

° CELSUS®

We help doctors to help their patients



CELSUS - AI-SOFTWARE FOR ANALYSIS OF X-



RAY AND CT STUDIES

Clinical decision support system (CDSS) based on AI technologies for analysis of the digital medical images, detection of the regions of interests, and automatic interpretation of the results.

OUR SOFTWARE



CELSUS®

Mammography



CELSUS®

Brain CT



CELSUS®

CXR and fluorography



CELSUS®

Chest CT



Successfully analyzed > 6.5 million studies

Connected > 350 radiology departments

CELSUS - MEDICAL DEVICE



Confirmed and clinically proven:

Efficiency

✓ Safety

Quality

Celsus® Registration certificate No RZN 2022/18855 submitted to the Unified Register of Russian Computer Software

Celsus® certified in EU.CE Mark SK-CA-001/DVC-SK-21-06-000018

Celsus® meets the requirements of the industry for the production of medical devices according to the ISO 13485:2018



Ref. SK-CA-001/DVC-SK-21-06-000018 DATA OWNER		MEDICAL DEVICE RE		
NCA name:	Address:	Contact person:		
REGISTRATION DATA		Version no.: 1		
		Record creation date:		
GMDN Term: Full-body CT system Make: Softvér CELSUS				
Class:	Type: CE marking			
English description: The CELSUS® software is a medical decision-making aid system for interpreting radiological examinations, to carry out "double reading" and quality control with subsequent interpretation of the results. The CELSUS® software includes a server part, on which a pre-trained neural network is located, as well as a user part, which can be a desktop application or functionality integrated via API. The CELSUS® software is intended for professional use by health care professionals, specialists in the field of				

ACTOR DATA

-	
NAME OF TAXABLE PARTY.	
	ФЕДЕРАЛЬНАЯ СЛУЖБА ПО НАДЗОРУ В СФЕРЕ ЗДРАВООХРАНЕНИЯ (РОСЗДВИВНАДЗОР)
	РЕГИСТРАЦИОННОЕ УДОСТОВЕРЕНИЕ
	НА МЕДИЦИНСКОЕ ИЗДЕЛИЕ
	от 27 мая 2021 года № РЗН 2021/14449
	На медицинское изделие Программное обеспечение ЦЕЛЬС* (ПО ЦЕЛЬС*) по ТУ 58.29.32-001-28139219-2019
	Настоящее регистрационное удостоверение выдано Общество с ограниченной ответственностью "Медицинские скрининг системы (ООО "Медицинские скрининг системы"), Россия,
2000	248000, г. Калуга, ул. Циолковского, д. 4, оф. 301
	Производитель Общество с ограниченной ответственностью "Медицинские скрининг системы (ООО "Медицинские скрининг системы"), Россия, 248000, г. Калута, ул. Циолковского, д. 4, оф. 301
	Место производства медицинского изделия ООО "Медицинские скрининг системы", Россия, 248000, г. Калуга, ул. Циолковского, д. 4, оф. 301
1000	Номер регистрационного досье № РД-35908/58023 от 04.09.2020
	Класс потенциального риска применения медицинского изделия 3
	Код Общероссийского классификатора продукции по видам экономической деятельности 58.29.32.000
-	Настоящее регистрационное удостоверение имеет придожение на 1 листе
	приказом Росздравнадзора от 27 мая 2021 года № 4743 допущено к обращению на территории Российской Федерации.
	Врио руководителя Федеральной службы по надзору в сфере здравоохранения Д.В. Пархоменко 0057423

CELSUS MAMMOGRAPHY



Celsus® analyzes mammograms, detects and highlights malignant and benign masses, suspicious calcifications, lymph nodes, determines the density of breast tissue according to ACR.

