Cost-Effectiveness of Androgen Suppression Therapies in Advanced Prostate Cancer

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Introduction
Androgen ablation therapy provides effective palliation for patients with advanced prostate carcinoma. Androgen ablation may be achieved surgically (with bilateral orchiectomy) or pharmacologically, usually with the lutetinizing hormone-releasing hormone (LHRH) agonists. Some studies have demonstrated that survival does not differ between patients treated with LHRH agonists and those treated with orchiectomy or diethylstilbestrol (DES) (Ann Intern Med 2000 Apr 4; 132(7): 566-77). However, the side effects and costs of each therapy differ substantially. In this study, the researchers evaluated the cost-effectiveness of androgen suppression in the form of orchiectomy, medication monotherapy, and combined androgen blockade.

Method
The researchers used a hypothetical man 65 years of age with clinically evident, locally recurrent prostate cancer as their base case. Over a 20-year time horizon they looked at survival, quality-adjusted life years (QALYs) lifetime costs and incremental cost-effectiveness ratios.

Results
- Orchiectomy, with a cost of $7000, had 5.1 QALYs, which resulted in lower costs and higher QALYs than other modalities.
- Androgen suppression therapies were the most cost-effective when patients started treatment early after they became symptomatic from metastatic prostate cancer.

Discussion
In this study, for men with advanced prostate cancer, orchiectomy appeared to be the most cost-effective method of suppressing androgen compared with other androgen modalities, which had fewer health benefits and higher costs. From a patient's perspective, there are usually minimal differences in terms of cost between the available choices and the choice between orchiectomy and LHRH agonists is driven by the value of organ preservation and perhaps side effects.

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