



MINISTERIO  
DE CIENCIA  
E INNOVACIÓN



# JORNADA DE INFRAESTRUCTURAS DE INVESTIGACIÓN EN BIOMEDICINA 4 JULIO 2023

# Euro-BioImaging ERIC

[www.eurobioimaging.eu](http://www.eurobioimaging.eu)



[EUROBIOIMAGING.EU](http://EUROBIOIMAGING.EU)

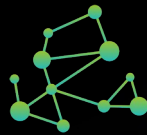
# OVERVIEW



**17**  
ERIC MEMBERS  
(16 COUNTRIES & EMBL)



**149**  
SITES



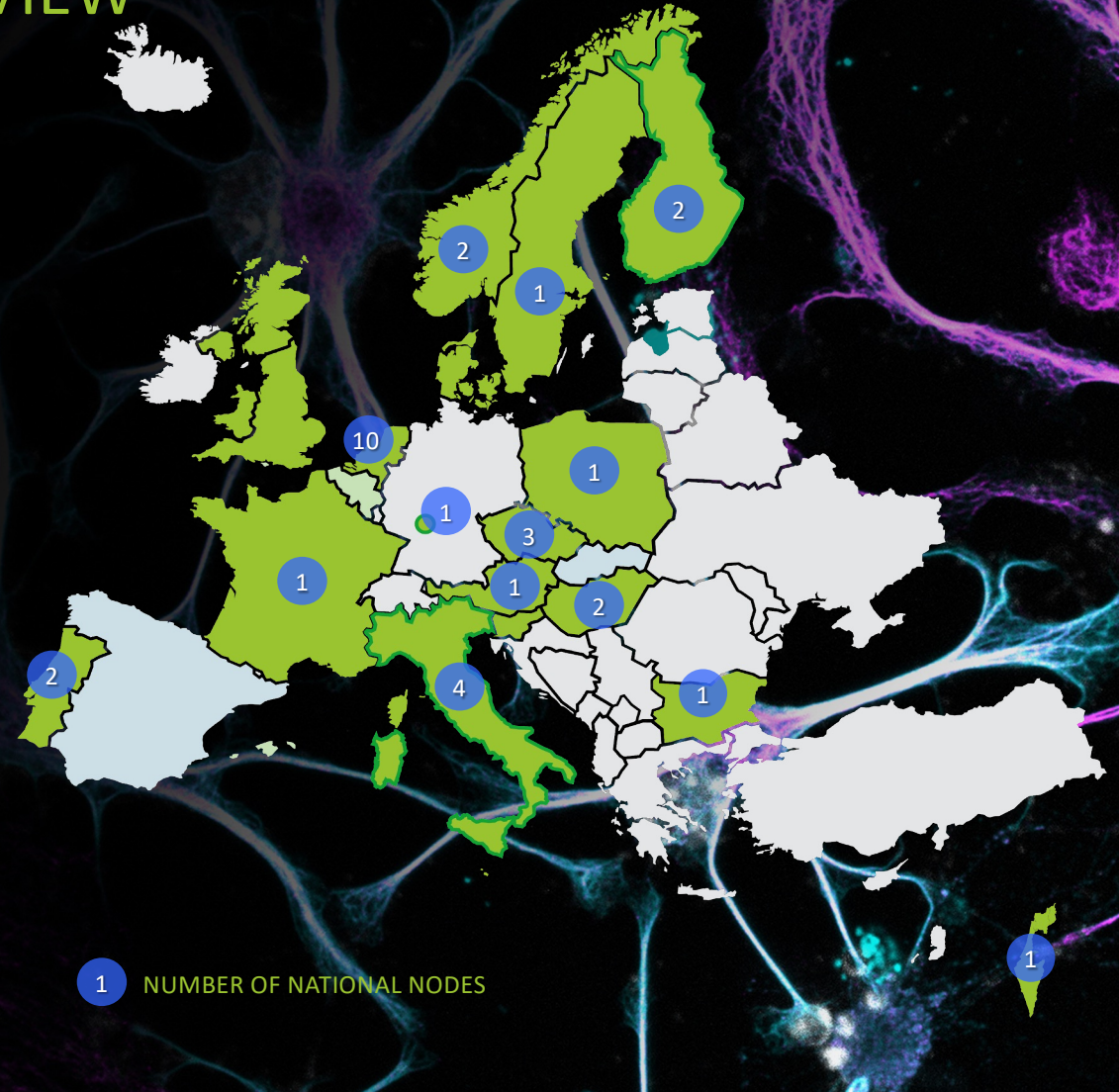
**33**  
NODES



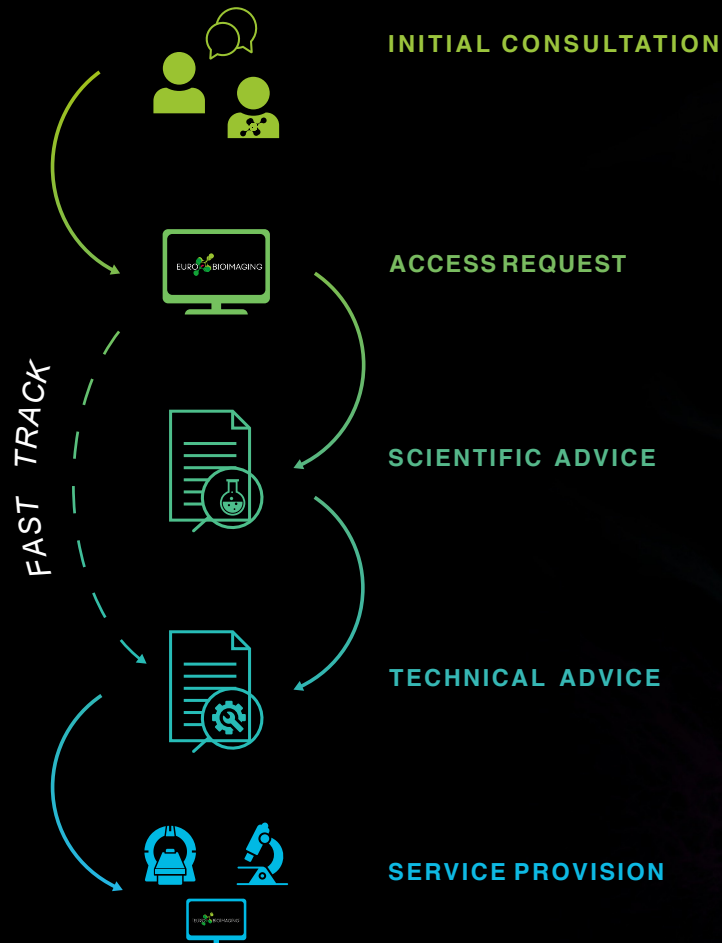
**+50**  
TECHNOLOGIES

## Euro-BioImaging Mission

- To provide access, services, and training to state-of-the-art imaging technologies for all life scientists in Europe and beyond
- To foster the liaison and cooperation of all its stakeholders (including scientists, industry, and national and European authorities)



# Funding User Access to Imaging Facilities



Information about available instruments to cover travel costs and access fees: [www.eurobioimaging.eu/about-us/funding-user-access](http://www.eurobioimaging.eu/about-us/funding-user-access)



International funding instruments

Funding instrument	Funder	For whom	For what (travel expenses, access fees, both)	Expiry date	Additional information
Mobility Grants for Short-Term Scientific Missions (STSM)	COST Action COMULIS Horizon 2020 – European Commission	Researchers in COST member & cooperating countries (including all European countries) performing a scientific project that involves more than one imaging technique (multimodality). Transnational access required.	<ul style="list-style-type: none"> <li>Travel, meal and accommodation costs</li> <li>Lump sums up to 3300 Euros in total provided</li> </ul>	The COST action COMULIS ends in November 2022	Costs will be covered for visits from 1 week up to 6 months
EMBO Short-Term Fellowships	European Molecular Biology Organization (EMBO)	Researchers coming from and going to EMBO countries associated EMBO countries (India, Singapore) and cooperation partners (Taiwan, Chile)	<ul style="list-style-type: none"> <li>Travel costs</li> <li>Daily rate (based on country of visit)</li> </ul>	Continuous program	Costs will be covered for visits from 1 week up to 6 months



