



**Title:** Brachytherapy for prostate cancer

**Agency:** CAHTA, Catalan Agency for Health Technology Assessment and Research

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**Reference:** CAHTA HTA report November 2000, Pages: 47, References: 51. Available only in Spanish at [www.aatm.es/cas/informes/i.html](http://www.aatm.es/cas/informes/i.html) (Report carried out on request of the Spanish Ministry of Health and Consumer Affairs under an agreement signed between the Instituto de Salud Carlos III and the CAHTA)

## **Aim:**

To overview brachytherapy as applied to localized prostate cancer (PC) and to analyze the scientific evidence related to the efficacy, effectiveness, and clinical safety of this health technology. Another aim was to study the clinical practice of brachytherapy in Spain and related economic, organizational, and regulative issues.

## **Results and Conclusions:**

The state of scientific knowledge about this therapy (efficacy, effectiveness, and clinical safety) is difficult to assess.

The literature search revealed no randomized, controlled clinical trials. The numerous studies performed in assessing the technique are limited to observational studies, most of which are retrospective, plus a few clinical series with non-equivalent comparison groups (without randomized grouping). Moreover, they vary widely in patient recruitment criteria (age, comorbidities, socio-economic class), tumor characteristics (staging, Gleason, PSA), implantation of different seeds and use of techniques, combination of treatments, followup time, and definitions concerning the progression of disease.

The intermediate short-term results of brachytherapy (biochemical control levels and disease-free survival) for patients selected with a low risk of extraprostatic progression seem to be comparable to those of other therapeutic options, eg, prostatectomy and external radiotherapy.

No long-term data are available, despite the fact that results from a sample (n=77) followed up for 12 years were recently published, showing the same rate of disease-free survival as was observed after 10 years of followup (66%). Among the complications secondary to brachytherapy described are prostatitis and acute urethritis, with greater frequency than after surgery. A smaller share of impotence and urinary incontinence were also found.

Brachytherapy seems to be indicated for patients with a low risk of extracapsular extension (stages T1, T2a; clearly differentiated and with low pretreatment rates of AST) with patients presenting prior irradiation of the pelvis, severe urethral obstruction, and transurethral prostatic resection excluded.

There is uncertainty as regards localized PC. Despite the evidence showing that this type of tumor tends to have a slow progression, it is unclear whether the type of treatment will or will not help all men with PC to live longer. On the other hand, it must be remembered that treatment can affect a patient's quality of life. Thus, random-design clinical trials are needed with prolonged followup to confirm the efficacy and safety of brachytherapy, assess patient quality of life, and define the role of this technique in the treatment of PC. In view of the lack of a therapeutic alternative that is clearly better than the rest, and due to the major side effects of some therapeutic options, it is becoming increasingly more necessary to consider the values and the preferences of patients when approaching this clinical condition.

## **Methods:**

Qualitative systematic review of scientific evidence and external peer review process.

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