

doserec

ARCHIVING AND RETRIEVAL DOSIMETRIC DATA

DoseRecis is a system for collecting dosimetric data from radiological examinations, featuring statistical functions in accordance with the requirements of the Ministerial Decree of 3 November 2023.

DoseRec interfaces via DICOM with the radiological examination archives within healthcare facilities (PACS).

Data can be fed into the system automatically, via pre-set forwards from the PACS, or via the Query/Retrieve module when automatic transmission from the PACS is not possible.

The **DoseRec** application is web-based and accessible via a browser using credentials to protect data.

DATA COLLECTION

In order to store dosimetric data in **DoseRec**, diagnostic departments must send the following to the PACS system:

- the SRDose file, certified as compliant, for CT and mammography examinations
- DICOM images with DAP data saved in dose-specific DICOM tags for X-rays and orthopantomograms

Each examination is recorded in the system, collecting crucial data, including:

- Data on the equipment used, including name and model
- Study ID, description and date
- Radiation dose data (for example, average glandular dose per MG, dose-length product for CT, DAP value for X-rays and orthopantomography)
- Patient data, such as gender, date of birth and ORTHOPANTO (optional in the DICOM file)
- Information on the target anatomical region

DATA PROCESSING

The data is processed to extract meaningful information regarding the radiation doses to which patients were exposed during the examinations. The following aspects are considered:

- **Age Classification:** The patient's age is calculated based on their date of birth and the date of the study. It is then classified into age groups (e.g., 'Paediatric', 'Adult').
- **Classification by Side and Anatomical Region:** Mammograms are analysed based on side (e.g., "Left breast", "Right breast"), whilst CT scans, X-rays and orthopantomograms are classified according to anatomical region (e.g., "Chest", "Abdomen").
- **Determination of Subcategories:** Target anatomical regions are categorised into subcategories using the SNOMED system, to ensure that each piece of data is correctly associated with the relevant anatomical part.

CALCULATION OF STATISTICS AND DISPLAY OF RESULTS

Once the data has been filtered, the following statistics are calculated for each combination of gender, age group, side (for MG) or anatomical region (for CT), and machine used.

The results are displayed in an easily understandable format, with the data broken down by categories. Valid data and excluded data are shown separately, with a brief description of the reason for exclusion in cases where a study does not meet the requirements. The data is also presented with aggregated information on the total dose administered during each study.

The processed data is thus ready to be reported to the relevant ministerial portal.



The screenshot displays the DoseRec web application interface. The browser address bar shows the URL `172.30.0.28:8000/home/`. The page title is "Home".

Filters and Controls:

- Periodo da:** 01/03/2023
- Periodo a:** 31/03/2023
- Categoria:** Procedure Mammografiche
- Sottocategoria:** Mammografie digitali
- Stazione:** GE HEALTHCARE Senographe Pristina PRISTINA01
- Profilo analitico scelto per il 2023:** Profilo standard di assistenza
- Mantieni questa ricerca e i filtri durante la navigazione tra le pagine

Analisi Percentuale dei Dati:

- Percentuale di Dati OK Classificati: 90.0%
- Percentuale di Dati OK Non Classificati: 7.0%
- Percentuale di Dati in Attesa: 3.0%

Dati Statistici:

Visualizzazione da 1 a 6 di 6 righe

Sexo	ES	Lateralità	Nome Stazione	N. Studi	Media	Mediana	Q1	Q3	SDM	95th Perc.	Peso medio
F	Antico 16-60	Left	GE HEALTHCARE Senographe Pristina PRISTINA01	128	2.9	2.7	2.3	3.3	3.0	4.6	N/A
F	Antico 16-60	Right	GE HEALTHCARE Senographe Pristina PRISTINA01	128	2.9	2.7	2.3	3.3	3.0	4.6	N/A
F	Antico >60	Left	GE HEALTHCARE Senographe Pristina PRISTINA01	186	2.7	2.5	2.3	2.9	0.6	4.3	N/A
F	Antico >60	Right	GE HEALTHCARE Senographe Pristina PRISTINA01	186	2.7	2.6	2.3	3.0	0.7	4.3	N/A
M	Antico 16-60	Left	GE HEALTHCARE Senographe Pristina PRISTINA01	1	2.3	2.3	2.3	2.3	0.0	2.3	N/A
M	Antico 16-60	Right	GE HEALTHCARE Senographe Pristina PRISTINA01	1	2.4	2.4	2.4	2.4	0.0	2.4	N/A

Dati 5R Includi:

Visualizzazione da 1 a 15 di 315 righe

Data/Ora Studio	Descrizione Studio	Stazione	Accession Number	Sexo	Data di nascita	ES	Sottocategoria	DRG (med)
20230109 08:04:58	ESAME CLINICO STRUMENTALE DELLE MAMMELLE (CONTROLLO)	GE HEALTHCARE Senographe Pristina PRISTINA01	20760011	F	19740906	49	Mammografie digitali	6.8
20230109 08:14:32	ESAME CLINICO STRUMENTALE DELLE MAMMELLE (CONTROLLO)	GE HEALTHCARE Senographe Pristina PRISTINA01	20760011	F	19400512	63	Mammografie digitali	4.7
20230109 08:23:03	ESAME CLINICO STRUMENTALE DELLE MAMMELLE	GE HEALTHCARE Senographe Pristina PRISTINA01	20058211	F	19950313	24	Mammografie digitali	7.7
20230109 08:42:39	ESAME CLINICO STRUMENTALE DELLE MAMMELLE (CONTROLLO)	GE HEALTHCARE Senographe Pristina PRISTINA01	20762211	F	19481212	76	Mammografie digitali	5.1
20230109 09:06:24	ESAME CLINICO STRUMENTALE DELLE MAMMELLE (CONTROLLO)	GE HEALTHCARE Senographe Pristina PRISTINA01	20768611	F	19451025	61	Mammografie digitali	4.5
20230109 09:49:03	ESAME CLINICO STRUMENTALE DELLE MAMMELLE	GE HEALTHCARE Senographe Pristina PRISTINA01	20958911	F	19441300	59	Mammografie digitali	9.1
20230109 09:18:10	ESAME CLINICO STRUMENTALE DELLE MAMMELLE (CONTROLLO)	GE HEALTHCARE Senographe Pristina PRISTINA01	20759711	F	19450603	78	Mammografie digitali	5.3
20230109 10:15:53	Esame clinico e strumentale delle mammelle	GE HEALTHCARE Senographe Pristina PRISTINA01	nan	F	19950318	65	Mammografie digitali	8.7
20230109 09:44:46	ESAME CLINICO STRUMENTALE DELLE MAMMELLE (CONTROLLO)	GE HEALTHCARE Senographe Pristina PRISTINA01	20810111	F	19630220	60	Mammografie digitali	6.3
20230109 09:55:48	ESAME CLINICO STRUMENTALE DELLE MAMMELLE	GE HEALTHCARE Senographe Pristina PRISTINA01	20805711	F	19630128	61	Mammografie digitali	6.9

Footer: Copyright © 2023 G. SQUARED S.p.A. - Via S. Maria 101 - 20122 Milano - Italia. Tutti i diritti sono riservati.