**eRImote AI4Life EOSC4Cancer ByCovid EOSCFuture**

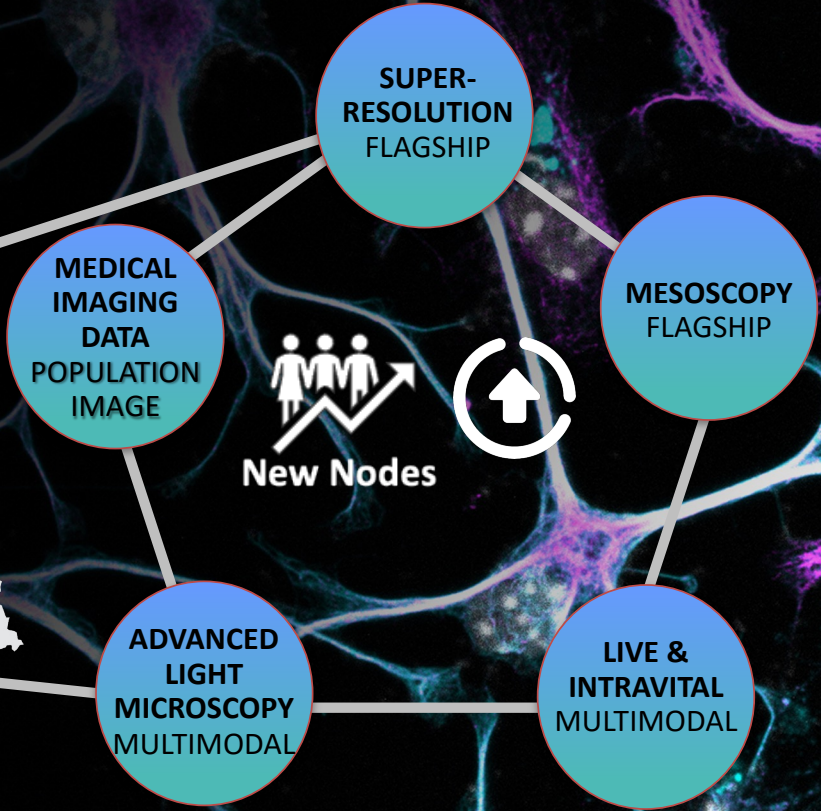
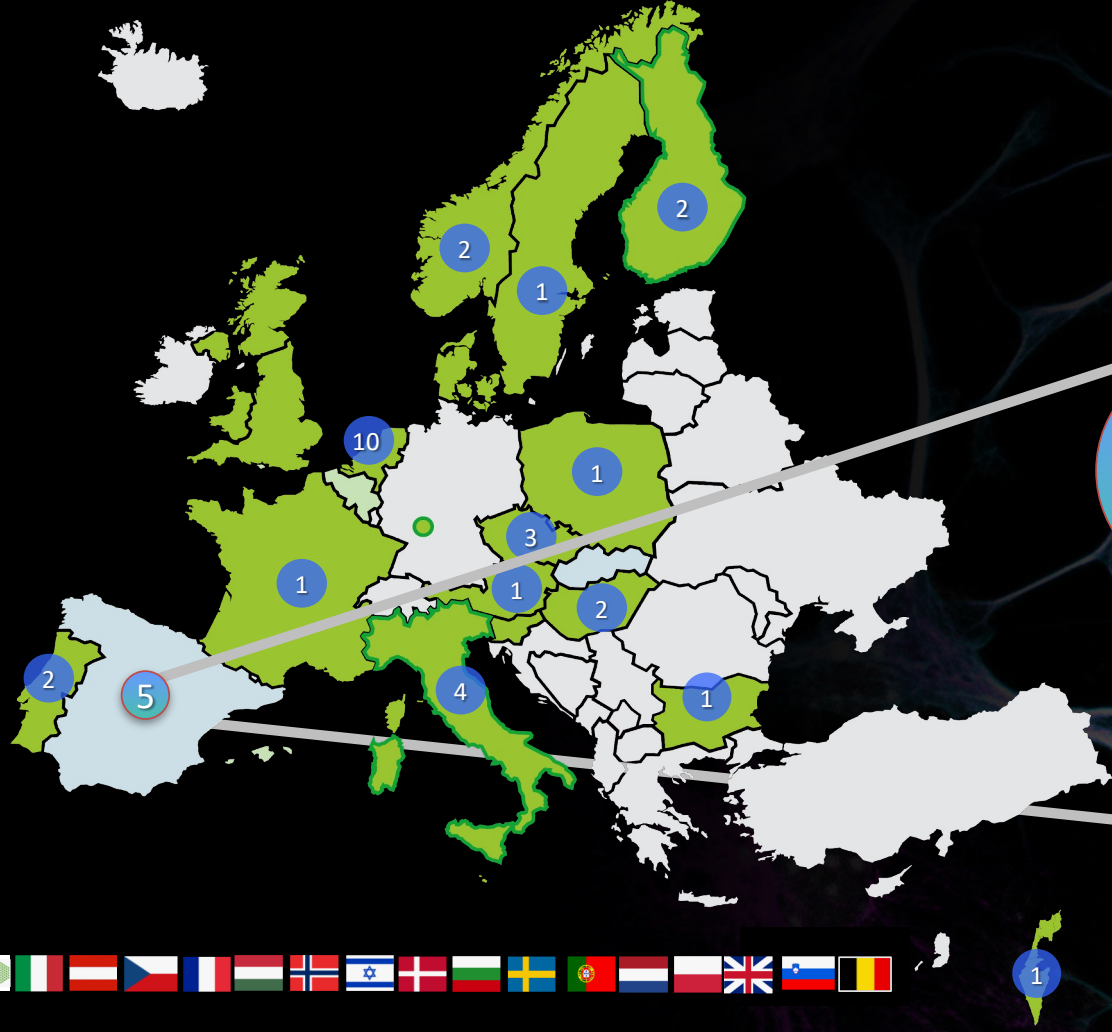


