
Aggiornamento in radioprotezione

Parte 3: Esempi pratici



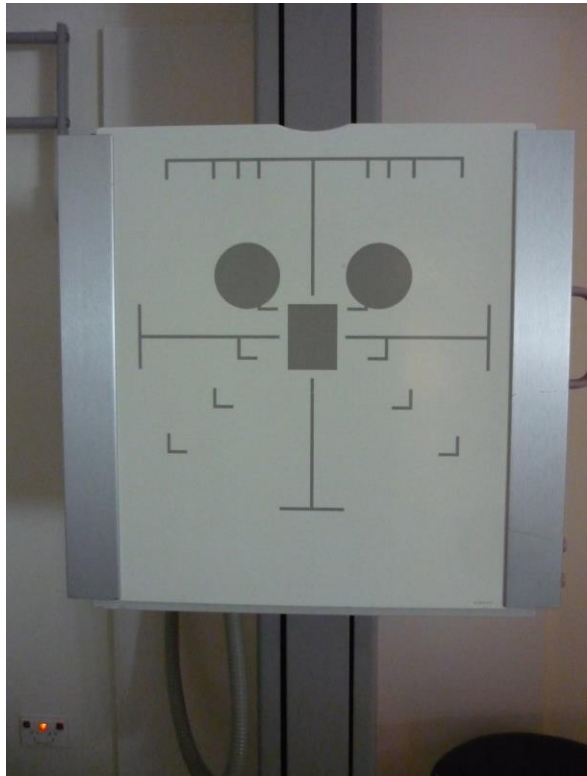
Formazione del 03.10.2024

Sala Aragonite di Manno

Benvenuti!

AEC: Automatic Exposure Control

GLI ESPOSIMETRI AUTOMATICI UTILIZZATI IN RADIODIOLOGIA MISURANO E REGOLANO AUTOMATICAMENTE LA QUANTITÀ DI RADIAZIONE NECESSARIA PER OTTENERE IMMAGINI DI QUALITÀ CLINICA, MINIMIZZANDO L'ESPOSIZIONE DEL PAZIENTE.



PRINCIPI

Selezione delle camere

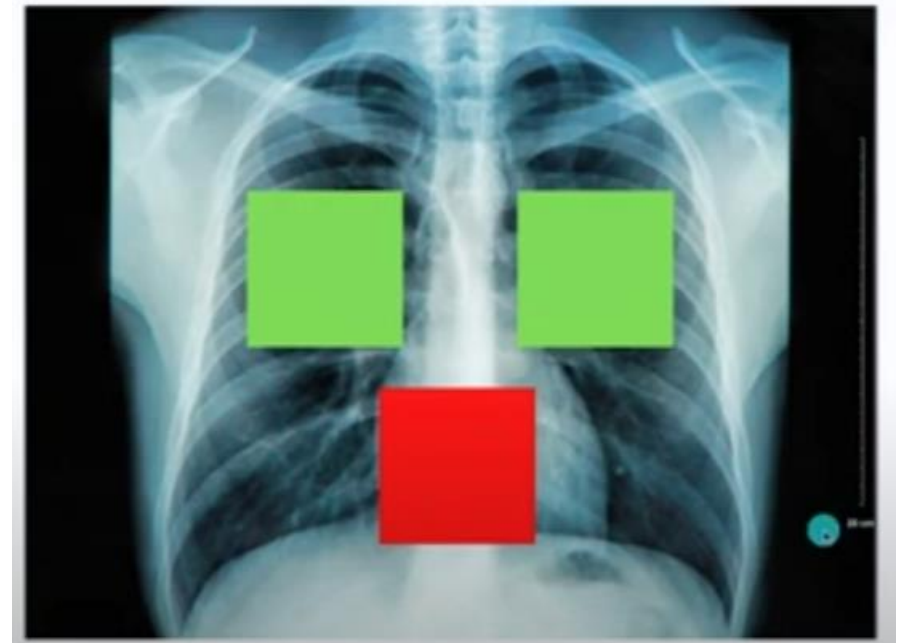
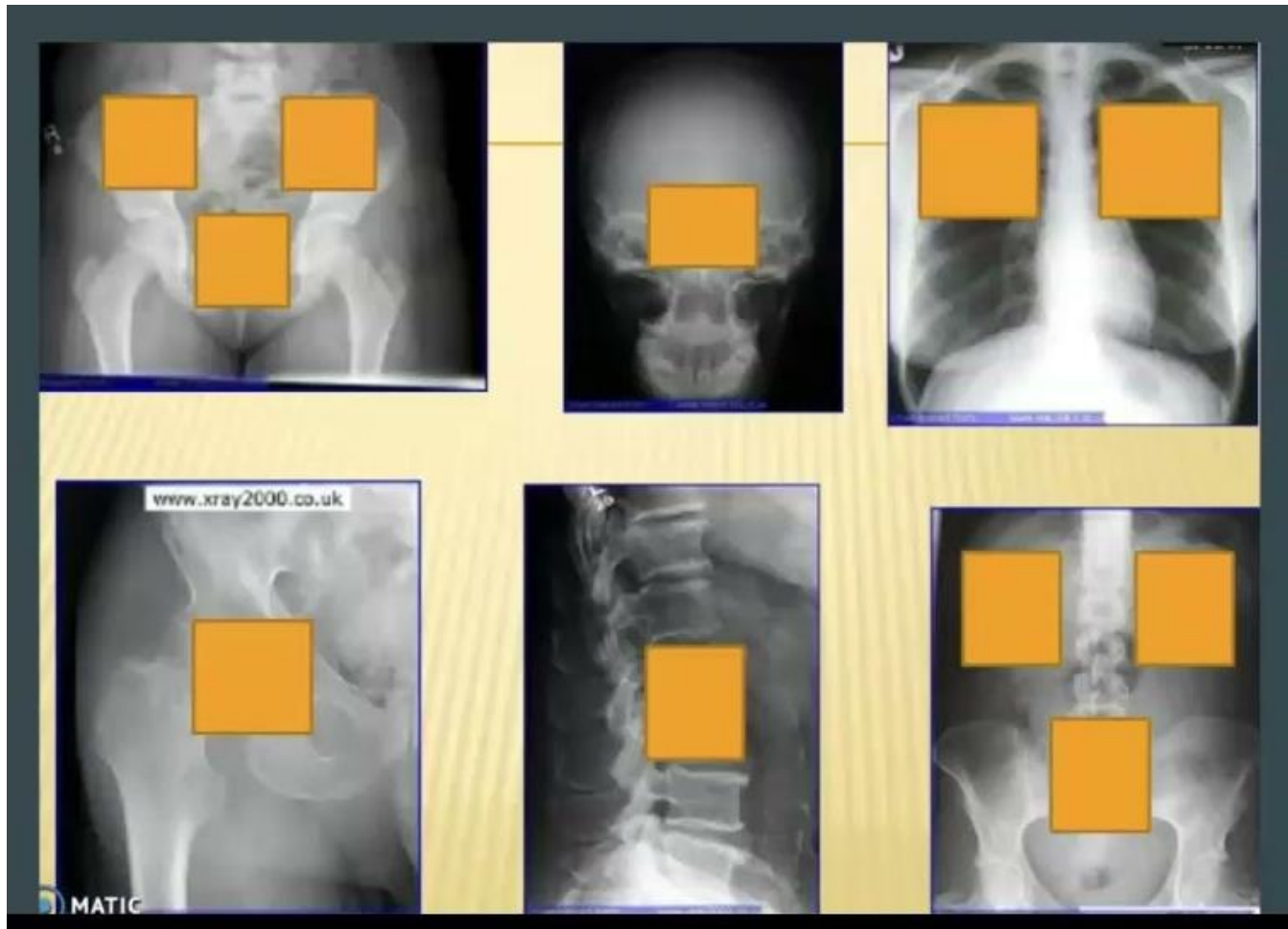
Centrature

