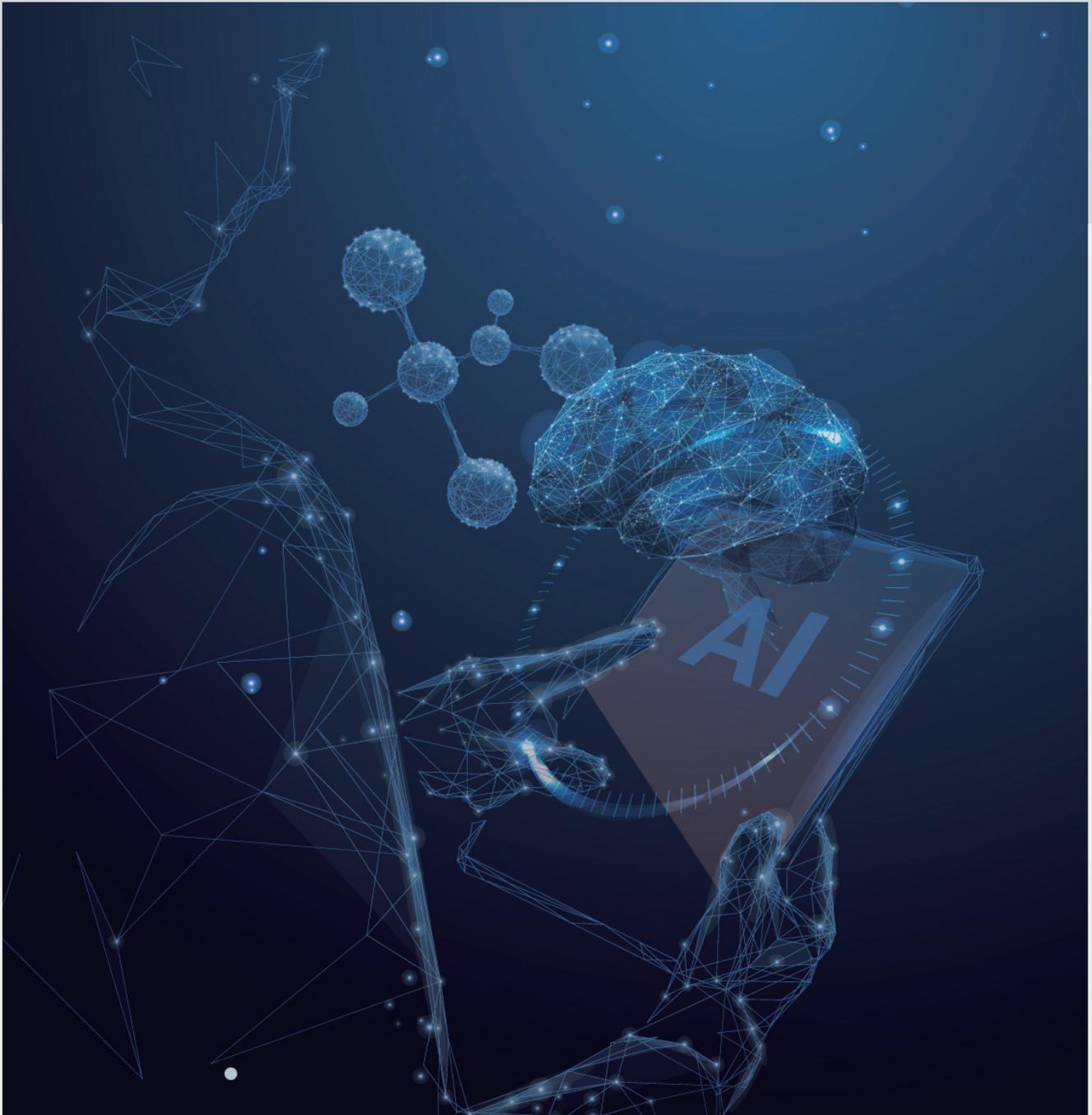


# MEDIHUB

Neuro & Cancer Medical Platform



AI for Human Benefit, Everywhere



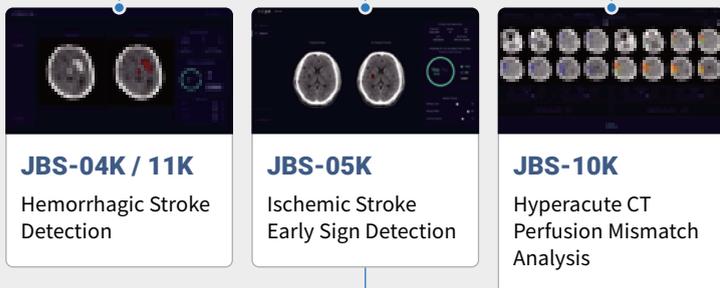
Supporting analysis of all phases of stroke ranging from Hyperacute to prognosis, utilizing **CT/MRI** images

