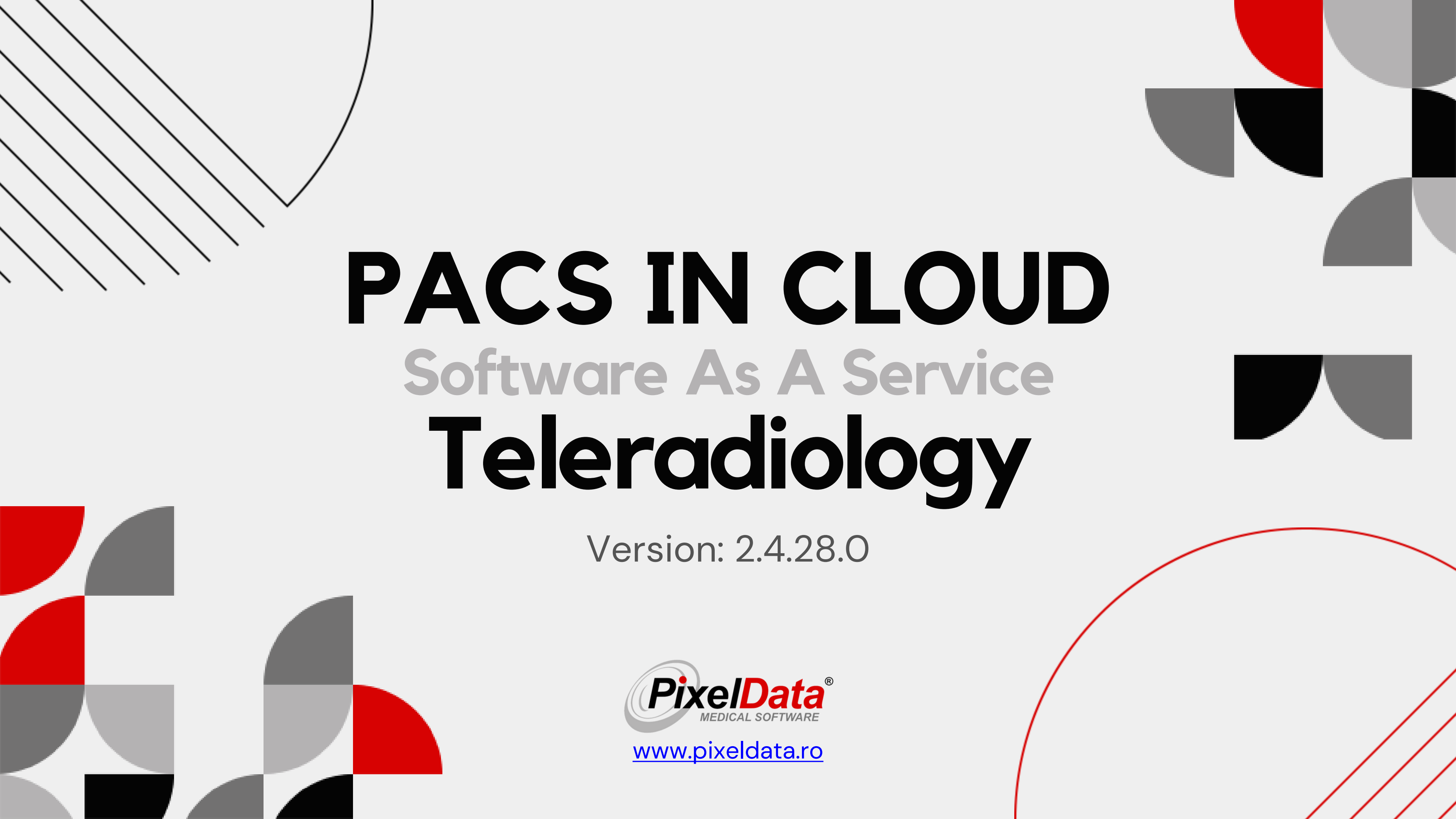




PACS IN CLOUD

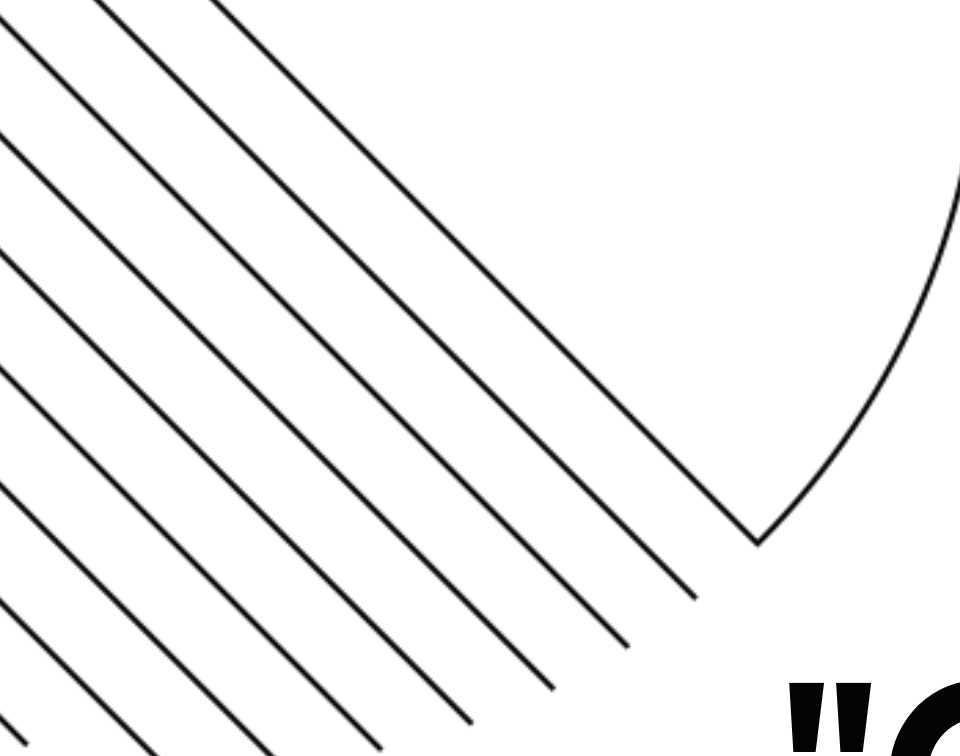
Software As A Service

Teleradiology

Version: 2.4.28.0



www.pixeldata.ro



"CHANGING **LIVES
ONE CODE LINE
AFTER ANOTHER"**

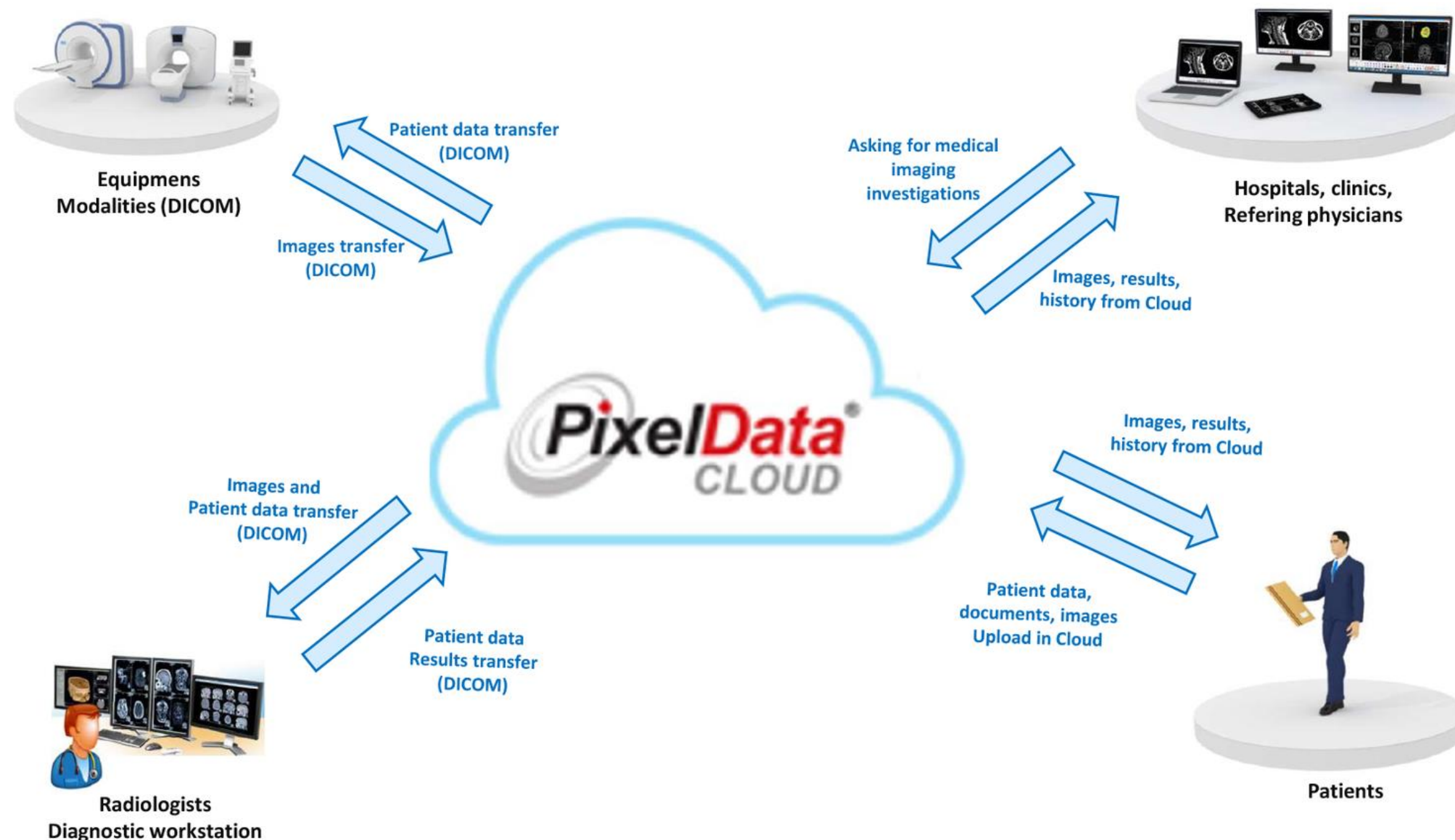


ABOUT US

We are a Romanian [medical software](#) company established in 2004. **PixelData** software products are intended for radiology departments and medical imaging centers. Through innovation, research, development and a lot of work, we reached an 80% share of the medical imaging market in Romania.

PixelData's main products:

- PACS and Cloud PACS
- Diagnostic Hub platform
- RIS and Modality Worklist
- DICOM Burner
- Web portal for patients and doctors
- Notifications
- Interfaces for integrations



PACS IN CLOUD

- Horizontal scalability
- Security in data access and storage
- High performance backup system
- Traceability in data access
- Direct connection via IPSEC Tunnel

DASHBOARD

Custom activity reports application:

- For radiologists
- For referring physicians
- For technicians
- For daily activity

PATIENT PORTAL

Patient Portal – patient portal with direct access to images and results