Diaframmatura

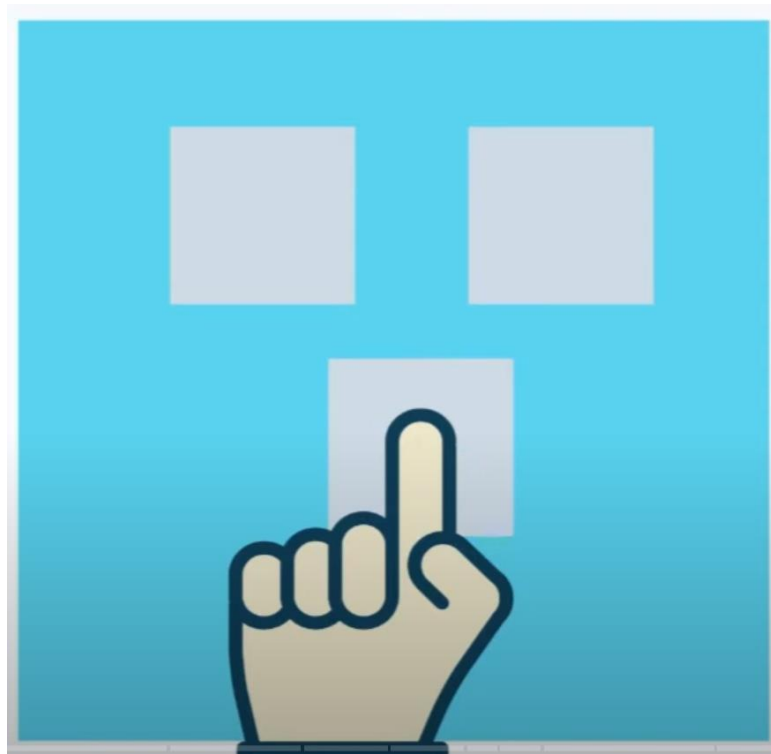
Dimensioni e composizione parte anatomica

