

VRIJE UNIVERSITEIT

**Volumetric modulated arc therapy for stereotactic body radiotherapy:
Planning considerations, delivery accuracy and efficiency**

ACADEMISCH PROEFSCHRIFT

ter verkrijging van de graad Doctor aan
de Vrije Universiteit Amsterdam,
op gezag van de rector magnificus
prof.dr. L.M. Bouter,
in het openbaar te verdedigen
ten overstaan van de promotiecommissie
van de Faculteit der Geneeskunde
op woensdag 19 september 2012 om 11.45 uur
in de aula van de universiteit,
De Boelelaan 1105

door

Chin Loon Ong

geboren te Maleisië

promotoren: prof.dr. S. Senan
prof.dr. B.J. Slotman
copromotor: dr. W.F.A.R. Verbakel

Evaluation of volumetric modulated arc therapy for cranial radiosurgery using multiple noncoplanar arcs. *Med Phys.* 2011;38:5863-75. Article PubMed Google Scholar. 9. Hong LX, Gard M, Lasala P, Kim M, Mah D, Chen CC, et al. Experience of micromultileaf collimator linear accelerator based single fraction stereotactic radiosurgery: Tumors dose inhomogeneity, conformity, and dose fall off. Chen F, Rao M, Ye JS, Shepard DM, Cao D. Impact of leaf motion constraints on IMAT plan quality, deliver accuracy, and efficiency. *Med Phys.* 2011;38:6106-18. Article PubMed Google Scholar. Download references. Acknowledgements. Not applicable. Treatment Simulation, Planning and Delivery for Stereotactic Body Radiation Therapy Yong Yang, Ph.D. Department of Radiation Oncology Stanford University 2015 AAPM Therapy Educational Course Acknowledgement Stanford Radiation Physics. Lei Xing, Ph.D. Ruijiang Li, Ph.D. Ben Fahimian. 4D imaging is required for accurate motion management. New techniques (Inverse planning, IMRT/VMAT, Gating/Tracking) can improve target conformity and critical structure sparing.