Physician Portal – portal for referring physicians to access patient images and results

Second opinion – is a very useful portal for access to second opinion. A link (URL) sent by email is used

Upload documents and images by patients directly into the platform; Existence of a triage and approval list before the information is saved in the system



- 2FA (two-factor authentication)
- Study sharing with double authentication
- View reports
- View images
- Import documents
- History of images, documents and results

PIXELDATA WORKFLOW ORCHESTRATOR

Workflow management
Clinical information
Diagnostic/result
Image sharing

**SECURITY
SINGLE SIGN ON**

Microsoft Active Directory Integration
LDAP

**APPLICATION
INTEGRATION**

Enables easy and secure integration with other RIS and/or HIS software applications using HL7, DICOM and Web API (JSON) protocols and technologies

AI MARKETPLACE

Easy integration with any type of AI engine through any type of interface (DICOM or REST API)

USER TYPES

Sys Admin / Radiologist / Clinician / Technician / Receptionist

MODALITY WORKLIST

HL7

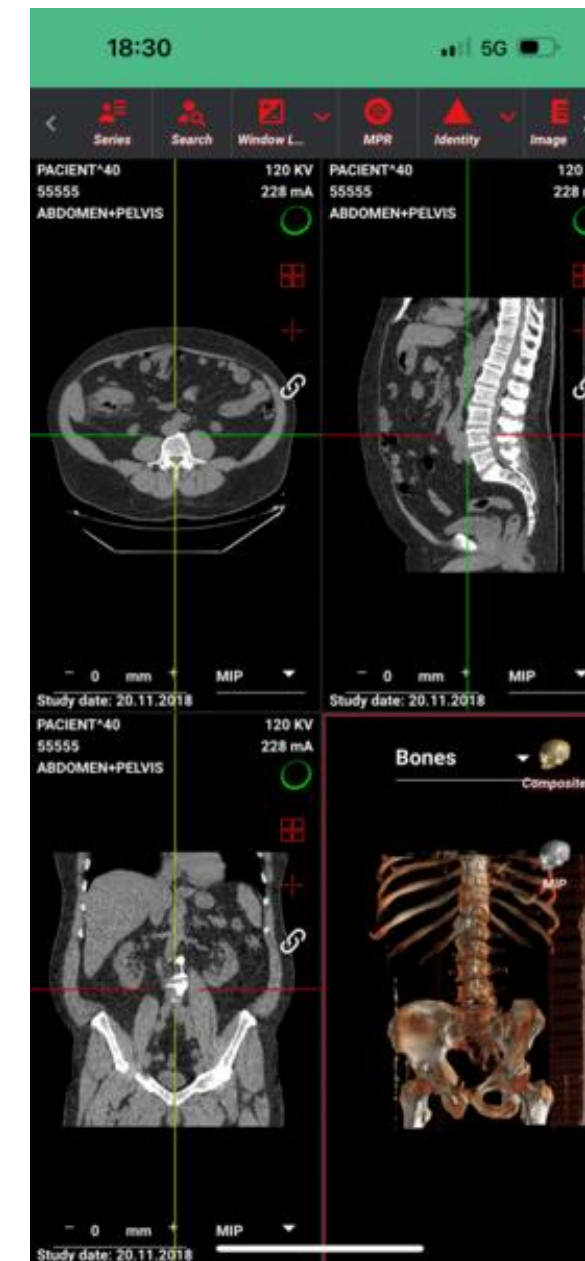
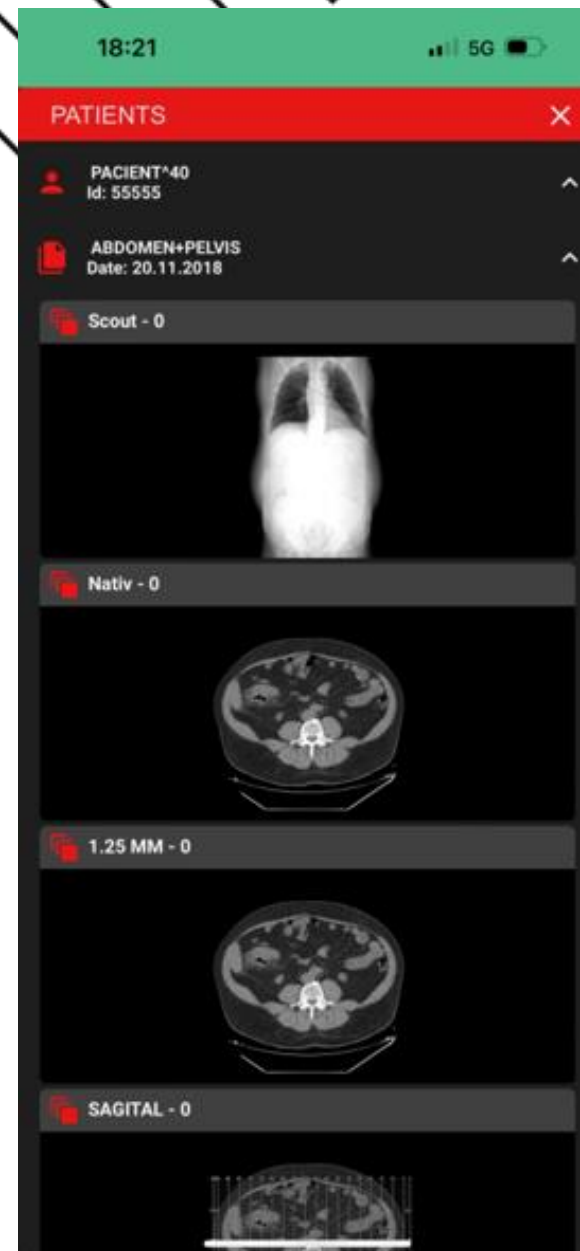
WEB API