**HYPER ACUTE**

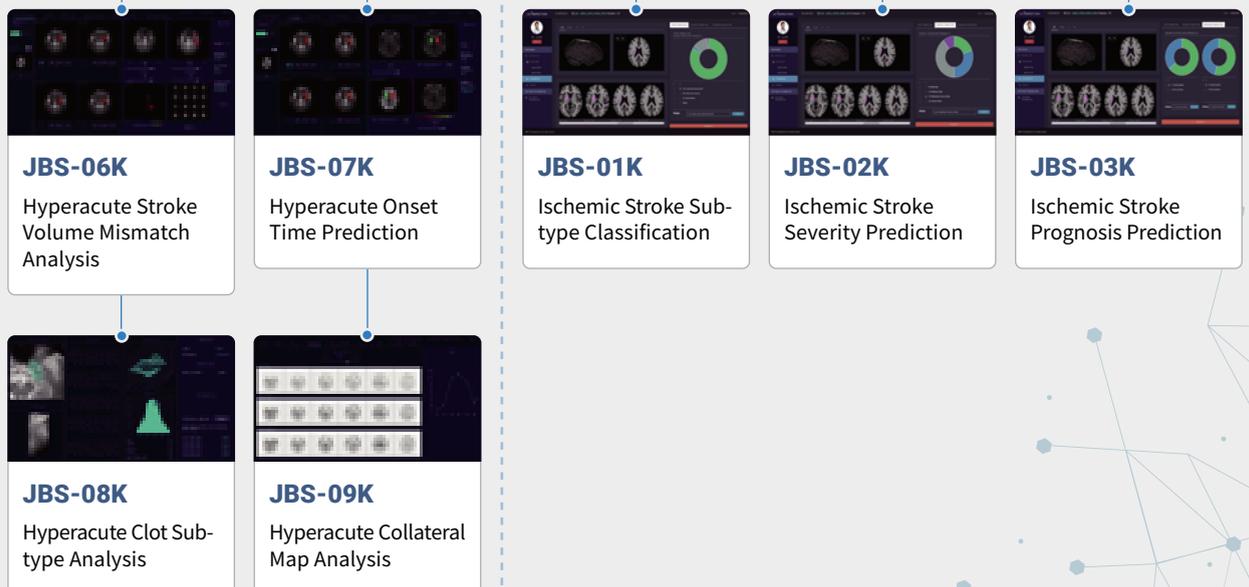
**ACUTE**

TIME →

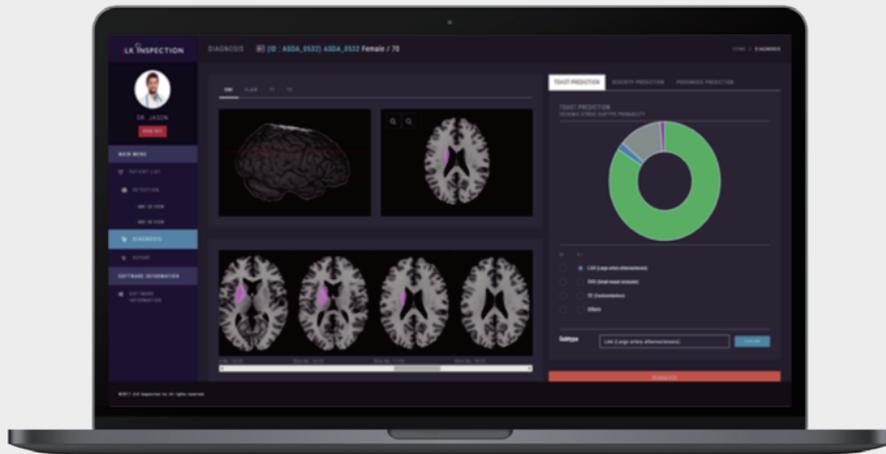
**CT Scan**



**MRI Scan**



**Treatment / Prescription / Rehabilitation**



# JBS-01K

## AI based Ischemic Stroke Subtype Classification Solution

### | Summary

Recent advances in stroke management have shown a significant increase in the cure rate for stroke patients. However, such treatment plans can vary in efficacy or have the risk of side effects if stroke subtype is not considered. Therefore, pre-treatment subtype classification is a crucial step to take in the early stage.

JBS-01K is aimed at detecting lesion location for ischemic stroke patients and classifying the subtype of