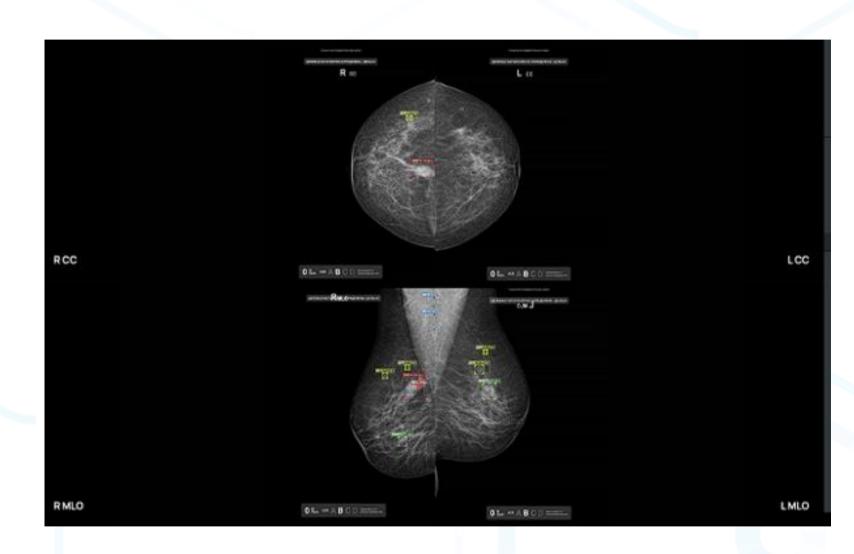
Celsus® forms a preliminary radiology report for the doctor.

AUC = 0.9 +

The processing time of the study less than 1 minute

Sensitivity = 0.9+ Specificity = 0.8+

High-sensitivity scenario: Sensitivity = 0.999+ Specificity = 0.4+



CELSUS CXR and FLUOROGRAPHY



Celsus® analyzes fluorograms and x-rays, detects and highlights pathological changes in the image

- Nodule/mass
- Dissemination
- > Annular shadows
- Pleural effusion
- Pneumothorax
- > Rib fractures

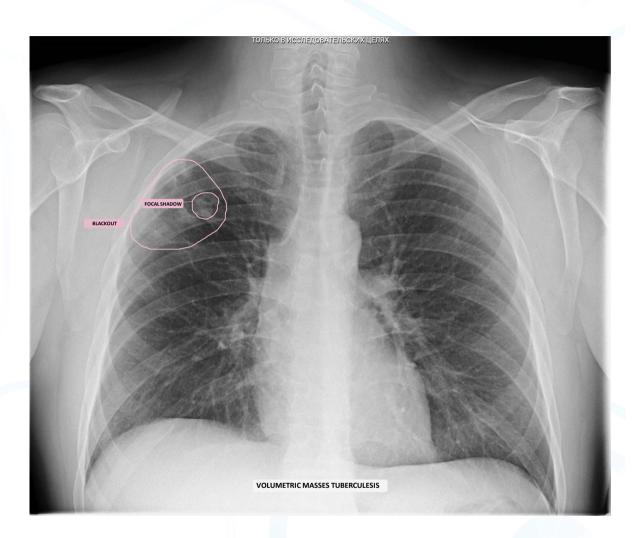
- > Enlarged medinastium
- > Hilar enlargement
- > Infiltration/Consolidation
- Cardiomegaly
- > Petrifications
- > Atelectasis
- > Fibrosis

AUC = 0.98

The processing time of the study less than 10 seconds

Sensitivity = 0.98 Specificity = 0.92

High-sensitivity scenario: Sensitivity = 0.999+ Specificity = 0.65+





CELSUS CHEST CT



Celsus® analyzes chest CTs, detects and highlights pathological changes in the study, forms a preliminary conclusion for the doctor.