MODALITY
(CT, RM, RX etc.)



Server-side service that converts from DICOM to HL7 or JSON, depending on the application it needs to connect to in order to get patient data and exams to be performed on a particular device

MOBILE WEB DICOM VIEWER



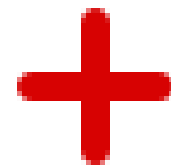
PixelData - PACS

General characteristics

Easy to use – intuitive, suggestive, workflow oriented
Scalability – the system is horizontally scalable, more and more medical imaging centers can be added

Multiple facility – the PACS system can handle multiple medical imaging centers

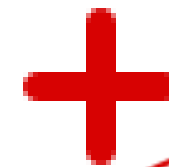
Unlimited users – the system can manage an unlimited number of users



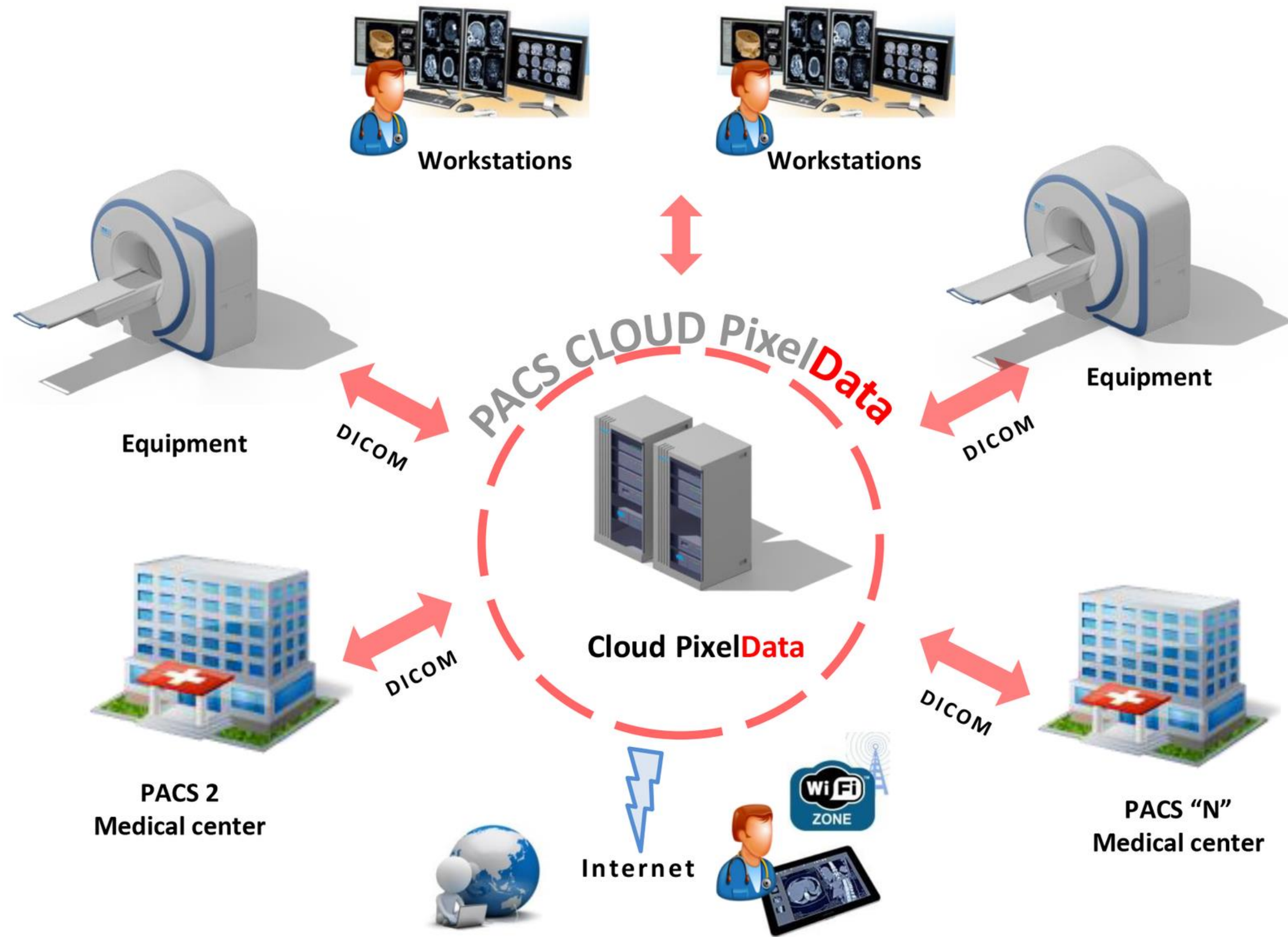
Unlimited storage – the PACS system can access an unlimited number of storage and backup drives

Software integration – the PACS system includes integration interfaces for any software application (RIS, HIS, etc.) using HL7, DICOM, Web API (JSON) language

Security – the system includes current security technologies (certifications, double authentication)



**24/7
Tech
Support**



MAIN PACS FUNCTIONALITIES

- **Image archiving** – 50% compression
- **Image viewing and post processing** – Web and Desktop DICOM Viewer
- **Image transfer** – different rules based on routing
- **Web portal** – for patients and doctors
- **Second opinion** – using the email service and a link (URL) to the study indicated by another doctor
- **Documents import** – using scanners, direct access folders and using the mobile app to scan and transfer to PACS
- **Notifications** – app for iOS and Android that automatically notifies the radiologist when the images have arrived in the PACS and are ready to be viewed for the purpose of drafting the diagnosis



ARCHIVING



- The PACS system can manage an unlimited number of archiving units
- Images are compressed before archiving. Image compression is about 50% and is 100% reversible
- Real-time backup system (if the archive drive is down, the PACS will work with the backup drive)