Stabilità nel mantenere il posizionamento

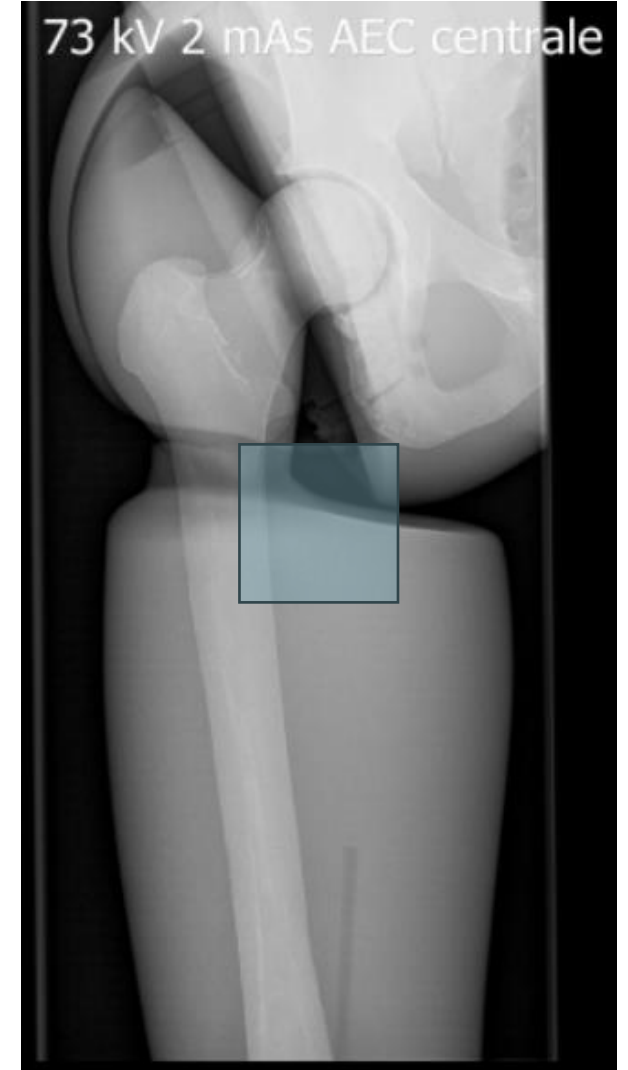
Selezione AEC



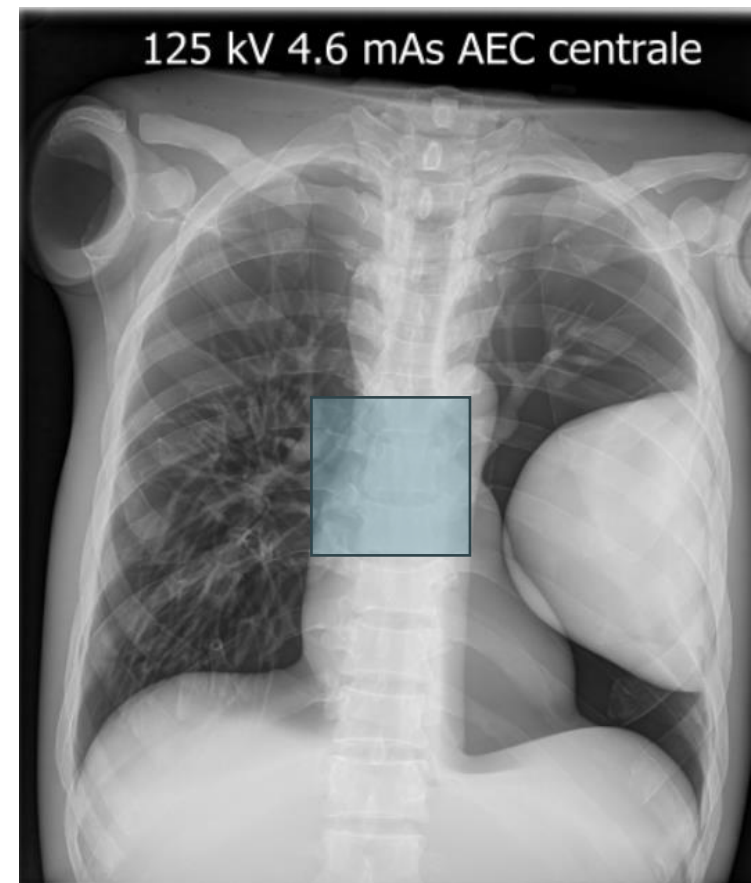
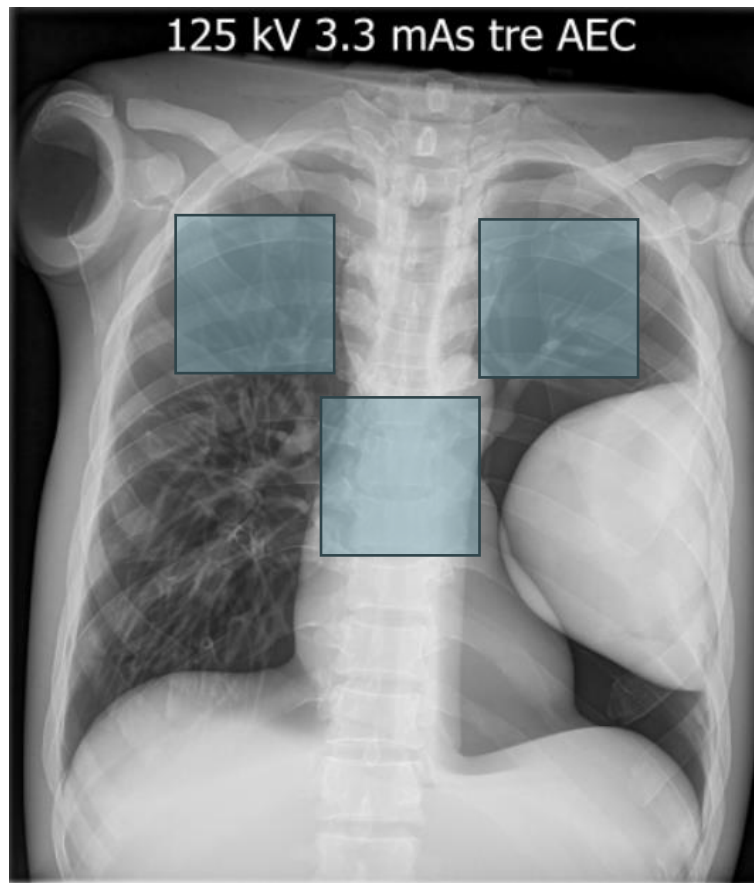
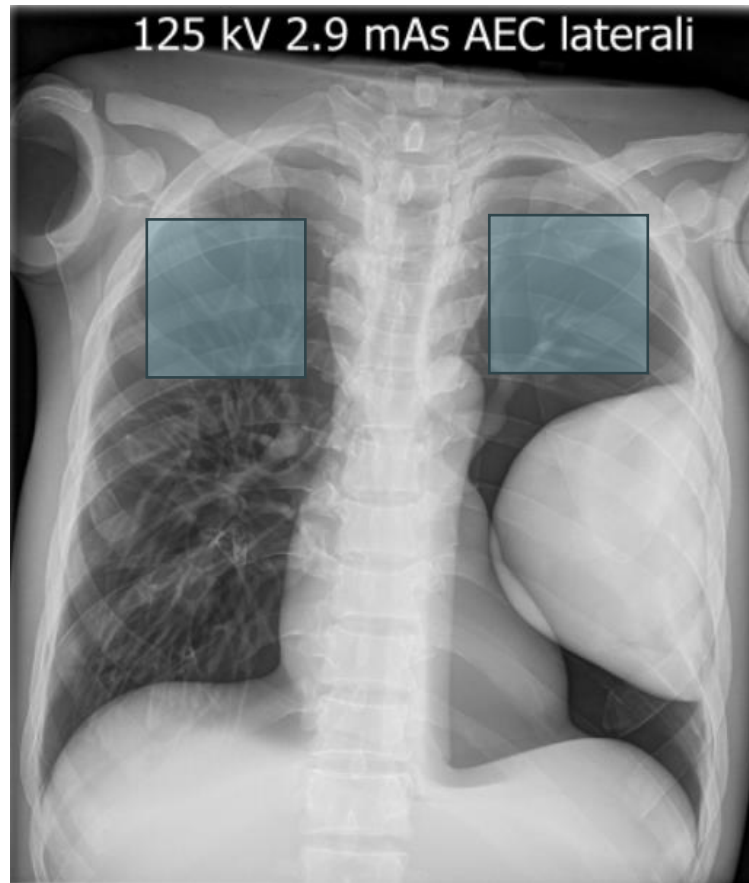
Non utilizzo AEC ❌



