Title	Proton Beam Therapy for Cancer
Agency	VATAP, VA Technology Assessment Program
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Reference	VA Technology Assessment Program Brief Overview, April, 2010.
	www4.va.gov/VATAP/docs/protontherapycancerupdate2010.pdf

Aim

To identify those cancer diagnoses for which proton therapy has been shown by rigorous research to be effective.

Conclusions and results

We examined and annotated 13 systematic reviews. At present, no studies have shown proton therapy to be unequivocally effective, or more effective, than its alternatives.

Recommendations

No recommendations regarding the use of proton beam therapy for cancer can be made at this time.

Methods

We searched MEDLINE, the databases of the INAHTA, and the Cochrane Library for systematic reviews, technology assessments, economic evaluations, and horizon scanning reports, for research in adult human subjects, printed in English between 1990 to April 2010. The terms "proton beam" and "proton therapy" were used, crossed with cancer.

Further research/reviews required

One Phase III randomized controlled trial, to be completed in February 2012, is investigating proton therapy versus other radiation for intermediate-risk prostate cancer. Future studies are needed to determine the effectiveness of proton beam therapy for cancer. In particular, decisions need to be made about which malignancies are amenable to and should require randomized trials, and which malignancies are sufficiently rare or difficult to treat by other means. Future studies should also consider the cost effectiveness of proton beam therapy.