



**Safwan Halabi, M.D.**  
 Senior Staff Radiologist and  
 Director of Imaging Informatics  
 Henry Ford Health System,  
 Detroit, MI

## Data-mining Philips iSite with Softek Illuminate™ leads to lower CT doses in children

*Dr. Safwan Halabi has been using Softek Illuminate™ since summer 2008. The editors of Enterprise Imaging & Therapeutic Radiology Management asked him to write an article for their March 2009 issue detailing how he used Illuminate's data-mining functionality to instantaneously access all CT scans done on children over a two-year period. His team then evaluated radiation doses and crafted procedures to ensure that the hospital complies with Image Gently protocols. The following article has been modified slightly because magazine guidelines stipulate that products cannot be referenced in published articles.*

### Quick Facts

**2495 Beds across  
6 hospitals**

**Radiologists: 80**

**Technologists: 400**

**HFHS physicians: 1050.**

**Modalities:** CT, MRI, PET  
 CT, Nuclear Medicine,  
 Interventional Radiology,  
 Ultrasound, Bone Density,  
 General Radiology,  
 Mammography, Breast  
 US, Stereotactic Breast  
 Biopsy, Fluoroscopy.

**PACS:** Philips iSite 3.5

**RIS:** IDX – Centricity 10.5

Since its inception in January 2008, the Image Gently campaign of the Alliance for Radiation Safety in Pediatric Imaging has educated healthcare providers on the potential dangers of high radiation doses administered to children and has set protocols for CT use and exposure levels. More than a year earlier, the Department of Radiology at the Henry Ford Health System in Detroit began its own initiative in this area. In 2006, we developed and introduced pediatric CT procedural and protocol changes and last year wanted to evaluate the effectiveness of these changes. Thanks to Softek Illuminate™, a novel search utility built into our Philips iSite PACS, we were able from our own workstations to set the search criteria in about five minutes and instantly retrieve all the studies we needed to evaluate.

We looked specifically at Henry Ford Hospital, which performs about half of the 1 million scans done throughout the network each year. We compared CT scans of the abdomen and pelvis done on patients under the age of 18 in 2005 to those done in 2007, the year before and the year after the CT protocols were changed. We wanted to determine how effective we were in implementing protocols that treated these patients by their size rather than as adults. Henry Ford Hospital is primarily an adult hospital, so our main radiological contact with children is in the ER.

We chose the abdomen and pelvis CT exam because of the concern over potential harm to children when radiating the reproductive organs since they are the most sensitive organs to radiation exposure. A developing