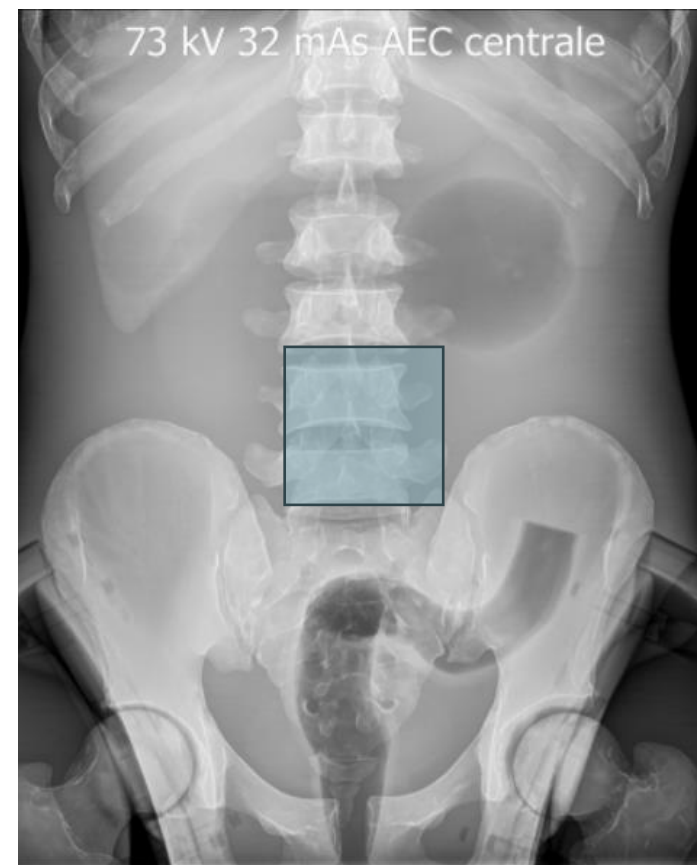
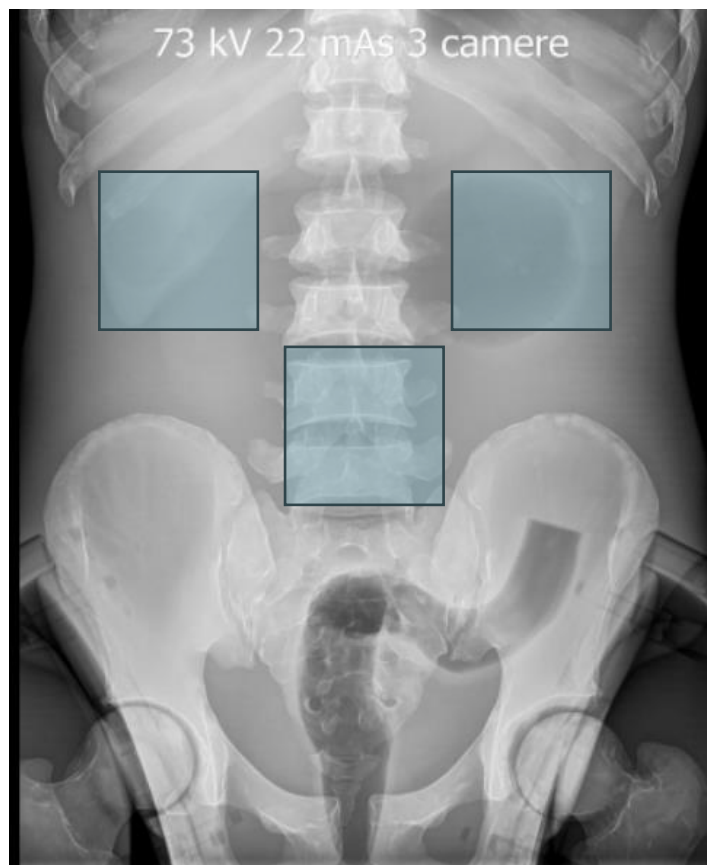
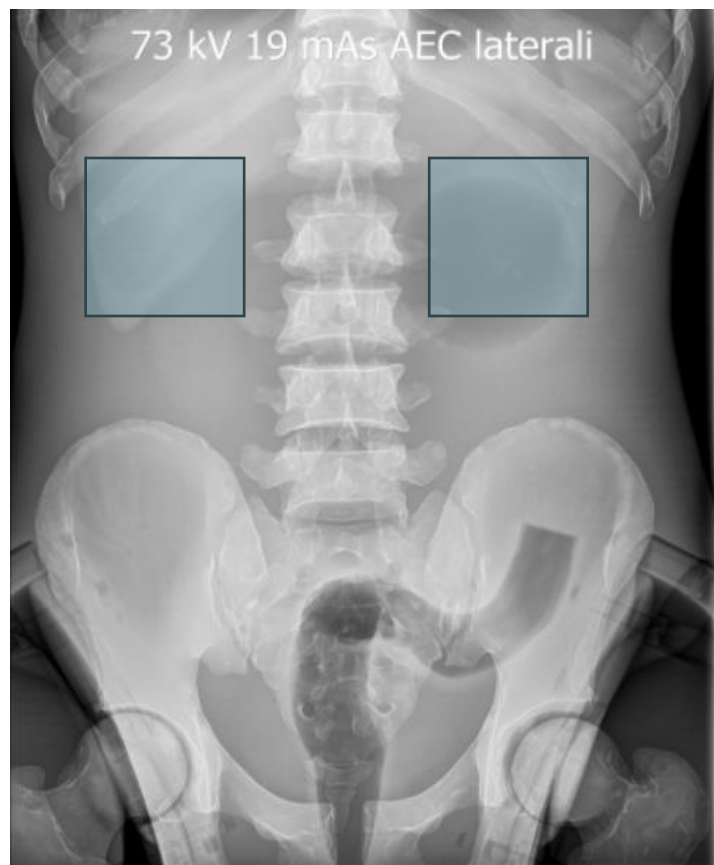
Confronto tra tecnica manuale e utilizzo AEC



