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Evaluation of Health Economics in Radiation Oncology: A Systematic Review

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Summary

Despite the increasing popularity of economic evaluations of radiation oncology, there is a lack of reports examining the quality of these studies. Through a systematic review of cost-utility and cost-effectiveness analyses involving radiation therapy, we found improvement in the reporting of key metrics with time, but overall reporting rates remain suboptimal. Although methodological approaches in this

Purpose: Despite the rising costs in radiation oncology, the impact of health economics research on radiation therapy practice analysis patterns is unclear. We performed a systematic review of cost-effectiveness analyses (CEAs) and cost-utility analyses (CUAs) to identify trends in reporting quality in the radiation oncology literature over time.

Methods and Materials: A systematic review of radiation oncology economic evaluations up to 2014 was performed, using MEDLINE and EMBASE databases. The Consolidated Health Economic Evaluation Reporting Standards guideline informed data abstraction variables including study demographics, economic parameters, and methodological details. Tufts Medical Center CEA registry quality scores provided a basis for qualitative assessment of included studies. Studies were stratified by 3 time periods (1995-2004, 2005-2009, and 2010-2014). The Cochran-Armitage trend test and linear trend test were used to identify trends over time.

Results: In total, 102 articles were selected for final review. Most studies were in the context of a model (61%) or clinical trial (28%). Many studies lacked a conflict of interest (COI) statement (67%), a sponsorship statement (48%), a reported study time horizon (35%), and the use of discounting (29%). There was a significant increase over

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