such occasion. The subtype of ischemic stroke is provided according to the trial of org 10172 in acute stroke treatment(TOAST) and will assist in establishing a proper treatment plan.

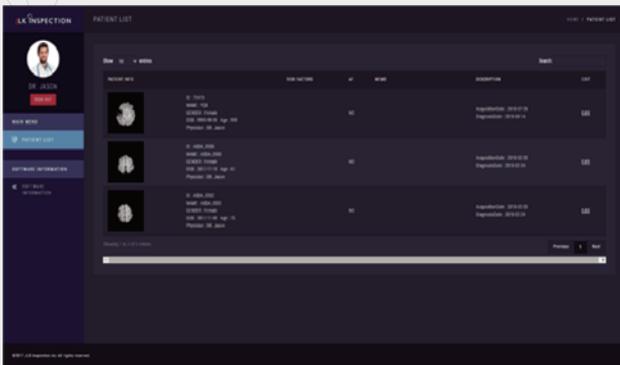
### | Key Components & Performance

- Multi Data Center Dice Coefficient 83.56% / F1-Score 80.62%
- Analysis Time : within 40 seconds
- Convenient patient data management through PACS interworking
- Display analysis result within the web-based user interface
- Provide customized patient report

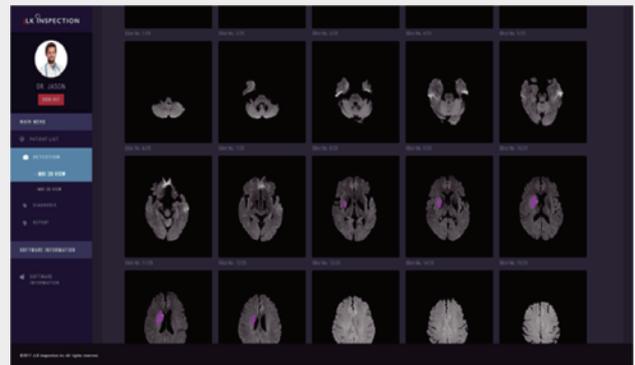
### | Input / Output

- **Input Data** Patient Brain MRI DICOM (DWI), Atrial Fibrillation (AF)
- **Output Information** Ischemic Stroke Subtype Probability

