With the advanced radiation oncology technology available at Hotel Dieu de France (HDF) since February 2013, the radiation oncology team underwent a dosimetric study to assess potential benefit of this newest technology on advanced breast cancer patients. The techniques used in the study were Volumetric Modulated Arc Therapy (VMAT), Deep Inspiration Breath Hold (DIBH) gating, Image Guided Radiation Therapy (IGRT), and conventional 3D radiation therapy (3DRT).

Preliminary findings showed that VMAT with DIBH may optimize internal mammary chain and axillary nodes radiation doses. The study concluded that improved nodal coverage provided by VMAT may outweigh long term concerns of low dose heart and left lung toxicities in this high risk category of patients.

An abstract describing the study: **Potential role of Volumetric Modulated Arc Therapy and Deep Inspiration Breath Hold in the locoregional irradiation of left breast cancer.** (F. Azoury, D. Nehme Nasr, N. Khater, J. Barouki, N. Farah, C. Samaha, T. Felfely, E. Nasr), has been accepted for presentation as E-poster by the abstract review committee for ESTRO 33, to be held in Vienna, Austria from 04-08 April 2014.