IMAGE PROCESSING

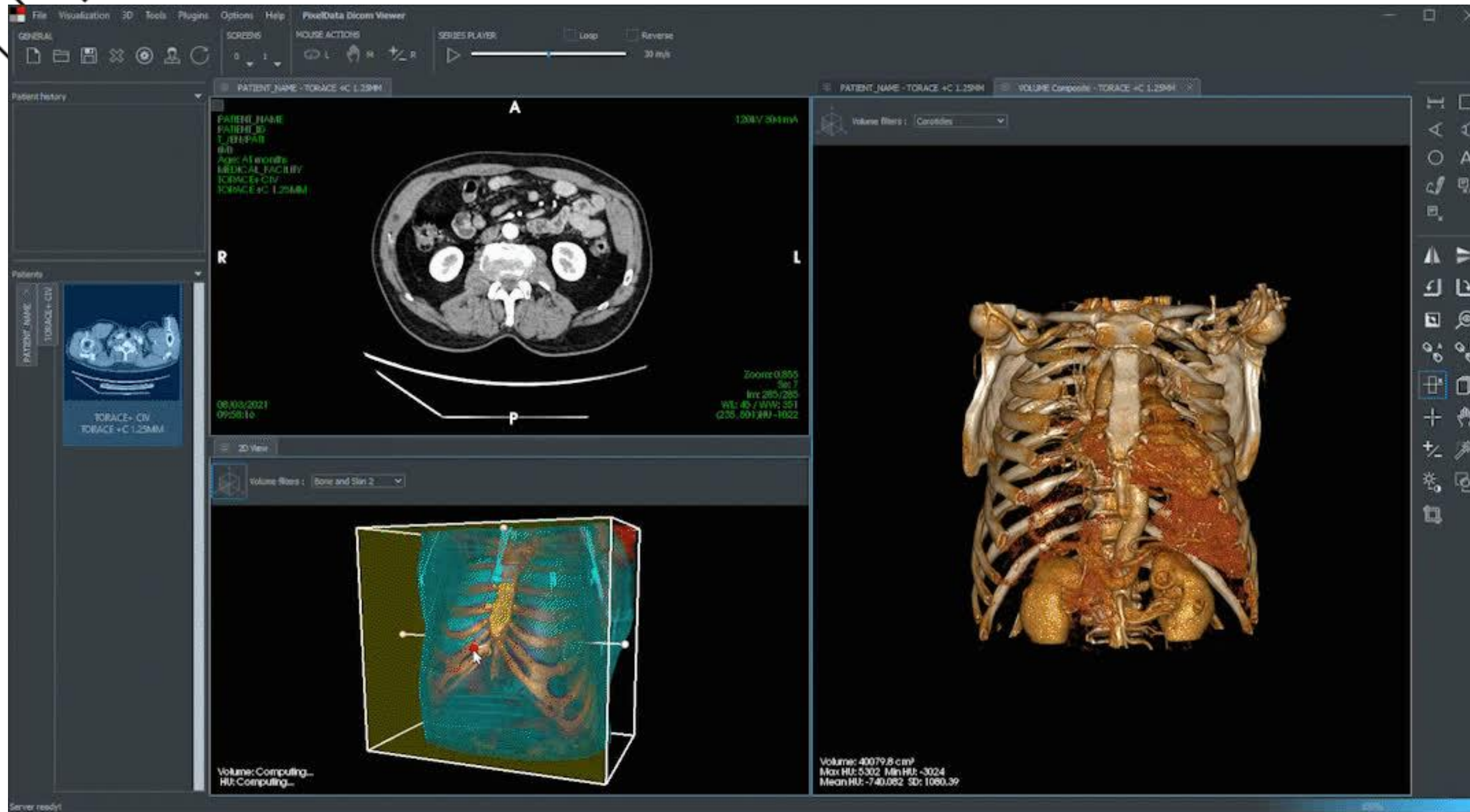


- Measurements, annotations
- Multi Planar synchronization
- MPR (Multi Planar Reconstruction)
- MIP/MinIP/Avg (Maximum Intensity Projection)
- Volume rendering
- Patient history one click away

