

**The experiences of two ESTRO Mobility Grant Awardees**

**High precision radiotherapy in primary and metastatic lung tumours**

**Vikas Kothavade**

HOST INSTITUTE:

Centre: VU university medical centre, Amsterdam, The Netherlands

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VIKAS KOTHAVADE

VU university medical centre (VUmc) in Amsterdam treats more than 300 patients a year with high-precision radiotherapy techniques such as stereotactic body radiotherapy (SBRT). This visit to the centre was essential to setting up the standard protocol in my centre in Jupiter Hospital, Pune, India, which has just initiated an SBRT programme.

As part of my visit, I learned to conduct SBRT at extra-cranial sites, including immobilisation procedures, CT simulations, delineation of targets, plan evaluations, treatment set-up and image verification during treatment. I was able to discuss with VUmc clinicians issues around the indications for SBRT, plan evaluations, toxicity, follow-up schedules and imaging protocols. These discussions will help to increase and improve the use of SBRT in my clinical practice. We also discussed alternatives to 4D-CT, such as slow CT scans, scans in the extreme phase of breathing (end inspiration, end expiration), free breathing, use of 4D cone beam CT and fluoroscopy for internal target volume generation. I learned about using gating in mediastinal and abdominal tumours other than breast and lung.

We assume SBRT requires rigid immobilisation, but VUmc’s approach is to use relaxed,

comfortable immobilisation, with most patients treated using a wing board with knee support. Faster treatment delivery, use of intrafraction cone beam CT, and faster IGRT correction help to minimise errors.

I observed utilisation of MRdian for MR-guided adaptive radiotherapy using online contouring, and re-planning considering daily anatomy.

VUmc has incorporated patient workflow within the Eclipse planning system, which means that the department is paperless and ensures easy communication among physicians, planners, physicists and technologists. Treatment site-specific protocols with planning objectives are also incorporated within the Eclipse system, helping staff to start and then evaluate the plan easily. In head and neck cancers, automated plans are generated using a planning database with 100 patients.

Along with a physicist, I spent time planning using MRdian, Eclipse, and iPlan by Brainlab. This helped me to understand differences in the planning processes, and will help me to produce better planning protocols at my centre. ▼

Each day started with a morning report, in which all new patients are discussed before starting their treatment, which gives excellent exposure to a wide range of diagnosis and radiation plans. I attended the weekly lung tumour board meeting to understand the treatment algorithm and approach to each case.

This visit definitely improved my understanding of stereotactic radiotherapy in lung and other sites, which will help me to create in-house protocols at my centre.

Finally, I am very grateful to the ESTRO committee for giving me this opportunity and Professor Suresh Senan, and all the VUmc team for their support and hospitality.

*Vikas Kothavade*  
*Consultant radiation oncology*  
*Jupiter Hospital, Baner, Pune 411045, India*  
[\*vikas.kothavade@gmail.com\*](mailto:vikas.kothavade@gmail.com)



## PHYSICS ASSEMBLY

**Monday 29 April**  
**13:30-14:30 | Room Brown 1**

**ESTRO 38, Milan**