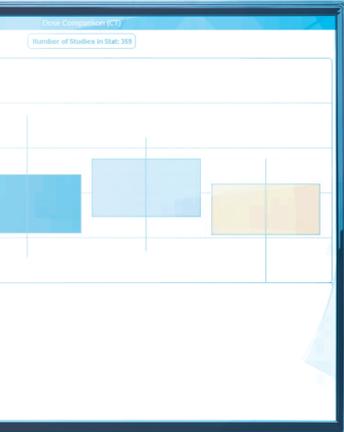




# RDM // Radiation Dose Monitor

Increasing the serenity of healthcare professionals

by ensuring the radiation protection of patients



CT	DX	MG	PT/CT	RF	XA	Alert Level Filter								
		<b>MA****</b>												
Female - 54 years - DoB: 1/1/1962 BMI: 28.73 (85 Kg / 172 cm) Pregnancy Status: Yes														
<b>SCANNER ABDOMINO-PELVEN INJECTE</b> Revolution EVO - CLI*** - DEE** 2/5/2020 8:09:15 PM 6.1 ABD PELV PORTAL (MAR R3 + CHANGER FITCH) Image Quality is not defined XENETIX 350														
Total DLP (mGy.cm) 626.31 P75: 860.12 P50: 607.7 P25: 409.36 Min: 185.91 Max: 4094.71 <b>Warning</b>														
<table border="1"><thead><tr><th>Acq. Number</th><th>K</th></tr></thead><tbody><tr><td>1</td><td>10</td></tr><tr><td>2</td><td>13</td></tr><tr><td>3</td><td>12</td></tr></tbody></table>							Acq. Number	K	1	10	2	13	3	12
Acq. Number	K													
1	10													
2	13													
3	12													
		<b>BO****</b>												
Female - 82 years - DoB: 1/1/1934 BMI: 20.89 (47 Kg / 150 cm) Pregnancy Status: Possibly														
<b>SCANNER THORACO-ABDOMINO-PELVEN INJ NEO</b> Revolution EVO - CLI*** - DEE** 2/5/2020 5:58:27 PM 5.7 TRAP PORTAL (MAR R5 R6 + CHANGER FITCH)														
Total DLP (mGy.cm) 405.93 P75: 997.65 P50: 721.92 P25: 504.7 Min: 0 Max: 2029.69 <b>Very good</b>														
<table border="1"><thead><tr><th>Acq. Number</th><th>K</th></tr></thead><tbody><tr><td>1</td><td>10</td></tr><tr><td>2</td><td>12</td></tr><tr><td>3</td><td>12</td></tr></tbody></table>							Acq. Number	K	1	10	2	12	3	12
Acq. Number	K													
1	10													
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3	12													



# RDM // Radiation Dose Monitor

*At the very core of your department, RDM is an essential tool for reducing dose.*



## What is RDM?

Medsquare's Radiation Dose Monitor (RDM) is a DACS (Dose Archiving and Communication System): a system for **archiving and centrally managing ionizing radiation doses** to which patients are exposed during medical imaging examinations.

## Why RDM?

Medsquare has developed the DACS Radiation Dose Monitor (RDM) to enable healthcare professionals to take the following actions:

- **Strengthen the safety of each patient and encourage dose reduction**
- **Optimize the control and traceability of patient dose data and contrast media data (iodine and radio-pharmaceutics)**
- **Comply with national and international requirements (e.g. Euratom Directive 2013/59)**

## Why is RDM suitable for all healthcare establishments?

- Solution adapted to the needs of each healthcare establishment, imaging department and/or specialty.
- Vendor-neutral solution, **compatible with all types of imaging modalities from all manufacturers** – notably, recovering dose data from medical imaging equipment over 15 years old.
- Customizable solution for all those responsible for the dose cycle: Radiologist, Radiographer, Head of Department, Radiation Safety Officer, and Medical Physicist.
- Ergonomic and easy-to-use solution, allowing users to quickly get to grips with the technology.
- Developed in collaboration with imaging specialists to ensure its optimal performance.

# RDM //

## The benefits

*RDM enables healthcare facilities and professionals to improve the quality of patient care, control the dose, receive timely alerts, easily analyze data, and confidently generate dose reports.*



### Improve the quality of patient care

- Display all information relating to patients on each acquisition of the examination (analysis of each exposure, traceability of cumulative doses, Peak Skin Dose calculation, and Organ Dose calculation).
- Manage high-risk patients specifically (children, pregnant women, patients with oncology follow-up, etc.).
- Alert medical teams immediately at their workstations using the alert pop-up. This feature is specially designed to allow the patient to be taken care of in the case of overexposure.
- Follow the patient throughout his/her pathway: pre-examination (via the Worklist page) and/or post-examination.
- Evaluate knowledge, help in the assessment and implementation of professional practices.
- Define keyword tags by medical indications (e.g. heart disease, oncology, etc.) to be included in the patient's records in order to refine research and statistics.