WEB VIEWER 3D



DESKTOP VIEWER 3D



DESKTOP VIEWER 2D

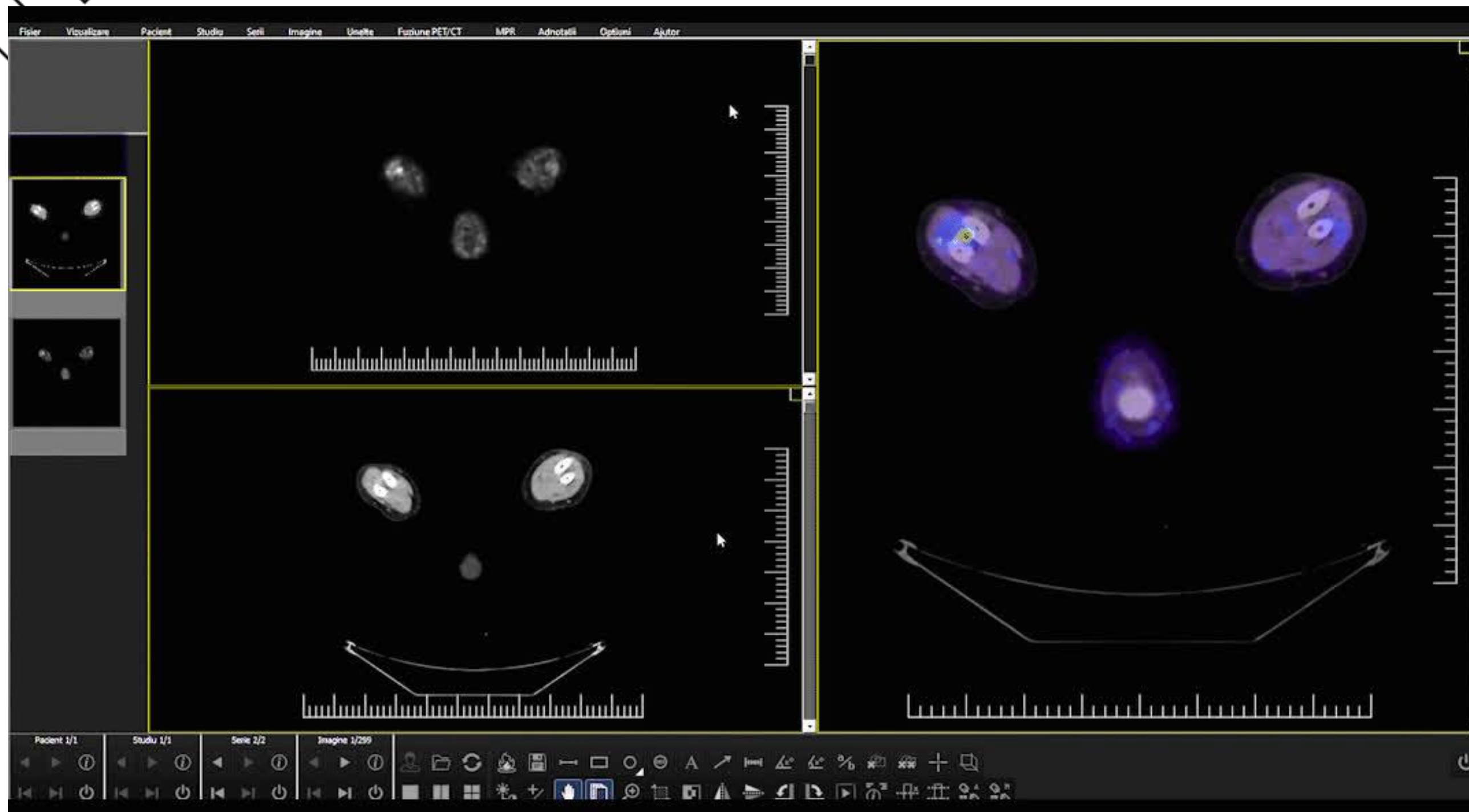
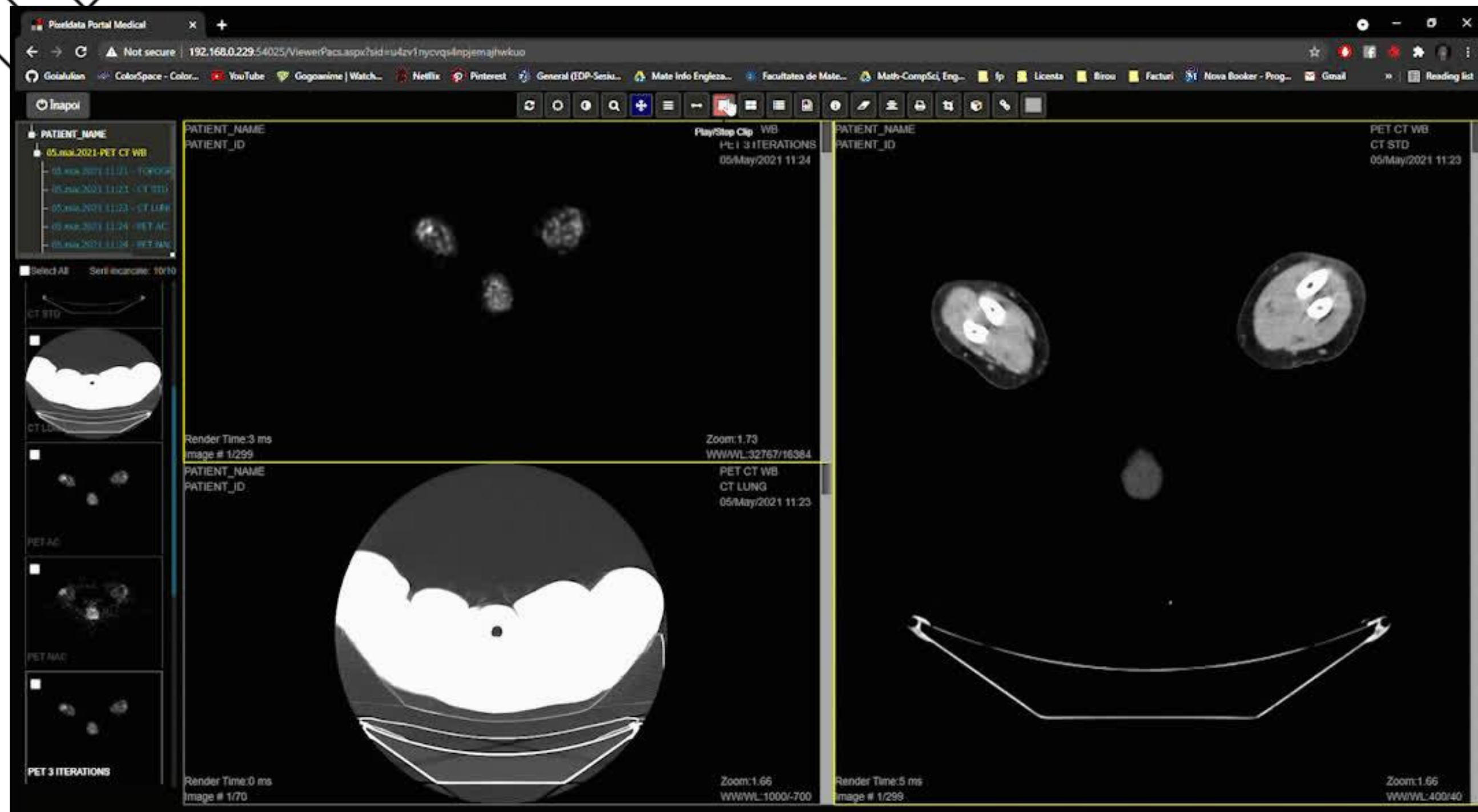


IMAGE TRANSFER

- The DICOM standard is used for image transfer. Ability to use more than one network IP for sending and receiving images based on the DICOM standard
- Encrypted image transfer using DICOM SSL/TLS
- Additional data transfer using the HL7 standard and HL7 SSL
- Web API REST services using HTTP/HTTPS to transfer information about patients, exams or other medical documents
- Special DICOM routing software service specialized in sending images to other DICOM nodes based on complex routing rules
- Custom interfaces using any technology



WEB PORTAL | GRAPHIC INTERFACE



DOCUMENT IMPORT

The PACS system supports the following ways to import patient documents:

- Direct access from the scanner using the Twain driver
- Importing files from folders
- Using the mobile app available in the App Store and Google Play to take photos and transfer them to PACS based on the Web API