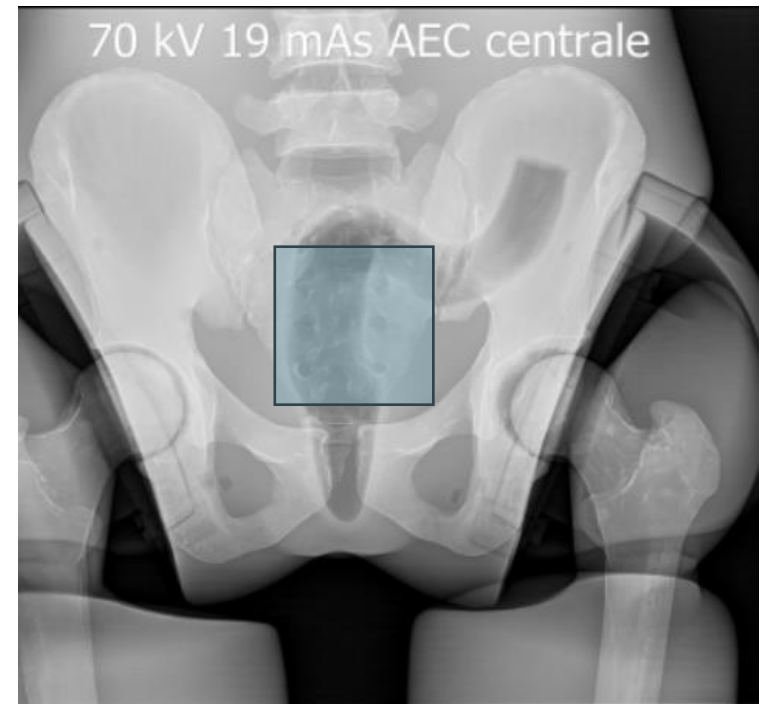
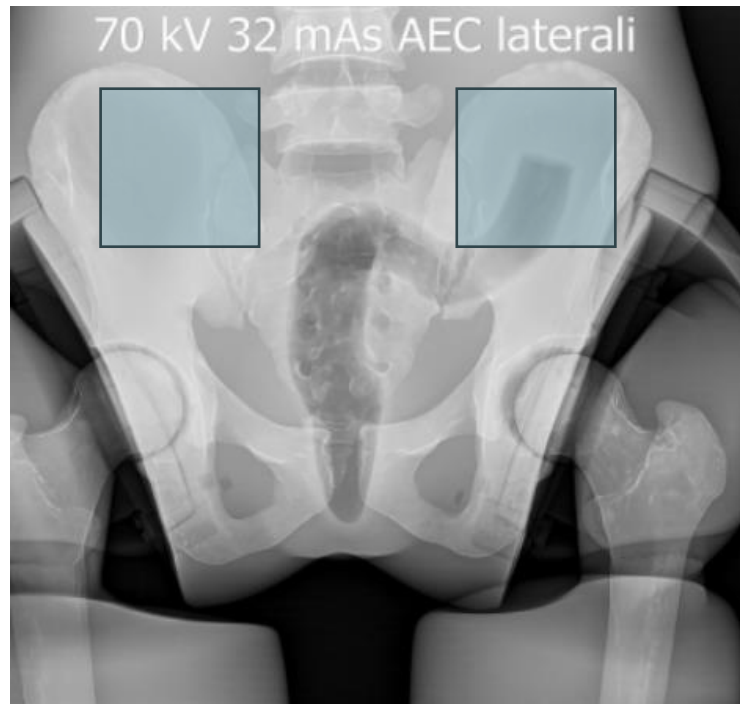
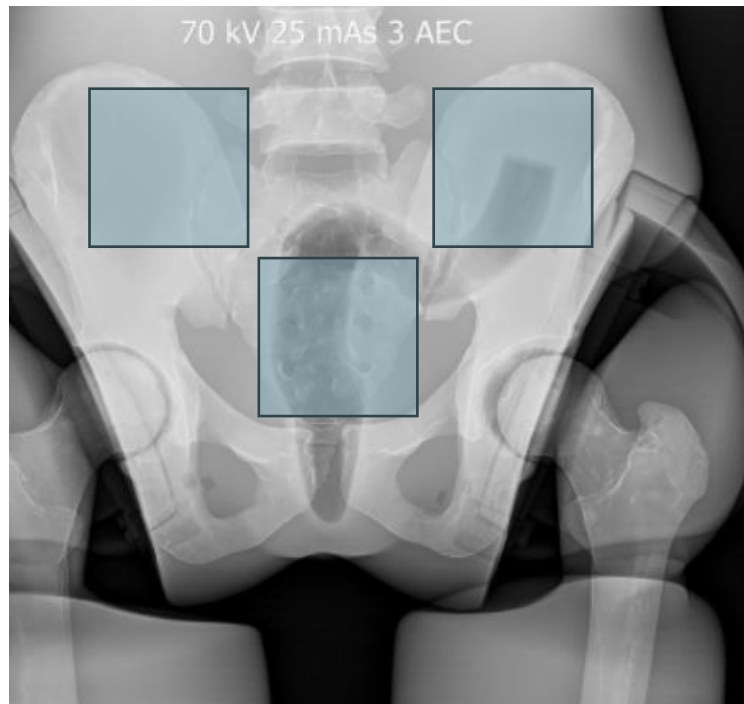
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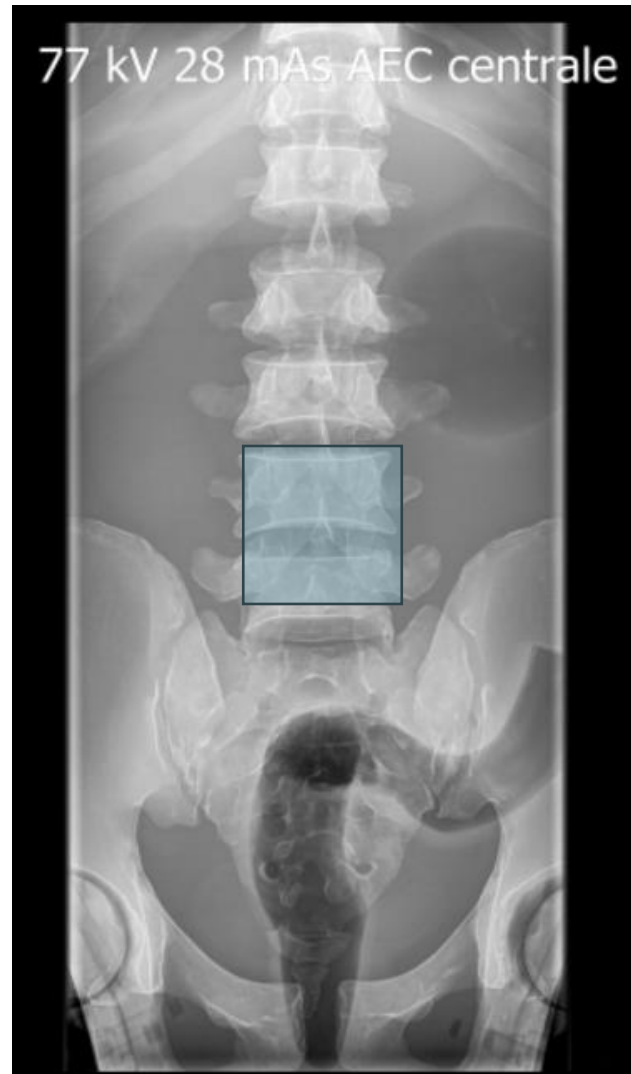
Selezione AEC