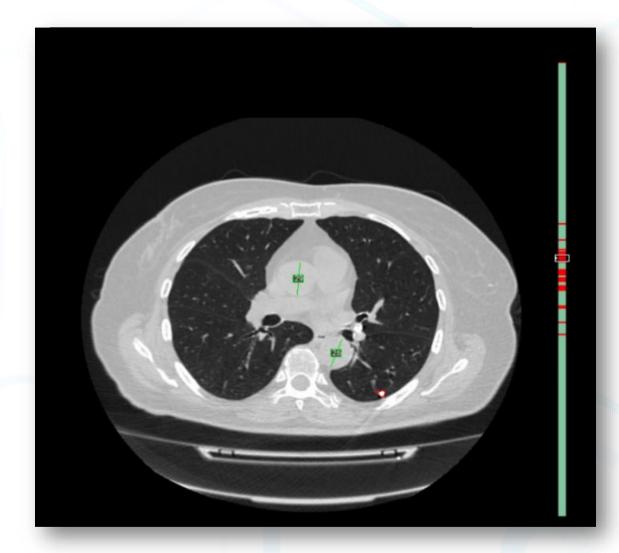
- Lung cancer
- ✓ Thoraic aortic aneurism
- Spinal compression fracture
- ✓ Pulmonary trunk dilatation
- Coronary calcium
- ✓ vertebrae with a degree of compression deformation of the body ≥ 25%

- COVID-19
- Pneumonia
- ✓ Pleural effusion
- Pulmonary emphysema
- Paracardial fat (epicardial pericardial)
- ✓ Rib/rib fracture

AUC = 0.9+

The processing time of the study less than 3 minutes

Sensitivity = 0.9+ Specificity = 0.9+





CELSUS BRAIN CT



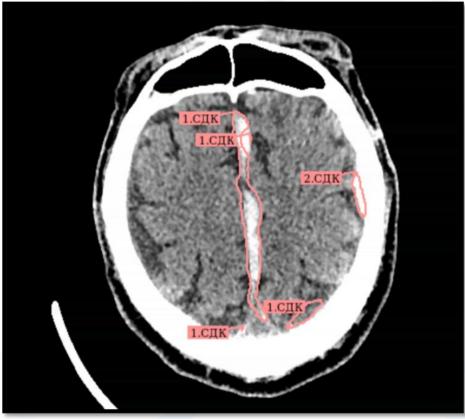
The software analyzes brain CTs, highlights the contours of pathologies, calculates the hemorrhage volumes and generates preliminary radiology report. The main goal of the service is detection of hemorrhagic and ischemic strokes.

AUC = 0.94

The processing time of the study less than 2 minutes

Sensitivity = 0.93 Specificity = 0.90





СДК - subdural hemorrhage BMK - intracerebral hemorrhage

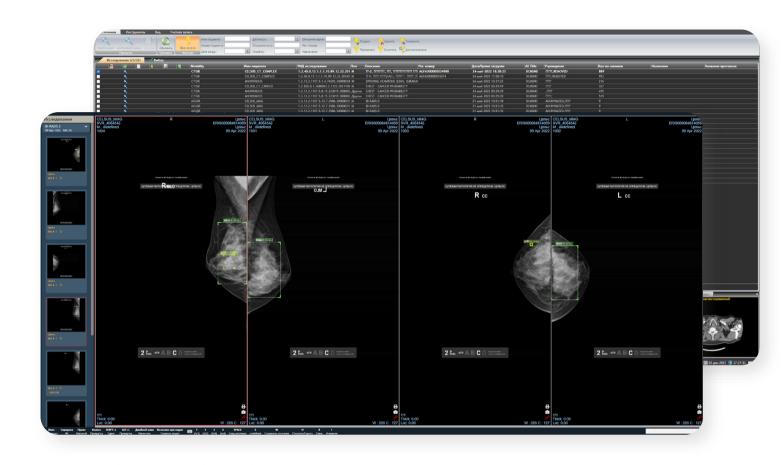


Seamless integration



Celsus® is a professional solution for integrating with the hospital's existing IT infrastructure, ensuring a user-friendly experience.

