2a*-mutant mice. Chromatin immunoprecipitation analysis showed that JHDM2A was specifically recruited to the *Tnp1* and *Prm1* gene regions, suggesting a vital role for JHDM2A in the transcription of these two post-meiotic proteins.

The authors conclude that JHDM2A is essential for viable spermatogenesis in mice, and suggest that the *Jhdm2a* gene might be important with respect to human infertility syndromes such as azoospermia and globozoospermia.

Original article Okada Y *et al.* (2007) Histone demethylase JHDM2A is critical for *Tnp1* and *Prm1* transcription and spermatogenesis. *Nature* 450: 119–123

Hemastix[®] is a useful diagnostic tool for urinary schistosomiasis control programs

Urinary schistosomiasis is particularly prevalent among schoolchildren in sub-Saharan Africa. The infection is a common cause of hematuria, and disease sequelae include bladder damage and kidney dysfunction. Rapid and accurate diagnoses are crucial to measure the effectiveness of control programs for this infection. French *et al.*, therefore, evaluated Hemastix[®] (Bayer, Elkart, IN)—diagnostic reagent strips that detect microhematuria—during a 3-year period of a control program aimed at schoolchildren on Zanzibar, Tanzania.

A subset of schoolchildren among the 135,000 who were administered praziquantel for schistosomiasis and albendazole for soil-transmitted helminthiasis were surveyed at treatment baseline in 2004 ($n = 2,002$), and at annual follow-up with re-treatment in 2005 ($n = 3,278$) and in 2006 ($n = 3,993$). The urine samples of the children surveyed were graded for microhematuria by use of Hemastix[®], and parasite burden was assessed microscopically by the egg-count method.

Hemastix[®] scored highly for sensitivity, specificity, positive predictive value and negative predictive value for the whole 3-year