10:15

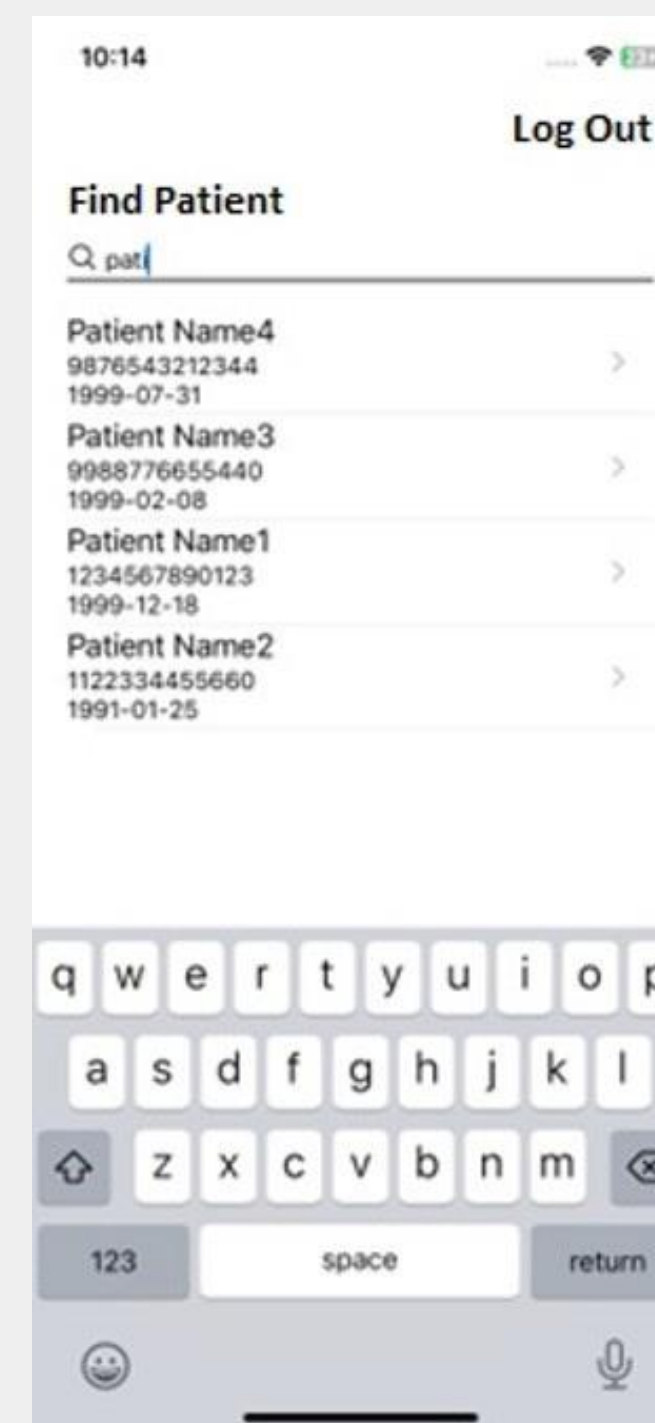
< Back Save

PID

First Name

Last Name

Add Picture



10:14

Log Out

Find Patient

Q pat

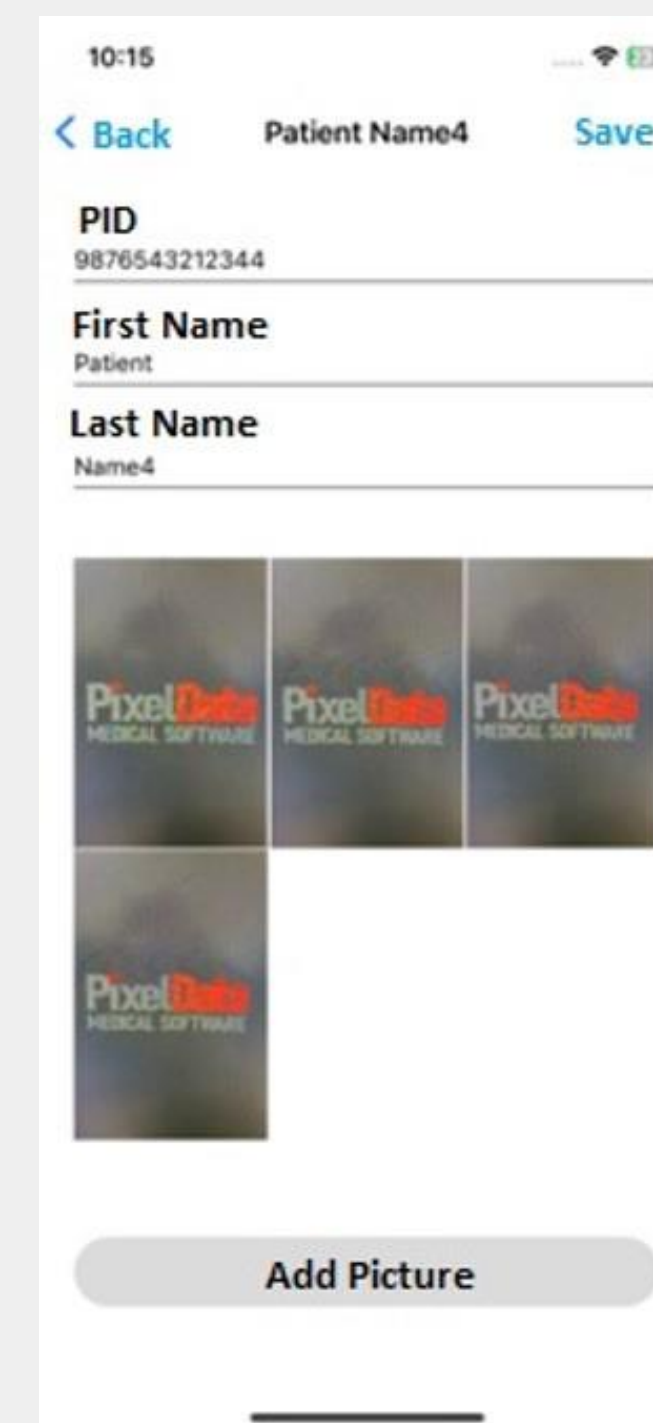
Patient Name4
9876543212344
1999-07-31

Patient Name3
9988776655440
1999-02-08

Patient Name1
1234567890123
1999-12-18

Patient Name2
1122334455660
1991-01-25

q w e r t y u i o p
a s d f g h j k l
z x c v b n m
123 space return



10:15

< Back Patient Name4 Save

PID
9876543212344

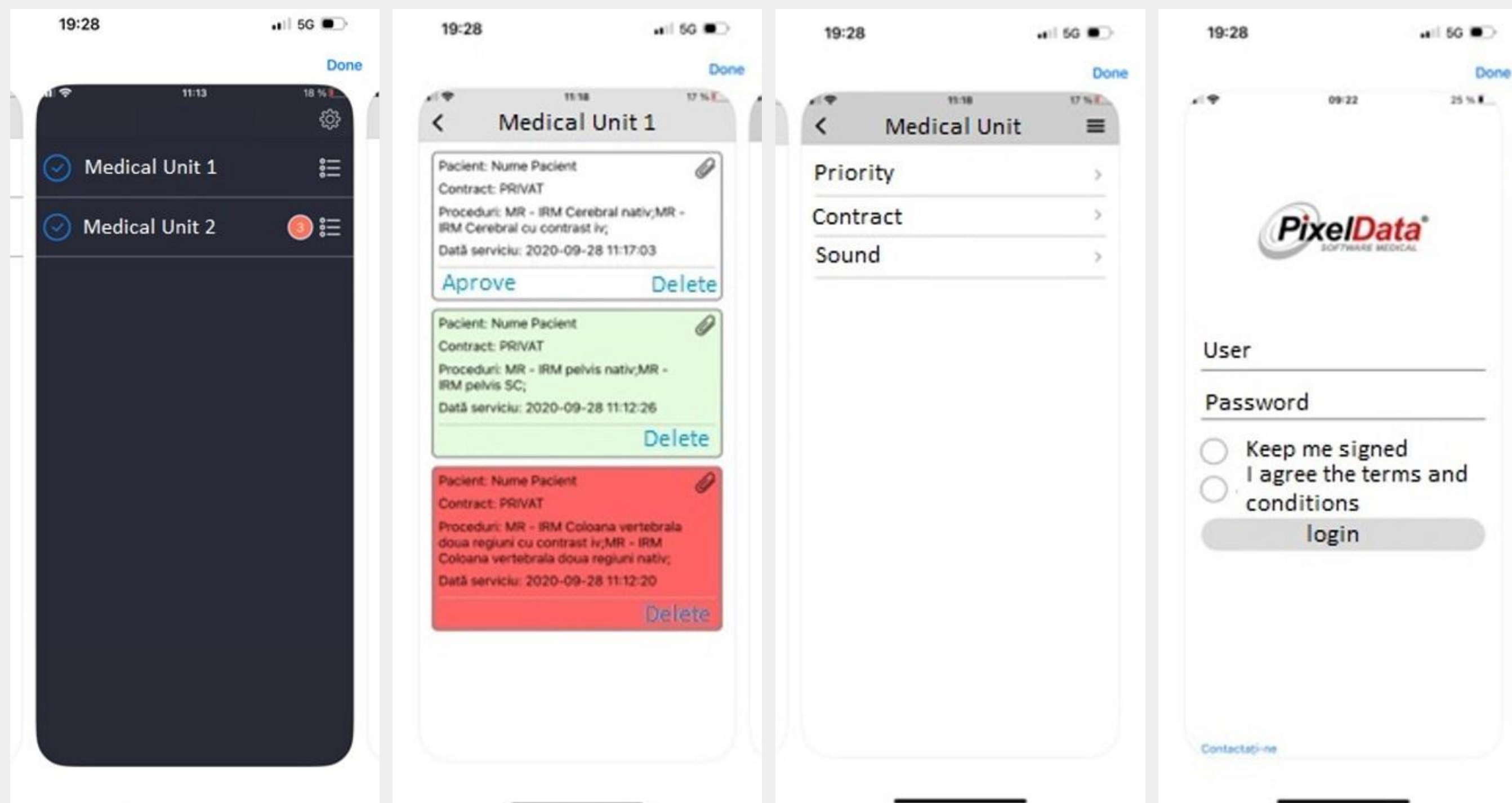
First Name
Patient

Last Name
Name4

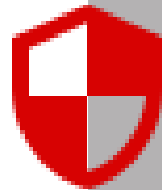
Add Picture

PACS NOTIFICATIONS

Notification app
available on App
Store for iOS and
Google Play for
Android,
very easy to
download and
install. All
communication is
secure. All
information is
encrypted using the
mobile device ID