Selezione AEC

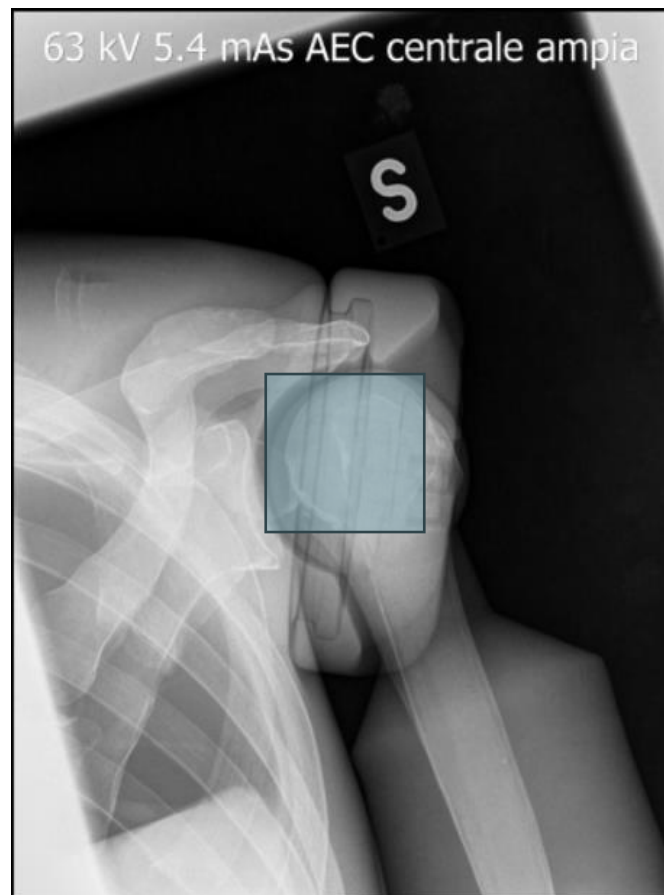
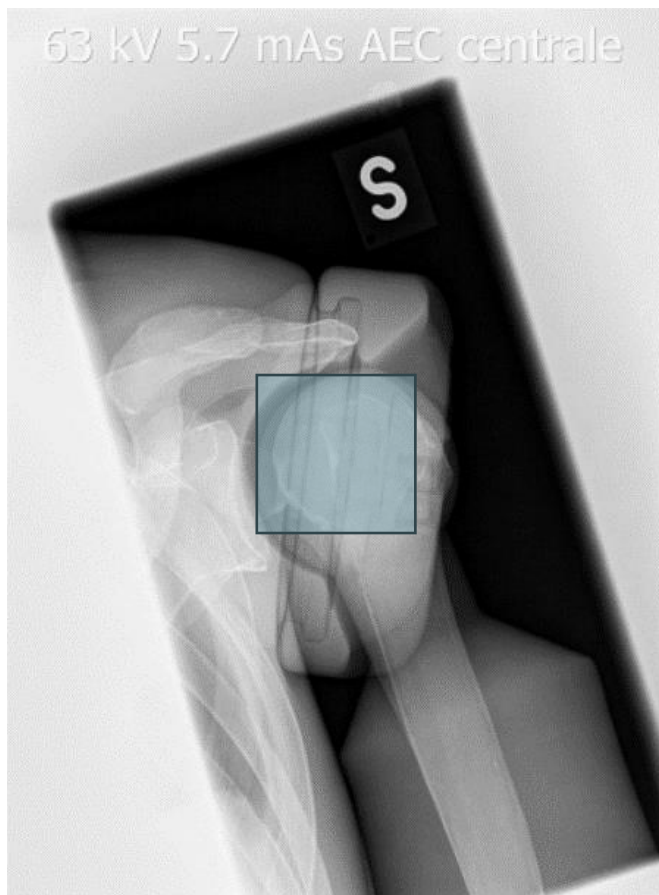


