

Secrétariat général

Service de la communication

**Video 2 - Device simulation**  
**ENGLISH VERSION**

**Screen text:**

HUG – Hôpitaux Universitaires de Genève.

Prof. Osman Ratib

Professor and Chair of Department of Medical Imaging and Information Sciences  
University Hospitals of Geneva.

**French from 00:00:07 – 00:00:21**

**Screen text:** Undergoing a PET-MR examination

**00:00:21**

**Prof. Osman Ratib:** This new device, which is the first one in Europe and the second one in the world, was created by Philips Healthcare and it is the first time—two whole body scanners— an MRI scanner and a PET scanner are in a single device. **[00:00:34 – screen text, see below]** Traditionally, these two machines could not co-exist in the same room given that with the MRI creates a magnetic field that interferes and creates artifacts on PET images. **[00:00:47 – screen text, see below]** This device allows you to have two modalities acquire images at practically the same time and with perfect alignment. The fact that we have the two modalities together separated by one bed allows the patient to go from one to another of the scanners acquiring images exactly at the same location. This of course requires the patient to stay still, the bed moves from one scanner to another and then images are superimposed. Advantages for the patient include, a shorter acquisition time, he/she gets two studies done at the same session, avoiding him/her to come in twice for two different studies, MRI and PET. And for the physicians, the images are being acquired at the same location, allowing them to be superimposed and are thus easier to interpret.

Images from both scanners are acquired exactly at the same position of the patient allowing us to superimpose and fuse MRI images— anatomical images showing tissues and organs—together with the PET images that represent metabolic activity of the tissues. This combination allows us to see if there is abnormal metabolism or abnormal function of those tissues as well as detecting abnormal tumors that may have a different metabolic behavior.

**Screen text:**

**00:00:34**

Improved co-registration.

Improved co-registration patient remains in the same scan position with RF coils in place for both the MR and PET.

**00:00:47**

PET

- Exclusive TruFlight. Time of Flight technology
- Consistent performance with patients of all sizes
- Minimized patient dose
- Fast acquisition speed
- Market leading image quality