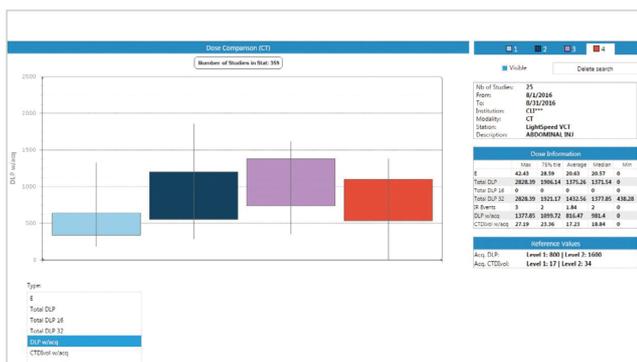
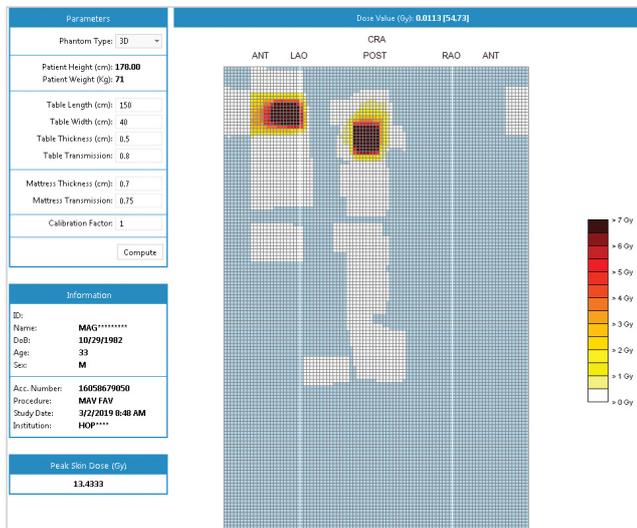
### Facilitate dose data analysis – and create dose reports in 1 click

- Facilitate data analysis by presenting the most problematic procedures and protocols for each of the modalities.
- Create and send dose assessment reports to the national authorities in 1 click.
- Create and automate a customized report: a statistical report (modalities/procedures) and/or a patient report.
- Customize analysis thanks to multi-criteria search.
- Compare dose data on all modalities, procedures, protocols, users.
- Export complete and sorted data from each page as well as dose analysis reports.
- Transfer reports to HIS, RIS, PACS, etc. automatically.
- Access the RDM web interface in real-time via a simple browser.



## Control the dose and stay alerted to patient safety

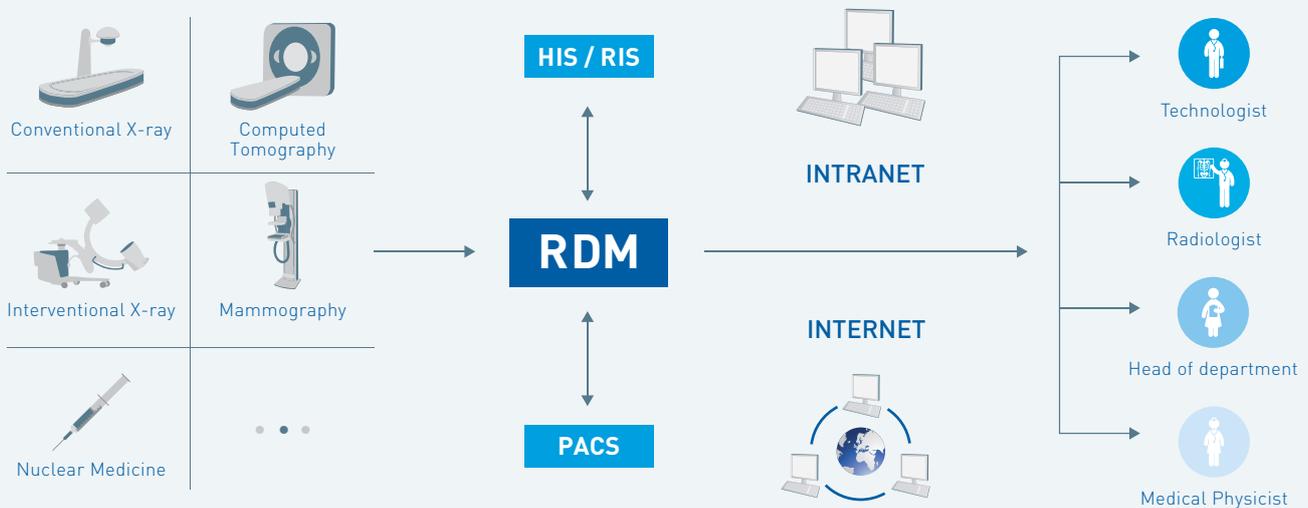
- Monitor examinations and patients in real-time: if the dose thresholds are exceeded, an advanced alert system (e-mail and/or pop-up) based on Diagnostic Reference Levels (DRLs, national and local) alerts you.
- Track all alert monitoring and justifications.
- Track the modality at different levels: quality controls and/or maintenance operations.
- Manage and configure alerts at different precise scales: modalities, procedures, protocols, acquisitions.
- Manage the dose by type of population very finely and effectively according to different alert rules based on age, weight, height, etc.
- Calculate the effective dose in all modalities.
- Calculate the Organ Dose.
- Access instantly to the patient's dose history before the examination (decision-making tool).
- Search by multi-criteria tool: protocol, procedure, patient, equipment, period, user, etc.
- Assess the patient's centering (patient at isocenter) during the examination, reinforcing good professional practices.
- Optimize exposure to ionizing radiation in a department and/or facility, according to the recommendations.
- Calculate the peak skin dose in interventional radiology. Visualize the skin dose evolution during the whole procedure with the aid of a time scale.
- Create complete patient dose records (portfolio), with the ability to attach any file or image to them.
- Re-evaluate the CTDI according to the patient's morphology (SSDE – Size Specific Dose Estimates)
- Create search filters by patient type (women of child-bearing age, child by age group, weight, etc.).