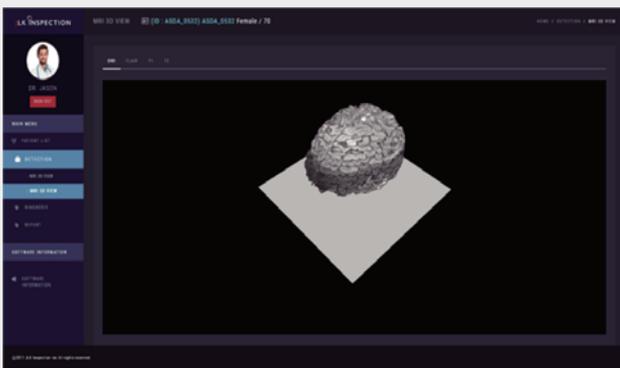
## Solution UI



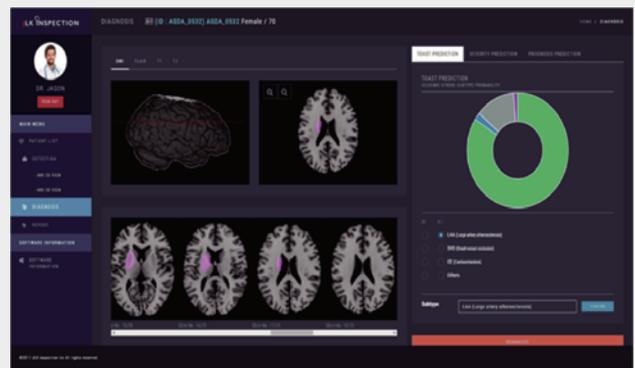
1 Patient List Management UI



2 AI Analysis Result UI (2D View)



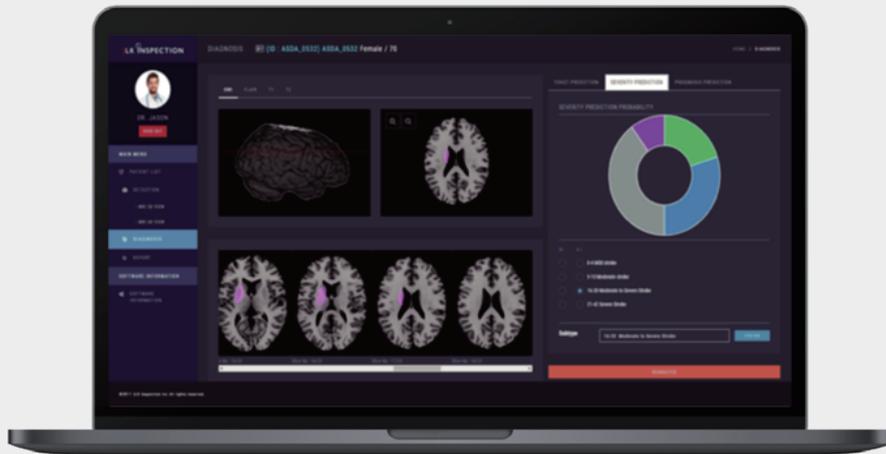
3 AI Analysis Result UI (3D View)



4 Ischemic Stroke Subtype Analysis UI

## Unique Functionality

- Trained to detect whether lesion exists consistently between slices of MR images through 3D CNN segmentation model
- Trained on lesion image which has standardized lesion size and location for subtype classification model
- Provides subtype probability to assist doctor's final decision
- Improved classification performance for cardioembolism by additionally training on atrial fibrillation information



# JBS-02K

## AI based Ischemic Stroke Severity Prediction Solution

### | Summary

The severity of ischemic stroke plays an important role in the treatment and management of patients. Observing initial and changes in the severity can help establish an adaptive treatment strategy based on the patient's condition.

JBS-02K is aimed at detecting ischemic lesions in patients and predicting the severity. It provides the prediction on the NIH stroke scale (NIHSS), which is formulated by the National Institutes of Health in the United States, to measure the severity and to provide appropriate treatment.

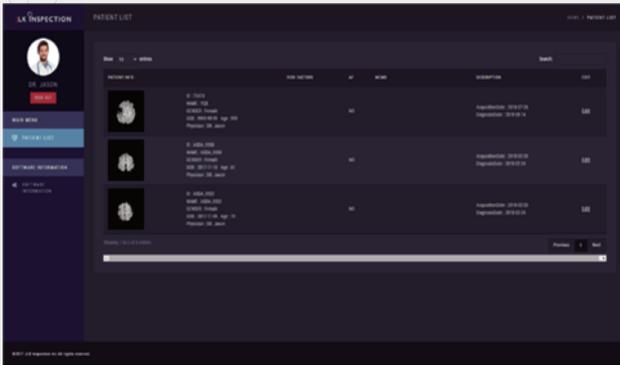
### | Key Components & Performance

- Single Data Center Dice Coefficient 83.56%
- Analysis Time : within 40 seconds
- Convenient patient data management through PACS interworking
- Display analysis result within the web-based user interface
- Provide customized patient report

