



APPLICATION OF DYNAMIC ARC THERAPY TECHNIQUE FOR TREATMENT OF HEAD AND NECK TUMORS

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List of Abbreviations

3D-CRT: Three-dimensional conformal radiation therapy.

CT: Computed tomography.

CTV: Clinical target volume.

DD: Dose difference.

DI: Dose inhomogeneity.

DTA: Distance to agreement.

DVH: Dose volume histogram.

EDR: Extended dose range.

EWf: Extend whole field.

GTV: Gross target volume.

HB-IMRT: Half beam intensity-modulation radiation therapy.

HT: Helical tomotherapy.

FP-IMRT: Forward planning intensity-modulation radiation therapy.

IMRT: Intensity-modulation radiation therapy.

IP-IMRT: Inverse planning intensity-modulation radiation therapy.

MLC: Multileaf collimator

OAR: Organs at risk.

PRV: Planning risk volumes.

PTV: Planning target volume.

PTV1: Sites of gross disease (primary tumor).

PTV2: Site of microscopic disease (upper and lower neck).

SF: Split Field

VBV: Virtual brain stem volume.

VMAT: Volumetric modulated arc therapy.

VMAT-S: Volumetric modulated arc therapy with smart arc.

WB-IMRT: Whole beam intensity-modulation radiation therapy.

W-DAT: Wedged dynamic arcs therapy.

List of Symbols

D_{\max} : Maximum dose to any volume.

D_{mean} : Mean dose to any volume.

D_{median} : Median dose to any volume.

D_{\min} : Minimum dose to any volume.

D_{modal} : Modal dose to any volume.

$DV\%$: Dose that covers Vx % of any volume, as obtained from the mean dose volume histograms.

$VD\%$: Volume that is covered by Dx % of the prescribed dose (78 Gy), as obtained from the mean dose volume histograms.

$V_{D\max}$: Volume that is covered by the maximum dose.

$V_{D\min}$: Volume that is covered by the minimum dose.

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