



Event in radiation therapy in France

**Notified to ASN in
February 2013**



Description

Where?

In a hospital near Paris.

When?

From Feb 2010 to end of Jan 2013.

What?

Event regarding 2 linacs Primus Siemens (but can occur on any Siemens linac) with Beamview EPID (MV mode) .



Origin and consequences

Origin of the event :

during a maintenance for something else, the technician from Siemens **changed the parameters of the film mode** used to check patient positioning to improve image quality (at the demand of the hospital).

Consequence :

the **dose delivered** to the patients with the **imaging mode** was **4 times higher than expected**. 66 patients had an overexposure of more than 5% of the prescribed dose (2 to 3 Gy) due to daily imaging.



Why does it happened?

It has been discovered by the professionals that **the film mode behave as an independent energy**, not related to the treatment mode. It means that even if the calibration of the photon beam during **daily check was correct**, the medical physicists controlled only the treatment beam, **not the imaging beam**.

During this change of parameters, 2 complementary parameters should have been modified. But only one was changed, the other one being hidden in the software, unknown from the technician and changeable only at Siemens facility.

Only Siemens linacs have this mode of functioning (independent imaging and treatment modes).



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the above mentioned information must
be kept internal to ERPAN***