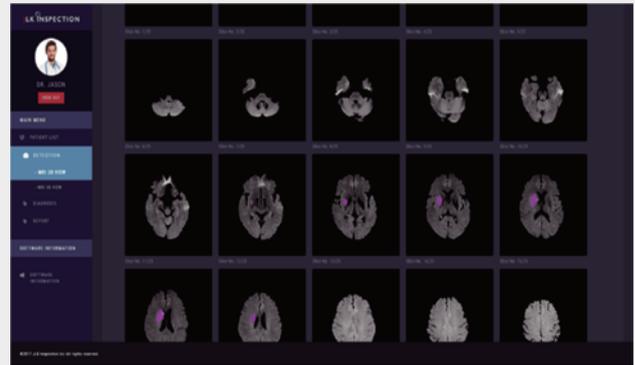
### | Input / Output

- **Input Data** Patient Brain MRI DICOM (DWI)
- **Output Information** Ischemic Stroke Severity Probability

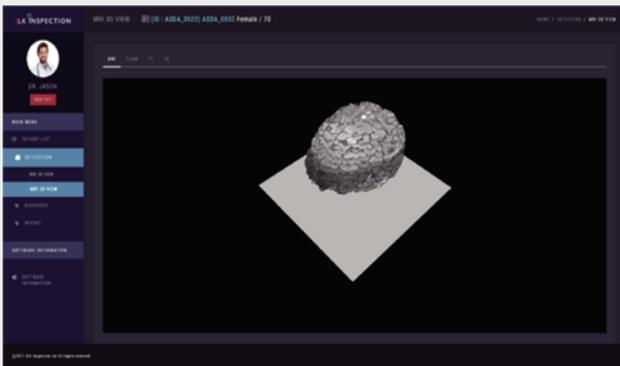
## Solution UI



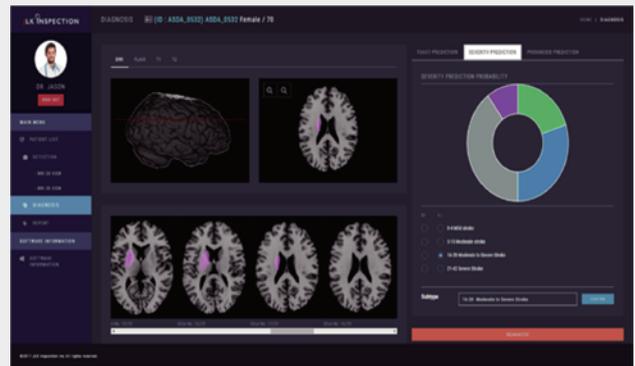
1 Patient List Management UI



2 AI Analysis Result UI (2D View)



3 AI Analysis Result UI (3D View)



4 Ischemic Stroke Subtype Analysis UI

## Unique Functionality

- Trained to detect whether lesions exist consistently between slices of MR images through 3D CNN segmentation model
- Trained on lesion image which has standardized lesion size and location for severity prediction, prognosis prediction model
- Provides severity probability to assist in doctor's final decision
- Trained on more than 50,000 slices of MR images



# JBS-03K

## AI based Ischemic Stroke Prognosis Prediction Solution

### | Summary

Treatment strategies for ischemic stroke patients can vary based on the prognosis prediction result. Such information can assist in selecting a proper treatment method for the patient.

JBS-03K is aimed at detecting ischemic lesions for ischemic stroke patients and predicting their prognosis.

It provides the prognosis information by analyzing lesion location and size to provide appropriate treatment for the patients.

