

# Patient Fact Sheet

## Magnetic Resonance guided Radiation Therapy (MRgRT)

We know that going through cancer treatment can be overwhelming, so we developed this Fact Sheet to help you better understand Magnetic Resonance Radiation Therapy (MRgRT), also known as MR-Linac treatment. If you have any questions after reading this Fact Sheet or would like to discuss the information provided, please talk to your healthcare provider.



### What is MRgRT?

MRgRT is a new and innovative treatment option that allows doctors to watch your tumor as they treat it. The therapy provides real-time visualization of tumors that allows treatment to be adapted to you. Effective, targeted radiation therapy can mean reduced side effects and fewer treatment sessions.<sup>1,2,3</sup>

### How does MRgRT work?

The technology allows your doctor to see your tumor and surrounding organs, targeting your cancer more effectively.<sup>1,2</sup> Your tumor's size, shape and location change throughout treatment. MRgRT allows doctors to react to the way your tumor is responding to therapy.

### What cancer types can be treated with the therapy?

A large range of cancers can be treated with MRgRT — at least 40 different tumor types such as prostate, liver, rectum, lymph nodes and pancreas.

### How can this treatment benefit cancer patients?

There are several benefits to MRgRT. The first is the quality of the imaging that allows doctors to see the tumor more clearly. The second is that the imaging process can continue during treatment and allow your doctor to see how the tumor is moving while they're actually treating it, ensuring a more precise treatment. This therapy also guards your healthy organs from exposure to radiation, which means you may experience fewer side effects compared to other treatment options.<sup>1,2</sup> By delivering a more targeted dose of treatment, this therapy can also result in the need for fewer treatment sessions overall.<sup>3</sup>

### What does it feel like to receive MRgRT treatment?

The experience is similar to an MRI (magnetic resonance imaging) scan, as there's no sensation associated with the radiation. You'll not be able to feel the radiation or magnetic field. The couch is fairly soft, and pads will be put around the arms and legs to make sure you stay comfortable and in position. You'll have earplugs or earphones should you wish to listen to music. The machine can be adapted for whatever position you are in. You'll always be able to communicate with the radiation therapist.

### Where can I go for updates and more information?

Please contact your healthcare provider with any questions/concerns.

Supported by Elekta

<sup>1</sup> Gregoire V, Guckenberger M, Haustermans K, et al. Image-guidance in radiation therapy for better cure of cancer. *Mol Oncol*. 2020. Available at: <https://febs.onlinelibrary.wiley.com/doi/epdf/10.1002/1878-0261.12751>. Last accessed December 2020. <sup>2</sup> Hall WA, Paulson ES, van der Heide UA, et al. The transformation of radiation oncology using real-time magnetic resonance guidance: A review. *Eur J Cancer*. 2019;11(122):42–52. Available at: <https://www.sciencedirect.com/science/article/abs/pii/S0959804919304290>. Last accessed: December 2020. <sup>3</sup> Murray J, Tree AC. Prostate cancer – Advantages and disadvantages of MR-guided RT. *Clin Transl Radiat Oncol*. 2019;18:68–73.