Euro-BioImaging users can request their access and travel costs in their grant proposals in many EU countries



In addition, Horizon Europe funding may be available for topic specific projects

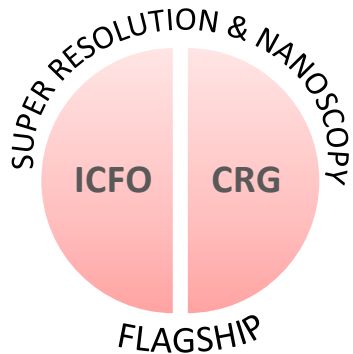
# Spanish Nodes



1

# Node 1: Super-resolution and Nanoscopy

## Cellular, subcellular and single-molecule imaging



SUB-CELLULAR → LIVE TISSUE  
**Resolution: 20nm**

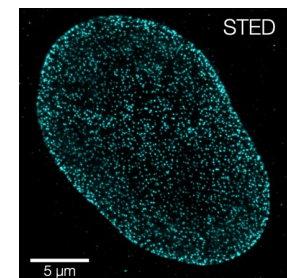
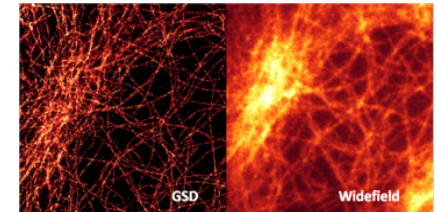
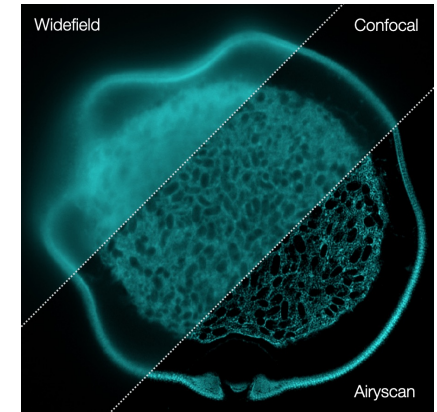
**ICFO** 

  
**CRG**   
 Centre for Genomic Regulation

Accessible Technologies				
2013	2022	2023	Modalities	Applications
4 (2 <sup>^</sup> )	6	6	<b>Point scanning confocal</b> (2x CW-STED, 3x 3D-STED +FLIM, Airyscan)	Intracellular Dynamics, live-cell imaging, Quantitative Imaging
2	3	3	<b>Single molecule localization</b> (STORM, dSTORM, PALM, PAINT, GSD)	Single cell, fixed and live-cell imaging
	1	1	<b>Optical fluctuation</b> (Camera Integrated)	Live-cell imaging