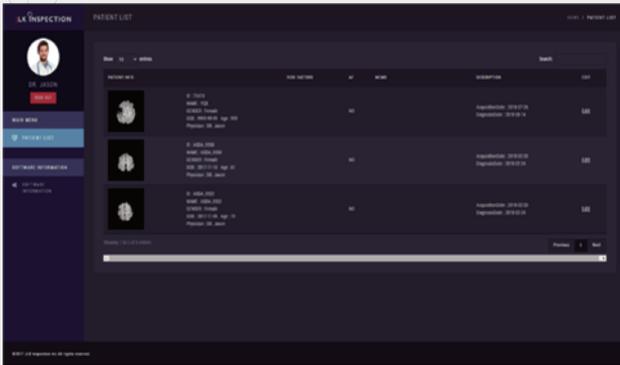
### | Key Components & Performance

- Multi Data Center Dice Coefficient 83.56% / AUC 80.18%
- Analysis Time : within 40 seconds
- Convenient patient data management through PACS interworking
- Display analysis result within the web-based user interface
- Provide customized patient report

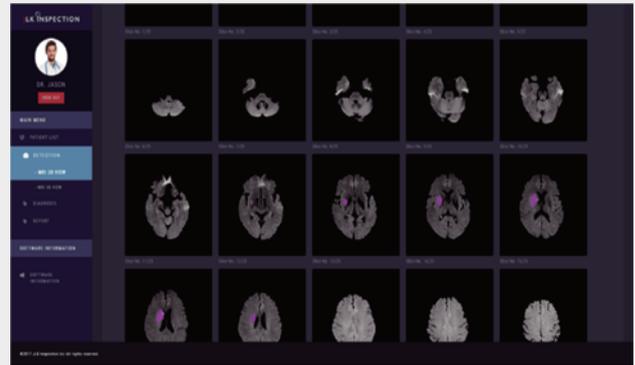
### | Input / Output

- **Input Data** Patient Brain MRI DICOM (DWI)
- **Output Information** Infarct Location, Size and Prognosis Probability

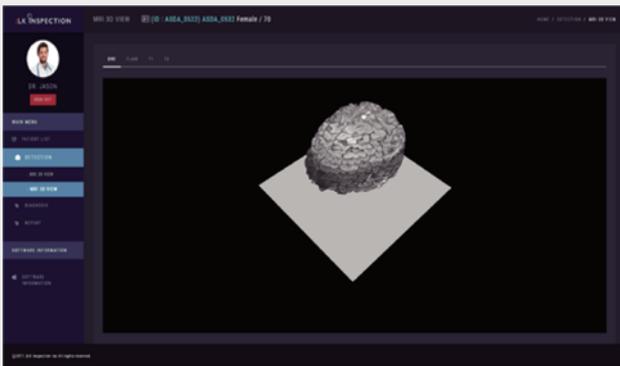
## Solution UI



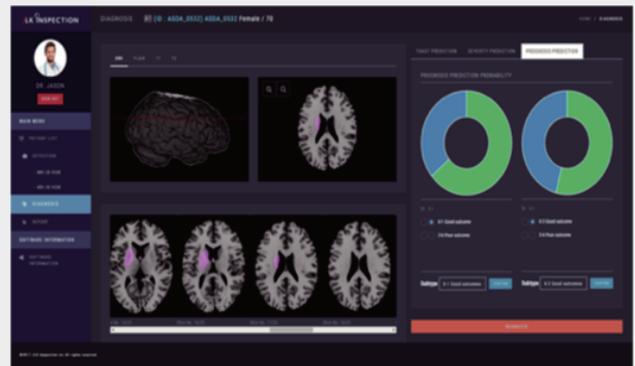
1 Patient List Management UI



2 AI Analysis Result UI (2D View)



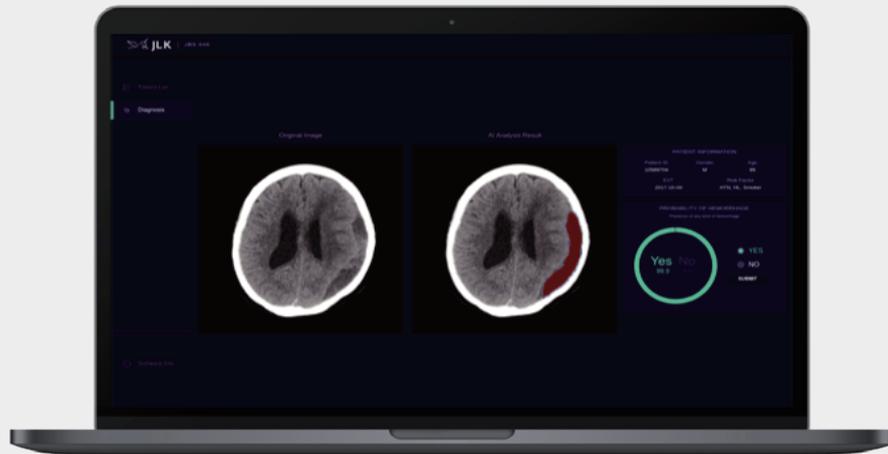
3 AI Analysis Result UI (3D View)