- Maximum convenience and flexibility
- **✓** The ability to tailor user scenarios
- **✓** No limitations on the quantity of equipment
- **✓** Transparent pricing







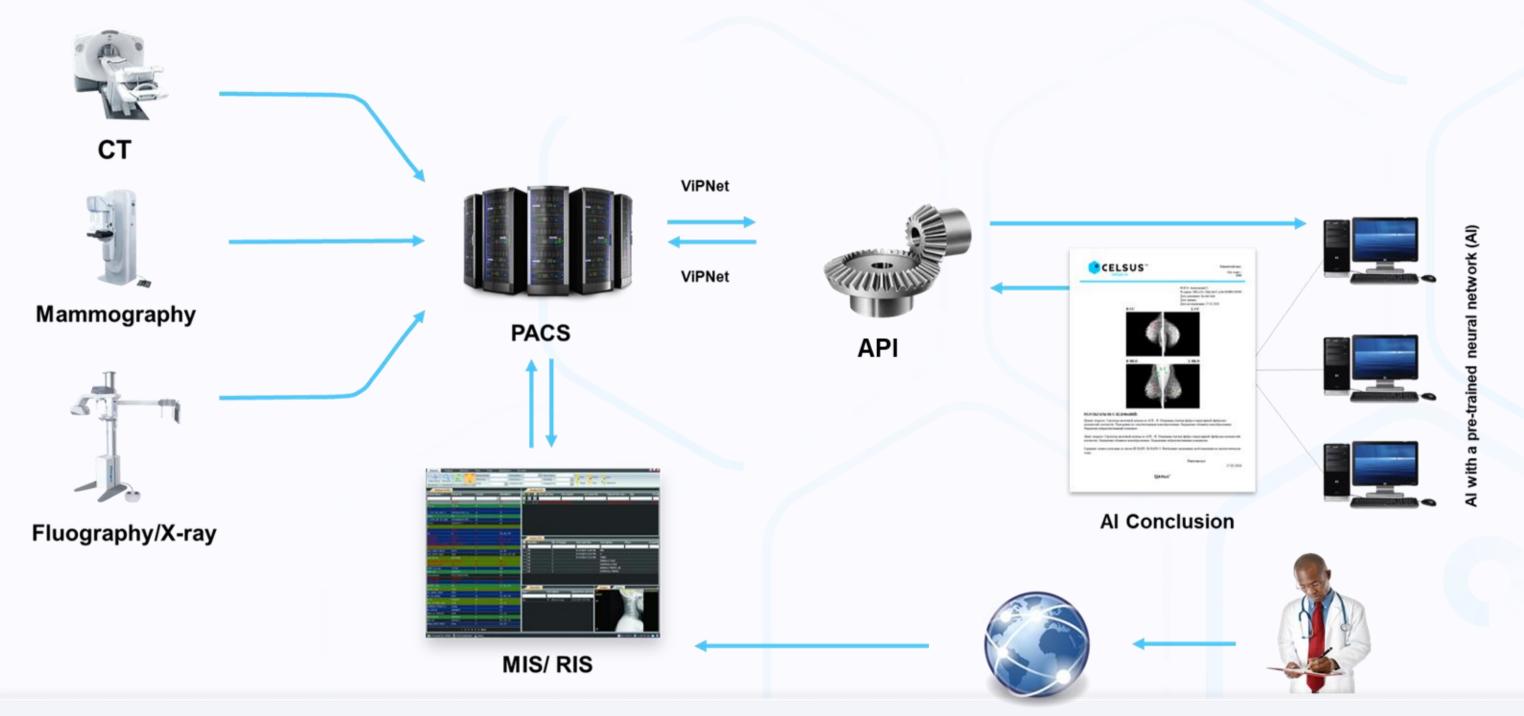






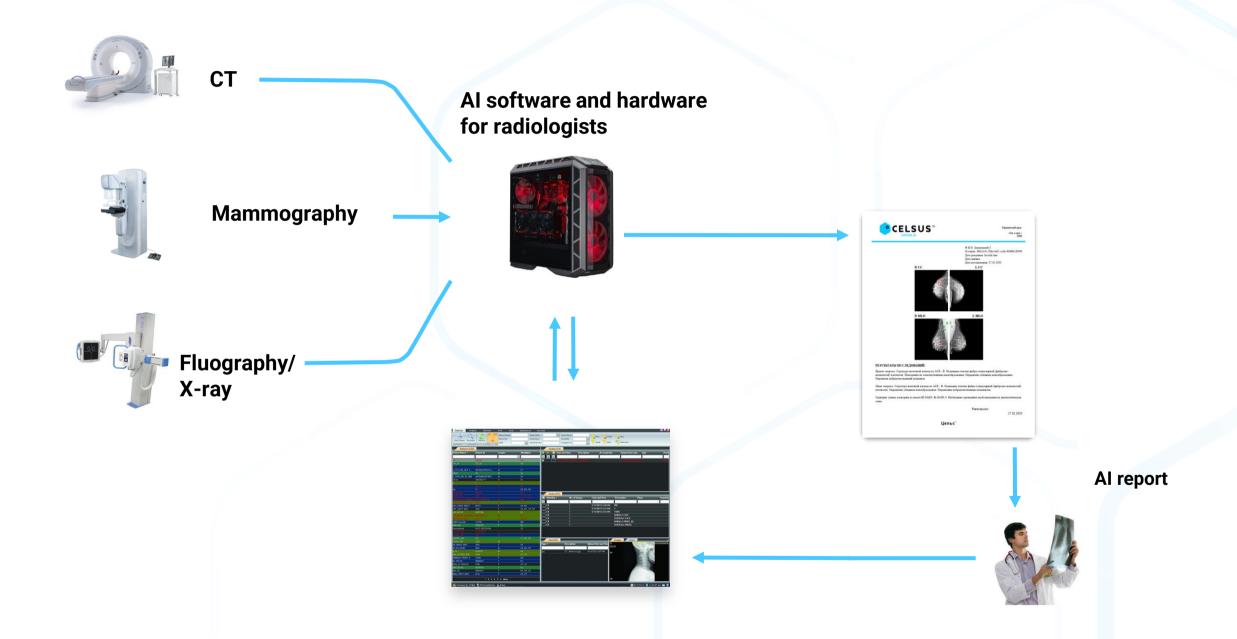
Cloud integration scheme





On-premise integration scheme







Geographical presence of Celsus





countries

Celsus ® has gained widespread adoption in hospitals across the world

Separate legal entity in Dubai

More than 6.5 million studies have been analysed by Celsus.

More than 350 hospitals are connected to Celsus







Competition



Celsus® takes a leading position in the Mosmed AI (AI in radiology world largest experiment).

We demonstrated superior metrics in many external tests within Experiment and production use.