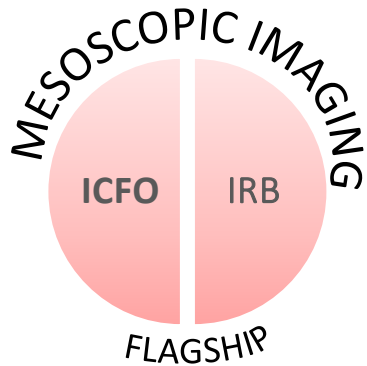
Personnel
7 Imaging Scientists

Type of samples
Sub-cellular components, molecules, cells



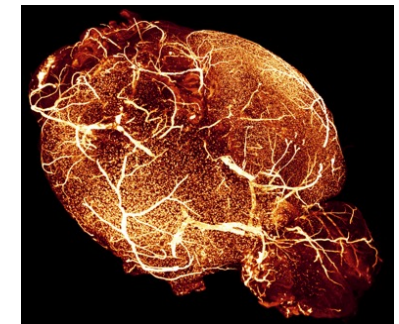
# Node 2: Mesoscopic imaging

*In vivo*, large samples, fast dynamics (3D), cleared samples



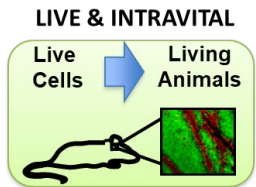
Accessible Technologies			LSFM: Lightsheet Fluorescence Microscopy	
2013	2022	2023	Modalities	Applications
1(1 <sup>^</sup> )	2	2	<b>MacroSPIM</b>	Large Samples 3D, cancer imaging, neuroscience, label free, etc...
	2	2	<b>OPM</b> Oblique Plane Microscopy	High-content, multi-well, long-term
2(1 <sup>^</sup> 2)	2	2	<b>DSLM</b> Digitally-Scanned Lightsheet Microscopy	High resolution live
	1	1	<b>Fluidics LSFM</b>	High content, multi-well
	1	1	<b>Fast LSFM</b>	Fast volumetric imaging

Personnel	Type of samples
6 Imaging Scientists	Cells, Spheroids, Organoids, Tissues, Organs, Embryos (Mouse, Rat, Chicken), Model Organisms (Zebrafish, C elegans, Drosophila, etc) Alternative Organisms (e.g., marine biology) Cleared samples.



# Node 3: Live and Intravital Microscopy

Live cell, tissues and *in vivo* imaging



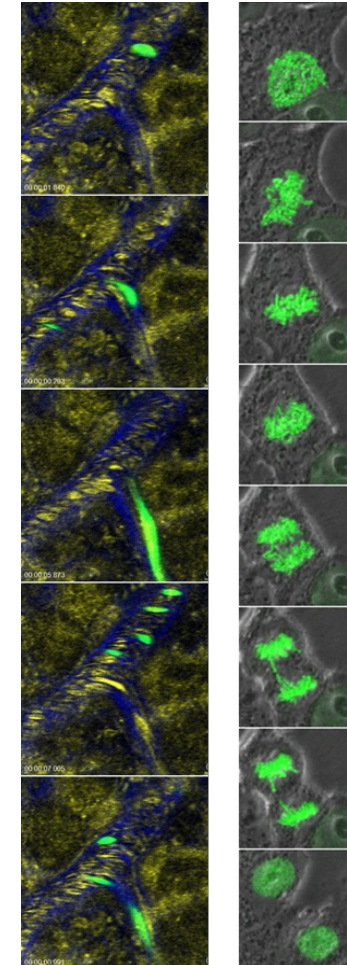
UNIVERSITAT DE BARCELONA

INSTITUT DE RECERCA BIOMÈDICA  
IRB BARCELONA

CRG  
Centre for Genomic Regulation

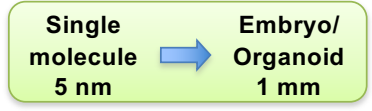
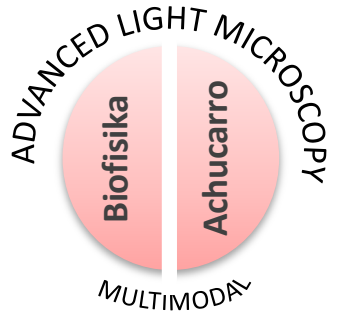
Accessible Technologies				
2013	2022	2023	Modalities	Applications
3	4	5	Widefield	Live-cell imaging, high-content screening (HCS), long term experiments, Quantitative Imaging
3	4(1^)	4	Spinning disk confocal	Functional imaging, live-cell imaging, HCS, HTS, laser ablation
6	11(1^)	12	Point scanning confocal	Functional imaging (FRAP, FRET/FLIM, FCS), live-cell imaging, HCS, Quantitative Imaging
3	3(1^)	4	Multi-photon	In vivo imaging, SHG, photostimulation, laser ablation, Quantitative Imaging
3	4	5	Total Internal Reflection	Live Cell Imaging (molecule trafficking, cytoskeleton dynamics), Quantitative Imaging