SECURITY



The PACS system has implemented modern technologies in the Security component:

- Multiple sign-in in the web portal
- HTTPS – uses SSL encryption for web communication
- DICOM SSL, HL7 SSL – implemented SSL encryption in DICOM and HL7 interfaces
- VPN/IP SEC – for VPN channels using IPSEC encryption

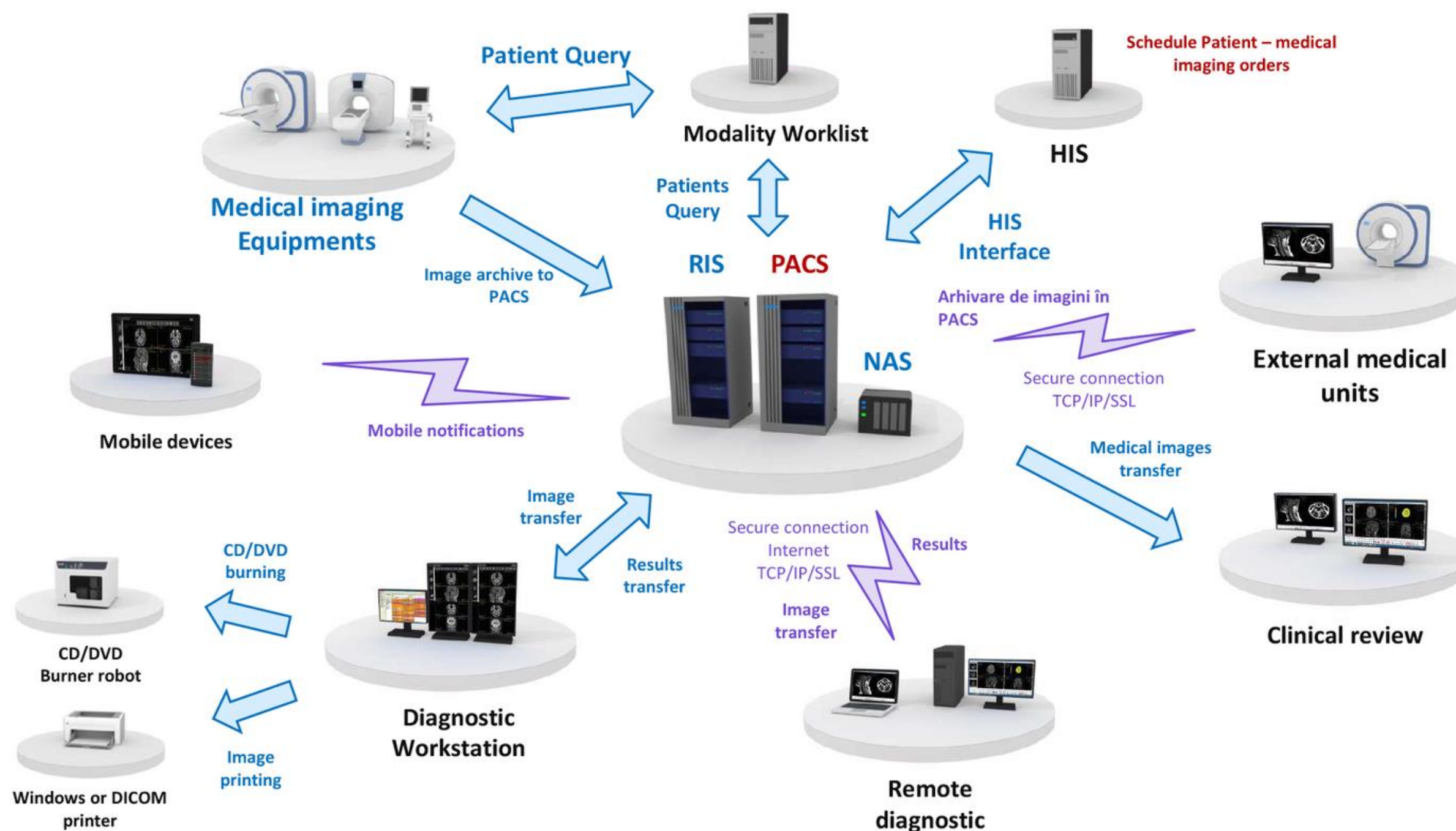
PACS SYSTEM - INTEGRATIONS

- The PACS system has interfaces for integration with any type of software application (RIS, HIS, etc.)
- All interfaces are secured and use authentication methods
- PACS system interfaces include HL7, DICOM, Web API (JSON) standards
- Development of special interfaces at the request of the client
- Integration with artificial intelligence (AI) engines for advanced image processing

