

**RECENT MODALITIES IN MANAGEMENT OF  
SQUAMOUS CELL CARCINOMA OF HEAD AND NECK  
BY EXTERNAL BEAM RADIATION**

*ASSAY*

Submitted for fulfillment  
Of the MS degree in clinical oncology

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## SUMMARY

IMRT techniques can yield very intricate dose distributions deemed “superior” to those obtained with conformal RT. Clearly, this capability will prove beneficial for certain clinical problems. However, just like every new development, IMRT is not without several major potential disadvantages. There is a true need to evaluate prospectively both the advantages and disadvantages of IMRT compared with those of other forms of conformal therapy.

Although undoubtedly a valuable tool, it remains to be seen whether these arbitrarily “improved” dose distributions on paper translate into meaningful improvements in the outcome of patients.

All series suffer from relatively short follow-up periods. These factors prevent meaningful direct comparisons of tumor control rates with similar series of standard RT. However the data accumulated so far tend to indicate that this new technique increases the therapeutic ratio by decreasing treatment morbidity such as xerostomia and by increasing local control. Whether all patients with head and neck tumors will benefit from IMRT is still unknown.

The promising results of IMRT can, however, be achieved only when all treatment conditions are met, for example, optimal selection and delineation of the target volumes and organs at risk, appropriate physical quality control of the irradiation.

IMRT is considered a new, sophisticated, valuable tool whose exact value remains to be quantitatively established. It presents new therapeutic options and new challenges. We need to assess, thoroughly and without bias, both its advantages and disadvantages against those of the technology that it intends to substitute. Until then, IMRT should not be considered the new standard in RT but only a new, potentially valuable tool needing confirmation.