

Pi™ – Service Definition

Overview of the service

Pi™ is software to help find cancer using MRI scans.

The first application of Pi™ is in prostate cancer. Pi™ has shown expert-level performance with 95% sensitivity and 67% specificity in evaluation with real-world, multi-centre, multi-vendor MRI data from across the NHS.

Lucida Medical also offers a variety of support and custom development services related to Pi™ ranging from the development of new medical AI applications to tailoring and hosting of Pi™ to meet specific requirements such as branding and clinical trials.

Technical details

How Pi™ works

Pi™ is used to analyse MRI scans for cancer as follows.

- Lucida Medical integrates Pi™ with a hospital's MRI scanners and IT infrastructure, including performing quality and technical checks to ensure optimum performance
- A patient has an MRI scan following the standardised protocols, and data is sent to the hospital PACS storage
- PACS or a DICOM router or integration platform forwards the MRI study and related data to Pi™
- Pi™ processes the results, typically within a few minutes
- The results are returned to PACS and stored alongside the original MRI study, for viewing and reporting.

Installation

Pi™ supports three different classes of installation.

- On-premises installation in virtualised hospital infrastructure, with direct connection to PACS
- Integrator installation through partner AI deployment platforms, PACS and integration service providers
- Cloud hosted software managed by Lucida Medical.

With on-premises and integrator installations, patient data is not retained in the Pi™ service. Cloud hosted solutions will store data in DICOM formats and make this available for reporting using a DICOM viewer and optional export capabilities.

Integrator and cloud installations will typically be provided in the UK, EU or USA depending on the customer's location. UK customers are served from UK infrastructure.

Infrastructure requirements

Pi™ typically runs on supported Linux OS platforms and Docker infrastructure. The minimum requirement is for 16 CPU cores, 16GB RAM, 50GB storage.

Training and onboarding

A typical engagement follows these steps to set up Pi™.

- Pre-contract meetings with users (radiologists), clinicians and other stakeholders
- Completion of governance sign-offs such as DPIA and clinical safety
- Contract signed

- Review MRI scanner protocols and update as required to ensure compliance with clinical guidelines and Pi™ software
- Install Pi™
- User training, typically remote but in-person training can be provided with agreement at extra cost
- Support available to ensure user familiarity with Pi™ and to monitor use.

Service levels

Availability

The Pi™ service is provided on high-availability infrastructure typically offering a minimum of 99.9% availability.

Backups are typically managed with the infrastructure provider, hospital IT or integrator partners.

Service can also be restored remotely by Lucida Medical support personnel, typically in around 8 working hours from infrastructure becoming available.

Offboarding support and access to data

Because Pi™ results are normally stored in the PACS, there is minimal data to migrate at the end of a contract. Offboarding typically comprises:

- Disabling the Pi™ service so no further data is transferred or processed
- Archiving logs for regulatory and contractual monitoring purposes
- Deletion of services.

Custom offboarding is offered for an extra fee. Custom offboarding is required at the end of a contract where Lucida Medical provides the PACS or hosts services, and typically includes providing DICOM format data back to the customer for archiving in PACS, research or other regulatory archives.

Customisation

Language. Pi™ outputs and supporting documentation is provided in English language in the UK and other English-speaking nations. Outside the UK, Pi™ outputs and documentation is provided in the relevant national language.

Output customisation. Pi™ template reports can be customised for colours, format and layout. Certain Pi™ outputs may be disabled if not required or not included in the agreed service price.

Training new algorithms. Lucida Medical can also offer retraining and new radiology and medical AI algorithm development, regulatory approvals and service provision based on the Pi™ platform.

After-sales support and maintenance

Pi™ is typically maintained by Lucida support personnel during out of hours maintenance windows agreed with customers to minimise impact on clinical services. Outages are managed through support. Upgrades to Pi™ are provided within the same regulatory certified version as standard. New versions of Pi™ are expected to be made available and where these offer substantial additional functionality or performance, the price may change. Subject to regulatory requirements, existing Pi™ versions will be supported for a minimum of 2 years after a new version becomes available.

Service support is provided by email and phone with agreed hours according to the contract.

A free tier of service is typically included in any contract. Service requirements above the free tier are billed on an hourly or project basis.

Security

Lucida Medical follows industry standards regarding security its own and customer services. Further details are available on request and are detailed in the relevant service agreement.