

ESTRO MOBILITY GRANT (TTG) REPORT

**Title of the report: Volume Modulated Arc Therapy in Head and Neck
Cancers**

HOST INSTITUTE:

Beatson West of Scotland Cancer Centre (BWoSCC), Glasgow, U.K

DATE OF VISIT:

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Details of the scientific content of the Visit:-Head and neck cancers are the commonest cancers in India and majority of the patients require Radiotherapy as a part of their treatment either as Postoperative or Radical. However, unlike other sites, treatment in Head Neck Cancers is very complex and diverse. IMRT is the standard protocol for treating these patients in our Institution. In the Beatson, they have progressed from IMRT to VMAT in all patients since the last 7 to 8 Years. Since we are recently implementing VMAT in our patients, it was good to have a look at their work protocol and treatment policies.

The first day I was received by Dr. Derek Grose, MBChB, MRCP, FRCR, MD, Senior Consultant, Clinical Oncology who took me to the Multidisciplinary Clinic on Head and Neck Cancers. Later he introduced me with other Consultants as per my time table and ensured that I would be making the best of my time there.

The Beatson Oncology Centre has 12 Linear accelerators and VMAT is now the established routine treatment for all radical head neck, brain and prostate tumors. Each machine on an average treats 40 patients per day which totals to 500 patients per day in all machines.

The advantages of using VMAT over IMRT are: variable dose rate, variable gantry speed, volumetric treatment in 360 degree arc rotation, treatment delivery as less as 2mins (4 times faster than IMRT), lesser intrafraction motion, higher precision, improved conformality, minimum dose to surrounding tissues and finally better comfort to the patient. This implies that almost double the number of patients can be treated using VMAT as compared to IMRT in a given period of time.

Thus VMAT treats a larger number of patients as compared to IMRT with the same conformality and quality assurance. Given the increasing patient load in our Institution, VMAT would therefore offer an advantage of treating more number of patients in lesser time.

Dr Derek Grose also showed me some of the contours which were very precise and strictly adherent to recommended guidelines. Every Thursday in the Beatson, the Head Neck Oncologists conduct a Peer Review where all the contours are presented before final approval for plan.

The consultants in the Beatson are site specific, much focussed, professional and at the same time happy to share. Right from the multidisciplinary clinics to the peer reviews and the follow up by specialist nurses, the work flow was organised. Besides, the consultants were involved in multiple research works and clinical trials. I also spent some time in between schedule with the Gynaecology and Breast Units. Overall, it was a wonderful time to spend with all the experts!

Results from the studies:-

After returning, I presented my experience in our Staff Seminar and have applied to our Institution Ethics Committee to enrol and treat patients with Head Neck Cancers using VMAT