Personnel	Type of samples
13 Imaging Scientists	Cells, Tissues, Spheroids, Organoids, Live Cells and Animals (Mouse, Rat), Brain Slices etc. Model Organisms (Zebrafish, C elegans, Drosophila, Xenopus etc)



# Node 4: Advanced Light Microscopy

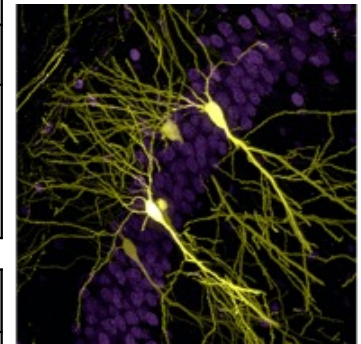
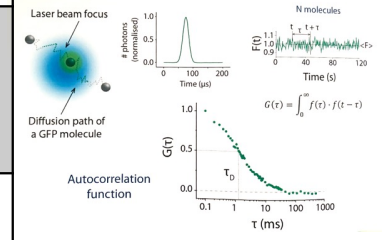
## Functional imaging and super-resolution neuroimaging



Accessible Technologies				
2013	2022	2023	Modalities	Applications
2	2	3	<b>Point scanning confocal</b> (Gated CW-STED, Multi-photon)	Lice cell, live embryo and organoid imaging. Functional Imaging, Neuroimaging
	2	3	<b>Image Scanning</b> (ISM, Spinning Disk Confocal)	Live cell, live embryo and organoid imaging. Functional Imaging, Nanosurgery
	1	1	DSLIM/LSFM	Fast organoid/embryo 3D imaging.
1	2	2	<b>Single Molecule Localization</b> (FCS, FCCS, FRET-FLIM, Correlative Light-AFM)	Functional Imaging, Quantitative Imaging

Personnel
5 Imaging Scientists

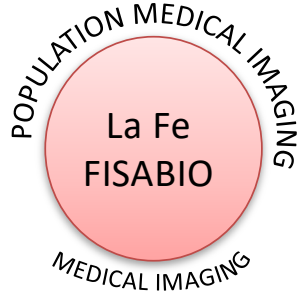
Type of samples
Embryos, Spheroids, Organoids, Cells, Lipid Vesicle reconstitution, Artificial lipid membranes, <i>In vitro</i> samples.





# Node 5: Population Medical Imaging node

## Medical Imaging Node



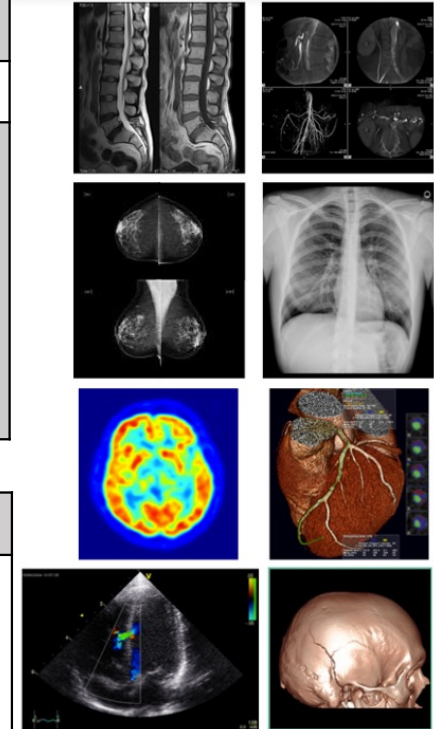
From mm to whole body



Accessible Technologies				
2013	2022	2023	Modalities	Applications
	1	1	MRI	Population Medical Research
4(2^)	5	5	CT-PET	
2	2	2	RX	
	1	1	DICOM & NO DICOM	

Personnel
13 Imaging Scientists

Type of studies
Clinical Imaging MIDS Medical Imaging Data Structure DisMed De-identifying medical texts COVID-19 pathology imaging datasets





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