Lui and co-workers inhibited the activity of HER2 (erbB-2) in androgen-responsive LNCaP cells *in vitro* by two methods: delivery and intracellular expression of an artificial antibody to HER2 using a modified retrovirus; and treatment with the dual epidermal growth factor/HER2 tyrosine kinase inhibitor lapatinib (GW572016), currently in advanced clinical trials for HER2-driven breast cancer. In both cases, inhibition of HER2 activity led to inhibition of HER2 tyrosine kinase signaling and impairment of androgen-receptor mediated functions, such as proliferation, and expression of PSA.

The authors found that inhibition of HER2 strongly inhibits proliferation of prostate cancer cells and impairs the function of the androgen receptor, by disrupting binding of the androgen-receptor protein to regulatory sequences in critical genes—those regulated by androgens such as testosterone. This implies that optimal androgen-receptor functioning is dependent on continued HER2 signaling, and offers a potential therapeutic strategy for disrupting progression of prostate cancer.

Clinical trials of lapatinib in advanced prostate cancer are planned to start within several months; the authors envision its role as part of combination therapy with other targeted agents to prolong survival.

Original article Liu *et al.* (2005) Inhibition of HER-2/neu kinase impairs androgen receptor recruitment to the androgen responsive enhancer. *Cancer Res.* **65:** 3404–3409

Diagnosis of azoospermia: effects of semen processing

The diagnosis of azoospermia is dependent on the manner in which the semen specimen is processed; severely oligospermic samples may appear to be azoospermic if the rare spermatozoa are not adequately concentrated. Corea and colleagues have carried out a two-part study of the centrifugal force needed to pellet sperm.

In the first part of the study, 25 semen samples were obtained from men who had undergone vasectomy. These samples were judged to be azoospermic following standard microscopic examination. After centrifugation at 600 × *g* for 10 minutes, none of the resulting pellets contained visible sperm. When the supernatants were further centrifuged at 1,000 × *g* for 15 minutes, however, sperm were observed in 3(12%) of the new pellets. A third round of centrifugation—at 3,000 × *g* for 15 minutes—failed to identify any new oligospermic samples.

In part two of the study, semen samples from 25 nonazoospermic men were divided into three aliquots and centrifuged for 15 minutes at 500, 1,000 or 3,000 × *g.* Microscopic examination showed that motile sperm remained in all of the resulting supernatants, except for two of those that had been centrifuged at 3,000 × *g.* Thus, it was not generally feasible to separate all sperm from the seminal plasma using a standard clinical centrifuge.

In conclusion, the study showed that sperm may remain in the supernatant even after centrifugation above 1,000 × *g.* To distinguish between azoospermic and oligospermic samples, the authors recommend centrifugation at a minimum of 1,000 × *g* for 15 minutes.

Original article Corea M *et al.* (2005) The diagnosis of azoospermia depends on the force of centrifugation. *Fertil Steril* **83:** 920–922

Intravesical immunotherapy: adverse effects on spermatogenesis

Intravesical chemotherapy or immunotherapy are common adjuvants to transurethral tumor resection in the treatment of transitional-cell carcinoma of the bladder. It is not known, however, whether these intravesical agents affect sperm quality. Raviv and colleagues have investigated this in their recent, prospective study.

Twelve male patients aged <40 years were included in the study. All had superficial transitional-cell carcinoma and received adjuvant intravesical therapy with *Bacillus* Calmette-Guérin (BCG; $n = 6$) or mitomycin C ($n = 6$). Sperm parameters were analyzed before and 3 months after intravesical treatment.

Except for one patient who had undergone multiple transurethral tumor resections, all patients had normal-volume ejaculate after intravesical treatment, and those treated with mitomycin C showed no significant changes in sperm quality. Three of those who underwent BCG treatment, however, showed striking changes in all sperm quality parameters: sperm