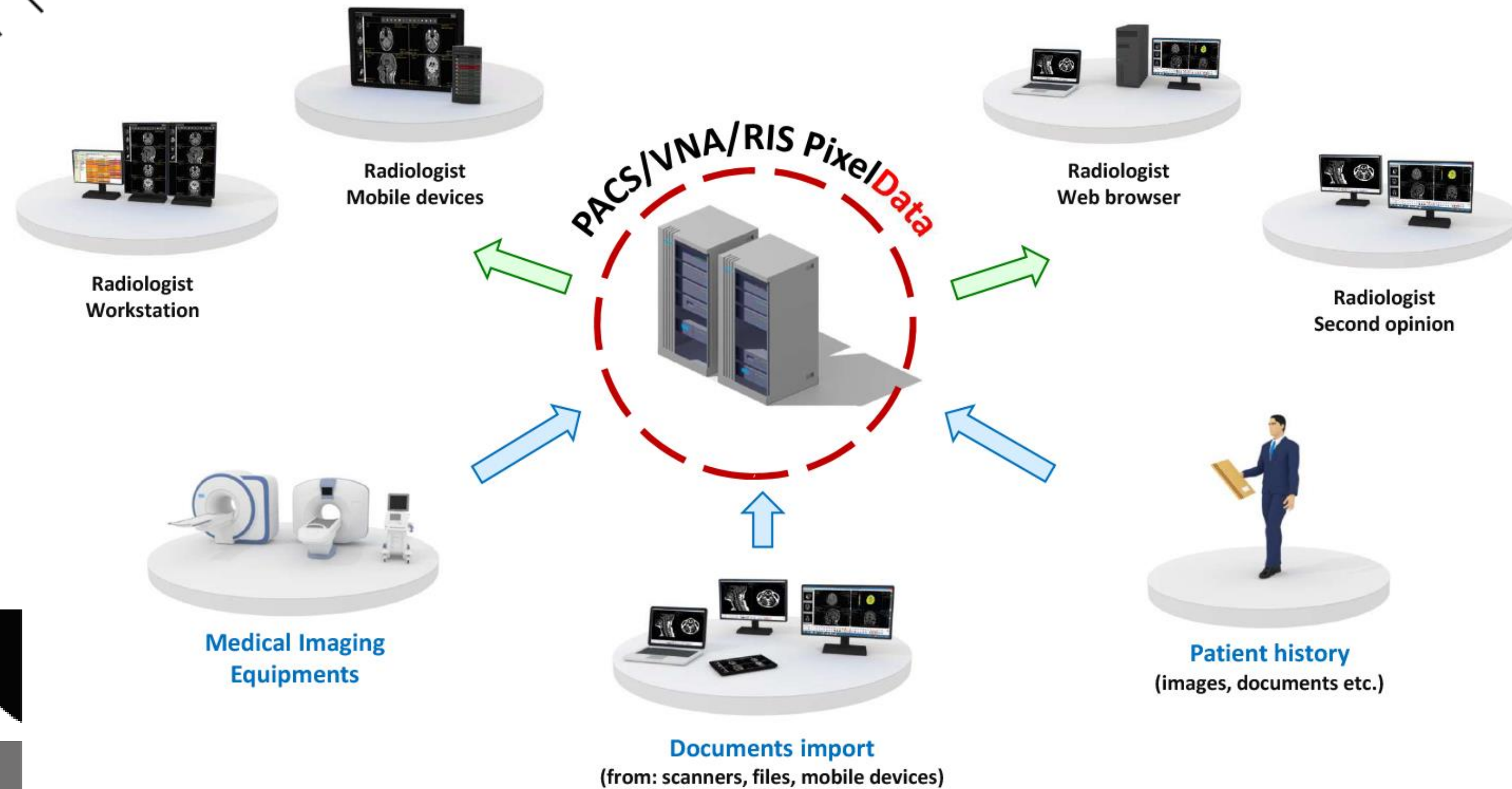


PACS SYSTEM INTEGRATION

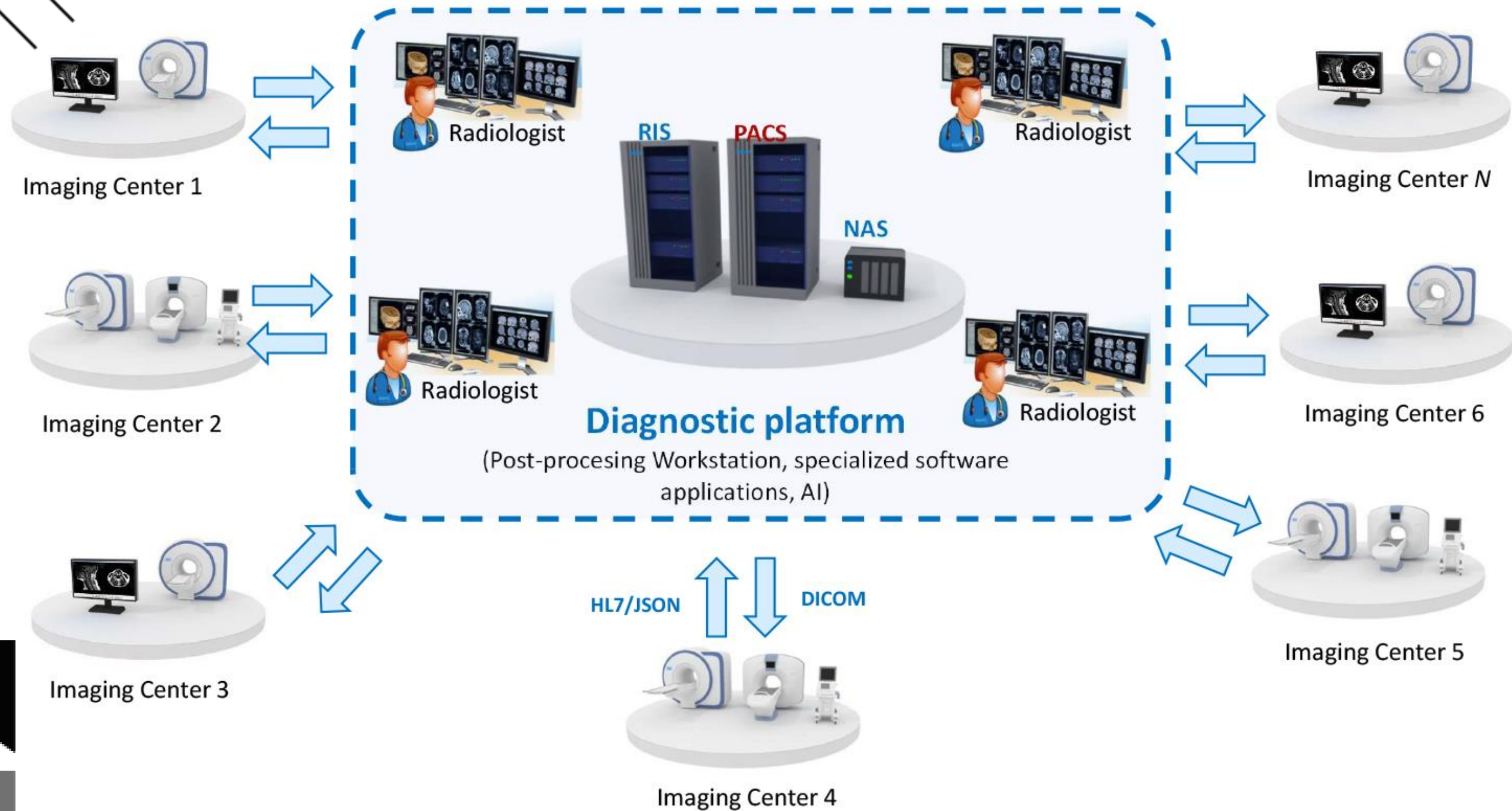
Open System for integration based on DICOM/HL7/JSON



TELERADIOLOGY



DIAGNOSTIC HUB



WEB RESULTS

- Editing results in a web application
- Application independent of operating systems
- Editing using output templates
- Possibility of integration with voice recognition systems (voice → text)

SEMNEAZĂ

MACRO

ANULEAZĂ

Examinări

Editor

Detalii Pacient

Numar Pacient

Test Test

Sex

M

CNP Pacient

1000000000000001

Data Nașterii

18.09.1948

Vârsta

77

ID Pacient

50424

Detalii Sursă

Unitate Medicală

AAAA

Contract

CAS III

Medic Radiolog

Tehnician

Techician Test

Medic Solicitant

Medic Test

Tabela

Detalii Examinare

Nume Procedură

CT regiune toracica nativ si cu substanta de contrast

Nr. Examinare/Procedură

85305/85481

Data/Ora Procedurii

24.04.2020, 10:39

Varsta Operatiei/Contrasta

Starea Procedurii

C

ICD 10 la internare

Editare

Modulul Examinat

Secvență Diagram

Nota Tehnician

Comente Client

←

→

✕

🔄

📄

Times New ...

14

A⁺ A⁺

■

A_y

B

I

U

S

X₁

X₂

A₀

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☷

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☲

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☵

☶

☐

Normal

🔊

🔇

TORACE:

No se constata modificari pleuro-pulmonare.

Fara adenopatii mediastinale sau hilare.

Structurile vasculare mediastinale apar cu morfologie normala.

Ficat, pancreas, splina, suprenale cu structura omogena, fara formatiuni inlocuitoare de spatiu pre- si postcontrast, cu dimensiuni in limite normale.

Fara modificari de structura osoasa cu caractere suspecte la nivel vertebral dorsal.

CONCLUZII:

Aspect CT in limite normale

RADIOLOGY INFORMATION SYSTEM – RIS

- Patient and clinical resources management
- Clinical Collaboration Platform
- Enable more efficient business management
- Right study is sending to the right radiologist based on his expertise, availability and workload. “The Orchestrator chooses the ideal radiologist to read each exam”
- Integration with AI engines
- Peer Review included
- Management reports
- Teleradiology included

For Report editor:

- Template for results
- Voice recognition
- Compare results
- Keywords
- Pathology classification
- Images integration in results



CONCLUSIONS

- A complete, scalable, intuitive and flexible PACS system with very good features at full price
- Integration with artificial intelligence applications
- Private Cloud oriented system, teleradiology ready
- 27/7 tech support
- Easy integration with any software application and equipment
- Comprehensive and customized management reports
- GDPR Compliant





THANK YOU

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