# RDM // Technical characteristics

*RDM collects and analyzes data from different sources, regardless of the manufacturer, interfacing with information systems and integrating perfectly into your imaging network.*

- Advanced technical expertise and Quick deployment
- Customization of integration with customer infrastructure
- Experience in project management at the level of hospital groups and regions
- Expertise in data recovery from previous DACS



## Installation

- On a physical or virtual server

## Modality integration, collection of dose data

- DICOM RDSR (Radiation Dose Structured Report)
- DICOM Dose SC (Secondary Capture)
- DICOM MPPS (Modality Performed Procedure Step)
- DICOM Header
- External dosimeter (RDM Modality Module)
- Manual entry of dose data (RDM Modality Module)

## HIS/RIS connectivity

- Automatic submission of HL7 and DICOM RDSR dose reports (HL-7/RDSR Sender Module)
- Reception of HL7 messages for fusion/update Patient/Study information (IHE HL-7 Integration Module)

- Transmission of the Worklist of the day in DICOM (Worklist Module)
- Advanced integration: REST API and/or web contextual call

## PACS connectivity

- Real-time synchronization with PACS for retrieving dose reports in RDSR, Secondary Capture and DICOM Header format
- Automatic downloading in DICOM Query/Retrieve of the patient's dose history (PACS History Module)
- Automatic sending of dose reports to PACS in RDSR format (HL-7/RDSR Sender Module)
- Advanced integration: REST API and/or web contextual call

## Web 2.0 interface

# Why Medsquare?

Medsquare, a French company founded in 2006, facilitates the work of healthcare professionals by providing them with complete solutions for the analysis and sharing of medical imaging data. Medsquare is committed to enhancing the benefits of RDM by providing users with high-quality service, a key strand of Medsquare's DNA.

- Medsquare is committed to providing solutions adapted to each healthcare institution and to each medical imaging service, implementing all material, human and cooperation resources (training, partnership with healthcare facilities, new hires, etc.) in order to respect its commitments and carry out the project successfully.
- A specialized and expert team in the field of medical imaging (project manager, developer, integrator, application manager and technical manager) supports healthcare professionals throughout the RDM project and intervenes on request.
- Commitment to training: RDM makes it possible to involve all players in medical imaging and, therefore, Medsquare tailors the training according to the user/service profile.
- Commitment to support RDM throughout the life of the healthcare facility: Medsquare offers a regular update of RDM and associated training according to the technological developments of the product, the specific needs of healthcare professionals or facilities, or regulatory developments.
- More and more RDM users all over the world: in January 2020, more than 1500 modalities are connected to RDM, collecting more than 15 million dose reports.



RDM, distributed by Medsquare



RDM, powered by our partner MPTronic

CE Medical Devices 93/42/EEC

Medsquare, 17 rue du Jura, 75013 Paris, FRANCE  
[W](http://www.medsquare.com) [medsquare.com](mailto:contact@medsquare.com) [E](mailto:contact@medsquare.com) [contact@medsquare.com](mailto:contact@medsquare.com) [T](tel:+330155256250) + 33 (0)1 55 25 62 50

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