AEC: Diaframmatura

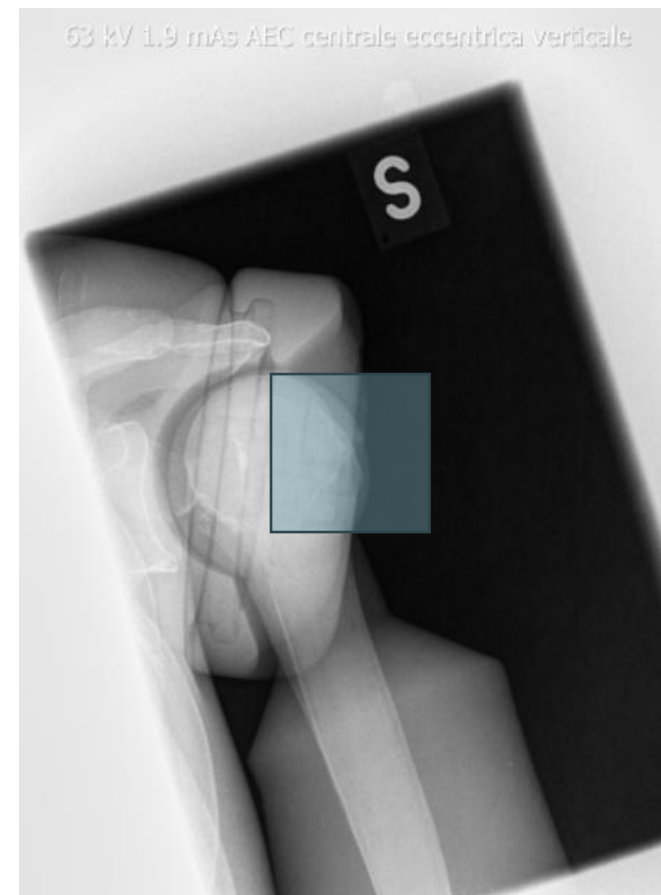


AEC: Diaframmatura e centratura

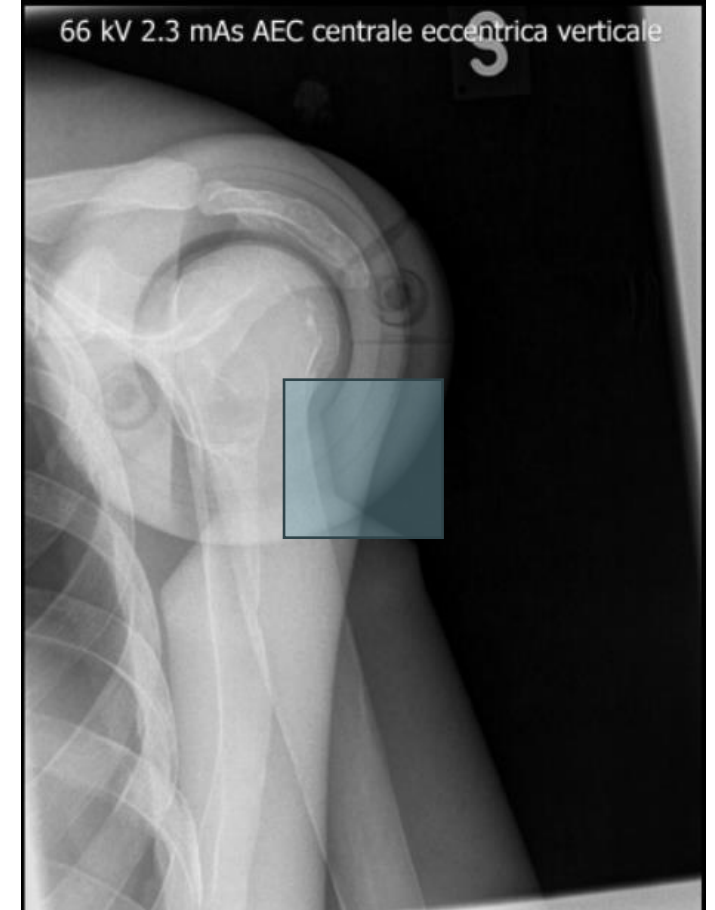
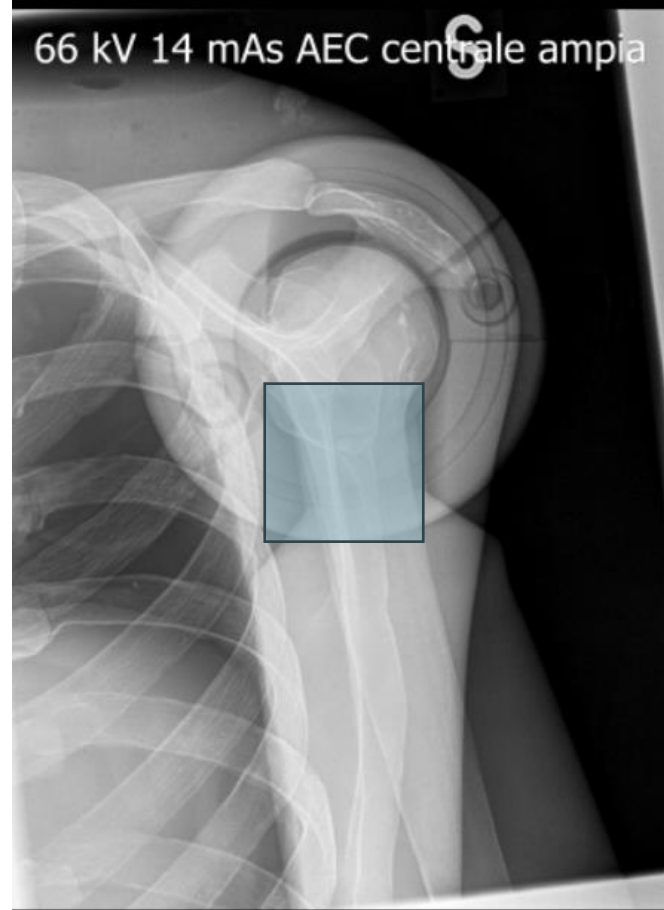
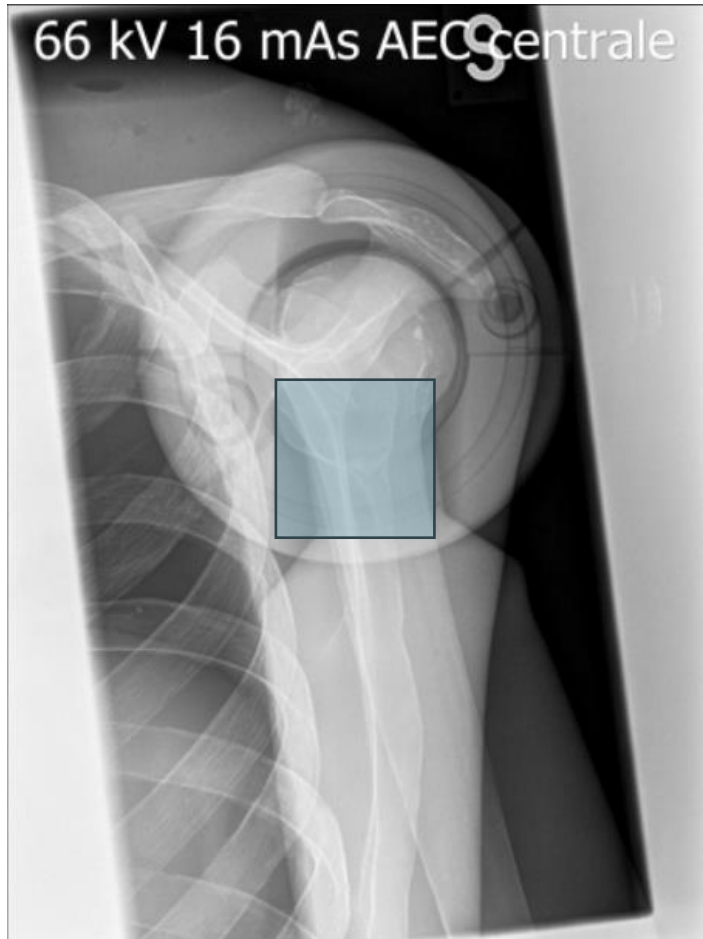
63 kV 5.7 mAs AEC centrale



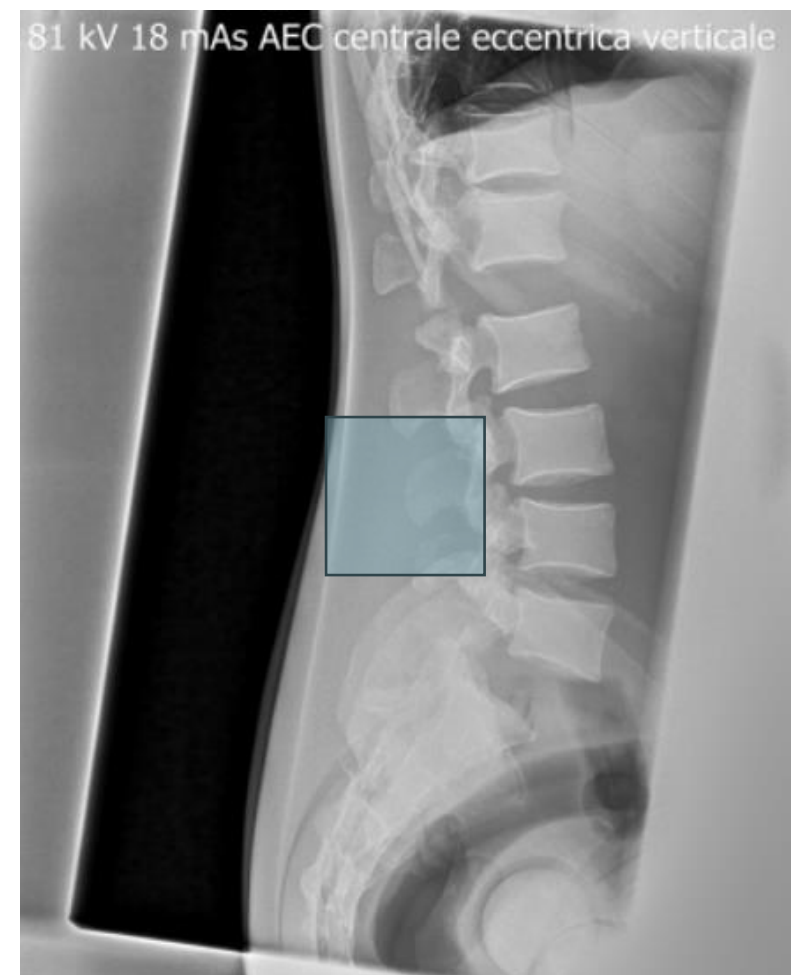
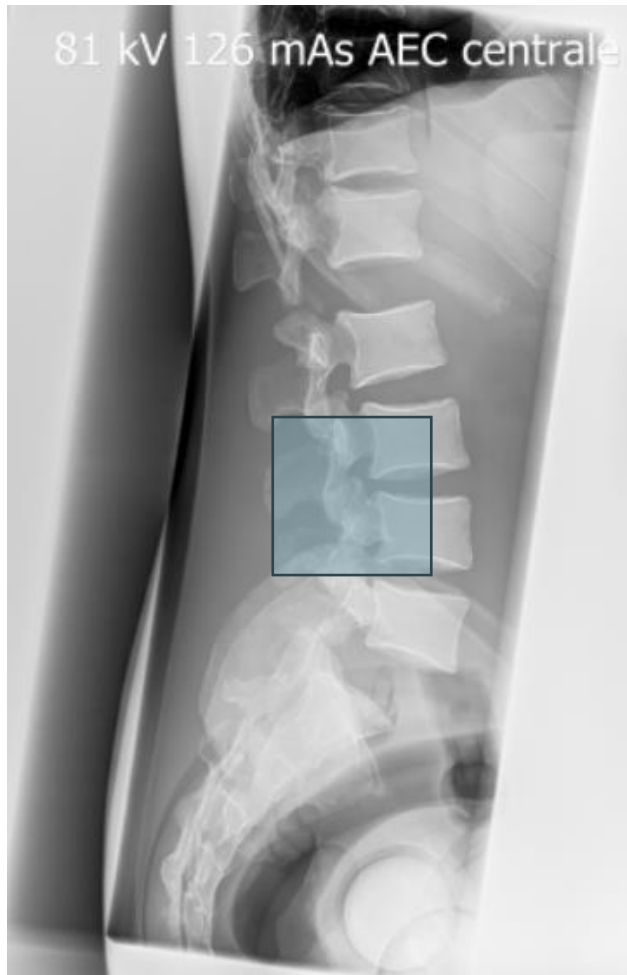
63 kV 1.9 mAs AEC centrale
centratura eccentrica verticale



