natureOUTLOOK

PROSTATE CANCER

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Live long enough, and most men will develop prostate cancer. Globally, it is the second most common cancer in men, and in some places it takes the top spot (page S118).

As the prime reproductive years fade, the gland typically begins to misbehave. The first sign that men often experience is inflammation — a condition that is sometimes, but not always, a precursor to cancer. The interplay between inflammation and cancer remains an area of intense research (page S130).

Prostate-cancer screening has provoked contentious debate (page S120). Blood tests for prostate-specific antigen (PSA) have led to the discovery of cancers at earlier and more treatable stages. But they have also revealed many tumours that could safely be left untreated. Researchers are looking beyond PSA to other biomarkers that could be used to tell more reliably which cancers need treatment (page S124). Often, the best therapeutic option is just to be vigilant — ‘active surveillance’ is now the norm (page S126). When a trip to the operating theatre is unavoidable, robotics is making prostate surgery less likely to cause adverse effects (page S132).

Hopes for a vaccine have dimmed (page S134). The only approved immunotherapy for prostate cancer — sipuleucel-T — adds mere months to survival time and is expensive.

Researchers are focusing on combinations of therapies, such as a checkpoint therapy administered together with a drug that targets tumour hypoxia. Because prostate tumours are most dangerous once they escape the gland itself, intense efforts are targeting metastatic cancers that have become resistant to standard treatments (page S128).

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Herb Brody
Supplements Editor

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