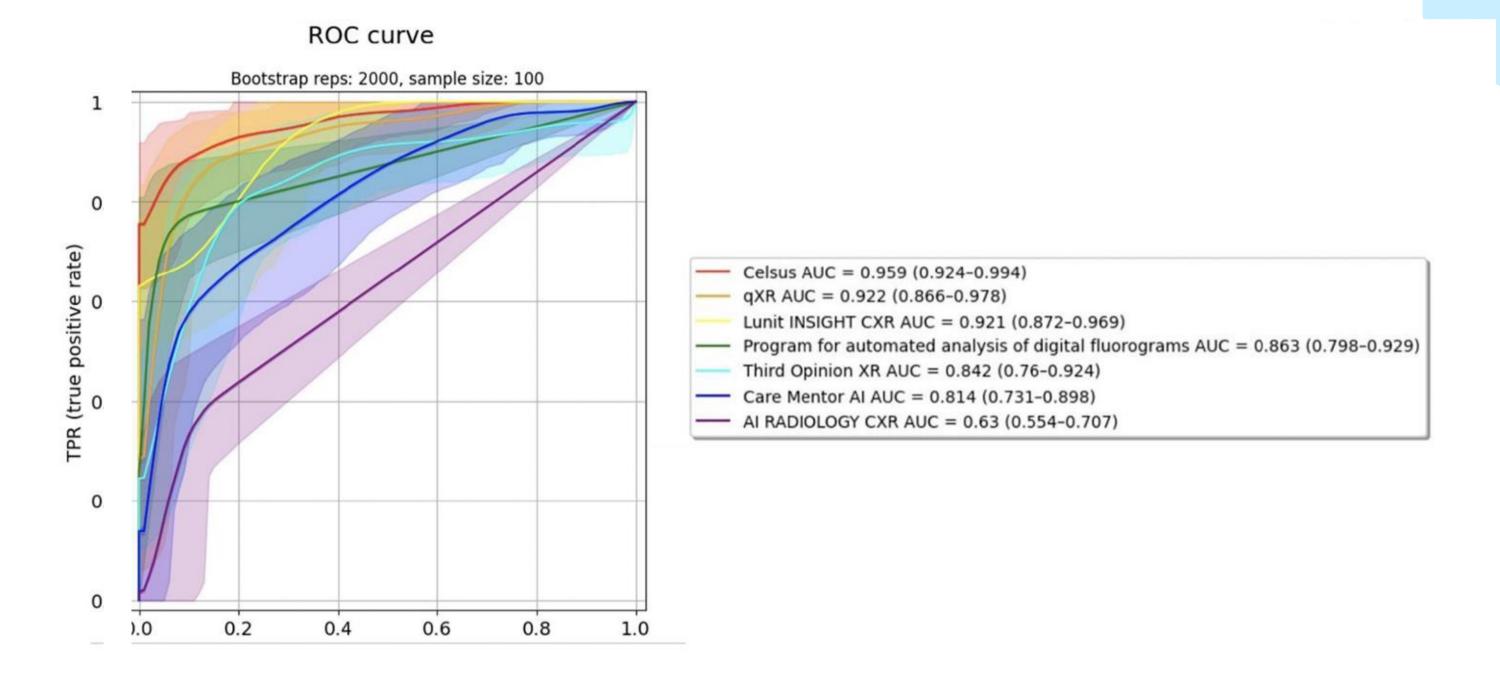
Current positions in rankings (prospective ROC-AUC + radiologists' feedback):

- Mammography 1st place
- Chest X-ray and fluorography 1st place
- Brain CT 1st place
- Chest CT 2nd place

Modality (MMG)	Celsus	Competitor1	Competitor2	Modality (Brain CT)	Celsus	Competitor1	Competitor2
AUC	0.97	0.84	0.90	AUC	0.96	0.87	0.91
Sensitivity	0.96	0.86	0.74	Sensitivity	0.93	0.85	0.82
Specificity	0.97	0.78	0.94	Специфичность	0.90	0.82	0.98
Accuracy	0.97	0.81	0.84	Accuracy	0.92	0.83	0.90
Processing time	0,95 min	1,7 min	2,4 min	Processing time	0,99 min	5 min	1,4 min



External comparison of lung nodule detection on chest X-rays (mosmed.ai)



Automatic interpretation of chest X-rays with no significant findings



Current prospective metrics in Moscow:

- 74.86% of chest X-rays can be automatically reported as normal
- No more than 1 missed pathology for every 10k exams

74,86% 25,14%



Contact us





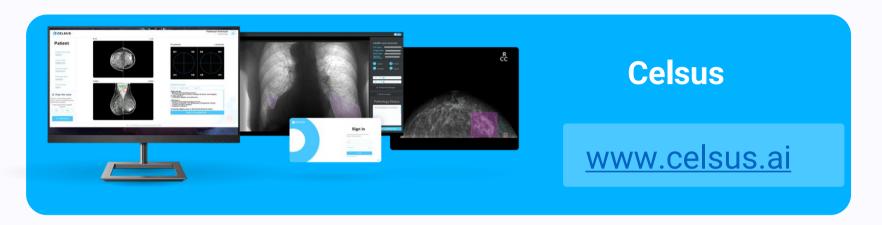
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Online demo

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