



# Does your quality improvement strategy include **dose management?**

The right strategies and technologies can help reduce variability by accurately measuring patient dose exposure in your radiology departments.

**DoseWatch - The solution with integrated radiation and contrast dose management across all your radiation emitting medical devices.<sup>1,2</sup>**

DoseWatch provides dose monitoring and analytics that support your institution in driving quality care improvements and in delivering accurate imaging examinations for each patient.

#### **Drive Awareness**

Dosewatch helps increase awareness by automatically receiving and storing dosimetric information from any imaging system across your healthcare network.

#### **Optimize Performance**

DoseWatch includes embedded analysis capabilities that help users in identifying opportunities for performance improvements and in tracking change implementation.

#### **Maintain Compliance**

DoseWatch's easy reporting helps health systems maintain compliance.

#### **Quality Improvement & Dose**

A successful radiation dose management program requires enhanced awareness and a comprehensive plan that includes a strong commitment from the people who administer, oversee and execute diagnostic imaging. Decreasing variability and adhering to ALARA (As Low As Reasonably Achievable) principles should be in place, as well as the right technology to help improve the quality of care and compliance with new regulations.

GE Healthcare's Dose Management program is a multi-faceted approach to help you develop, integrate and sustain an effective dose optimization program using analytics, technology, and education.



iodine cumulative History (last 300 days): 86.3g

| All Studies |               |                  |                   |                    |             | Cumulative Dose History                      |               |                     |
|-------------|---------------|------------------|-------------------|--------------------|-------------|--|---------------|---------------------|
| Dose Alerts | Clinical info | Date and Time    | Modality          | Accession #        | Patient ID  | Modality                                     | Past 3 Months | Older Than 3 Months |
|             |               | 2015-07-30 11:48 | CT                | site5AN_391202933  | HVL_5114146 | CT DLP (mCy cm)                              | 3326.07       | 2354.56             |
|             |               | 2014-07-23 14:53 | CT                | site4AN_474819151  | HVL_5114146 | CVIR K <sub>av</sub> (mCy)                   | 9396.86       | 1344.21             |
|             |               | 2015-07-02 09:40 | CVIR              | SITE1AN_1276100502 | HVL_5114146 | CVIR DAP (mCy cm <sup>2</sup> )              | 975066.70     | 114324.90           |
|             |               | 2015-05-25 07:55 | Radio Fluoroscopy | site3AN_1237037644 | HVL_5114146 | Mammography OD (mCy)                         | 0.00          | 10.23               |
|             |               | 2015-05-28 12:38 | Radio Fluoroscopy | site3AN_1237003852 | HVL_5114146 | Radio Fluoroscopy DAP (mCy cm <sup>2</sup> ) | 0.00          | 2442.34             |

## Deliver the Right Dose with DoseWatch

DoseWatch is an enterprise-wide dose management solution designed to automatically collect and analyze patient radiation and iodine<sup>1</sup> exposure across multifacility, multi-modality, and multi-vendor imaging environments. DoseWatch enables health care professionals to monitor the radiation exposure and contrast<sup>1</sup> media injection dose of their patients, evaluate their practices and make improvements so that the right dose is used to provide the best patient outcome.

## Analyze Dose Across Modalities & Vendors

Collect and use data across your imaging enterprise

- Automatically track dose from CT, mammography, cardiovascular interventional, radiography, nuclear medicine,<sup>2</sup> contrast injection, and surgical/mobile c-arms
- Support multiple patient identifier with unified patient dose record
- Integrate with clinical and information systems

## Enhance your Workflow & Change Management Practices

Take immediate steps when processes cause outliers

- Alert notification tools with automatic threshold calculation and patient stratification
- Automated and monthly reports to gain insights into staff and equipment performance
- Automatic CT “geometric” and water-equivalent SSDE metrics developed by AAPM (resp. TG204 and TG220)<sup>3</sup>
- Isocenter shift and mA modulation to identify how the patient was positioned and how dose was administered
- Cardiovascular and interventional incidence mapping



## Contrast Data Management

DoseWatch with Contrast Data Management<sup>1</sup> can automatically capture the specifics of the contrast injection details for each patient to enable the evaluation of the actual volumes and flow rates of contrast that each patient receives. This can help assess and track variability, which could enhance contrast administration optimization and standardization efforts.

- Analyze contrast media utilization based on patient, clinical indication, protocol, device, site and more
- Track and compare dose and contrast between sites, devices, study descriptions and age ranges

CT Study 2015-07-30 11:48

site5AN\_391202933 Accession #    Lumbar Spine Study Description    7.2 Lumbar Spine Protocol    38.37 IRI

DW Demo Vot-SSDE GE CT Class 4 Name    HVL\_5114146292 Patient ID    1336-09-07    F    63

Study Overview    Study Details    SSDE View    Quality Review    Comments    **Injection Details**    Clinical Information

Name: VISIPAQUE Z70    Concentration (mg/mL): 270    Injected Volume (mL): 90.00    L:0.00    Not available    Initial volume of substance in container (mL): Not available

| Series # | Injection / Phase | Type of Injection | Flow rate (mL/s) | Volume (mL) | Duration (s) | Delay (s) | Iodine delivery rate (g/s) | Total iodine delivered (g) | Planned Flow Rate (mL/s) |
|----------|-------------------|-------------------|------------------|-------------|--------------|-----------|----------------------------|----------------------------|--------------------------|
| 201      | 1/1               | CONTRAST          | 4.50             | 90.00       | 20.00        | 0         | 1.22                       | 24.30                      | N/A                      |

## About Dose Management

A comprehensive dose management program requires a combination of a well-designed low dose strategy, low dose devices and technologies, and the collaborative efforts of the entire imaging team, from the referring physician and technologists operating the equipment to the radiologists reading the scan and medical physicists evaluating protocols. GE Healthcare provides an integrated program of evidence-based best practices that help facilities capture, track, report and monitor radiation dose at the patient level, across the enterprise and integrated with current PACS and RIS.

Contact your GE Healthcare representative or visit [www.doseoptimization.gehealthcare.com](http://www.doseoptimization.gehealthcare.com) for more information.

<sup>1</sup> This feature collects contrast data automatically for class-4 injectors integrated with CT scanners or from some DICOM compliant injectors. It is available for manual entry for other modalities connected to DoseWatch with the Contrast Data Management Module.

<sup>2</sup> Tracking for PET, PET/CT for single injection procedures only and single DICOM study

<sup>3</sup> Available for DoseWatch 2.2

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