AEC: Diaframmatura e centratura



AEC: Diaframmatura e centratura



Dose report

Exam Protocol														MULTIX Impact	
•Patient name	Anonymous^Anonymous					•Request ID	9156854			•Number of images	2				
•Date of birth	19400101					•Accession no.	000								
•Patient ID	27da106f-004e-493a-b2bd-99ab28462935					•Study description	Radiografia torace			•Dose area prod.(mGy·cm ²)	334.10				
•Patient sex	F					•Per. physician				•Ref. air kerma (mGy)	0.5				
•Ward						•Institution name									
Irradiation no.	kV	mAs	ms	Dose lev.	MField	Cu.Filter	Format	Density	Date and time	Application	DAP	EXI	Ref. air kerma	Focus	Grid
1	124.8	1.34	7.1	2.50	LR	NONE		0	11-09-2024 14:09:47	Torace ap	53.20	71.96	0.1	SMALL	universal
2	125	6.43	33.2	2.50	M	NONE		0	11-09-2024 14:12:11	Torace lat	280.90	169.10	0.4	SMALL	universal

Tabella 1: LDR per adulti



Radiografia	Dose superficiale in ingresso al paziente per singola radiografia [mGy]	PDS [mGy · cm ²]
Torace (pa)	0.15	150
Torace (laterale)	0.75	600
Colonna vertebrale lombare (ap o pa)	7	2350*
Colonna vertebrale lombare (laterale)	10	4150
Bacino (ap)	3.5	2500
Cranio (ap o pa)	2.5	650
Cranio (laterale)	1.5	500

ap: antero-posteriore; pa: posteriore-anteriore

Dose report

Exam Protocol

MULTIX
Impact

·Patient name	Anonymous^Anonymous	·Request ID	9210802	·Number of images	1
·Date of birth	19430101	·Accession no.	000		
·Patient ID	f5ac4b85-8c66-4c6f-b075-12e2f7b55819	·Study description	Radiografia bacino/anca	·Dose area prod.(mGy·cm ²)	366.50
·Patient sex	M	·Per. physician		·Ref. air kerma (mGy)	0.7
·Ward		·Institution name			

Irradiation no.	kV	mAs	ms	Dose lev.	MField	Cu.Filter	Format	Density	Date and time	Application	DAP	EXI	Ref. air kerma	Focus	Grid
1	84.7	4.95	6.6	2.50	LR	NONE		0	17-09-2024 10:59:32	Bacino ap	366.50	222.38	0.7	LARGE	115cm



Tabella 1: LDR per adulti

Radiografia	Dose superficiale in ingresso al paziente per singola radiografia [mGy]	PDS [mGy · cm ²]
Torace (pa)	0.15	150
Torace (laterale)	0.75	600
Colonna vertebrale lombare (ap o pa)	7	2350*
Colonna vertebrale lombare (laterale)	10	4150
Bacino (ap)	3.5	2500
Cranio (ap o pa)	2.5	650
Cranio (laterale)	1.5	500

ap: antero-posteriore; pa: posteriore-anteriore

Dose report

Exam Protocol

MULTIX
Impact

-Patient name	Anonymous*Anonymous	-Request ID	9255311	-Number of images	1										
-Date of birth	19380101	-Accession no.	000												
-Patient ID	7c1d4443-68be-4f05-b14c-a168d8494aba	-Study description	Radiografia addome	-Dose area prod.(mGy·cm ²)	292.80										
-Patient sex	F	-Per. physician		-Ref. air kerma (mGy)	0.5										
-Ward		-Institution name													
Irradiation no.	kV	mAs	ms	Dose lev.	MField	Cu.Filter	Format	Density	Date and time	Application	DAP	EXI	Ref. air kerma	Focus	Grid
1	80.9	5.62	7.5	2.50	LR	NONE		0	27-09-2024 13:53:10	Addome ap	292.80	161.07	0.5	LARGE	115cm



Tabella 1: LDR per adulti

Radiografia	Dose superficiale in ingresso al paziente per singola radiografia [mGy]	PDS [mGy · cm ²]
Torace (pa)	0.15	150
Torace (laterale)	0.75	600
Colonna vertebrale lombare (ap o pa)	7	2350*
Colonna vertebrale lombare (laterale)	10	4150
Bacino (ap)	3.5	2500
Cranio (ap o pa)	2.5	650
Cranio (laterale)	1.5	500

ap: antero-posteriore; pa: posteriore-anteriore

**Grazie per
l'attenzione**