4 Ischemic Stroke Prognosis Analysis

## Unique Functionality

- Trained to detect whether lesions exist consistently between slices of MR images through 3D CNN segmentation model
- Trained on lesion image which has standardized lesion size and location for severity prediction, prognosis prediction model
- Provides prognosis probability to assist in doctor's final decision
- Trained on more than 50,000 slices of MR images



# JLS-04K

## AI based Hemorrhagic Stroke Detection Solution

### | Summary

Cerebral hemorrhage is a disease caused by an external shock, high blood pressure, and rupture of the cerebral blood vessels due to a cerebral aneurysm. And depending on the cause, area, and amount of bleeding, it is treated with medication or emergency surgery.

JLS-04K is a medical solution based on artificial intelligence, which detects cerebral hemorrhage from patient brain CT. This solution targets fast cerebral hemorrhage diagnosis in emergency situations and provides a lesion area and location for cerebral hemorrhage analysis.

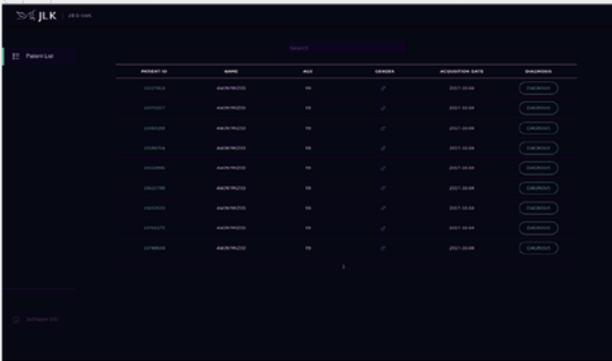
### | Key Components & Performance

- Single Data Center AUC 98.35%
- Analysis Time within 10 seconds
- Convenient patient data management through PACS interworking
- Display analysis result within the web-based user interface

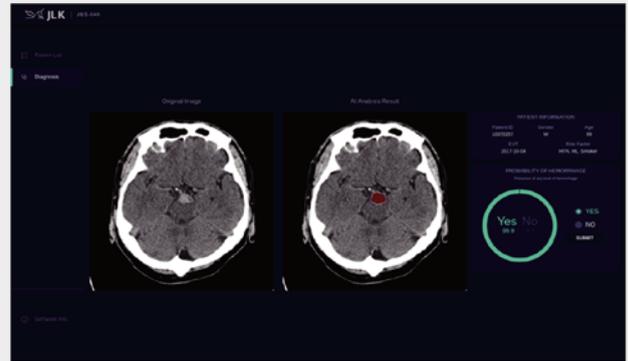
### | Input / Output

- **Input Data** Patient's Brain CT DICOM
- **Output Information** Cerebral Hemorrhage Area, Cerebral Hemorrhage Probability

## Solution UI



1 Analyzed Cerebral hemorrhage patients list UI



2 Cerebral Hemorrhage Analysis result UI

## Unique Functionality

- Training four cerebral hemorrhage sub-type.(EDH, SDH, ICH, IVH)
- Provide fast analysis and result for emergency situations
- Provide by visualizing the detected cerebral hemorrhage area



# JBS-05K

## AI based Ischemic Stroke Early Sign Detection Solution

### | Summary

Ischemic Stroke is a disease caused by blood vessels clogged in the part of the brain. It shows various symptoms, such as unconsciousness, dizziness, and body paralysis depending on the clogged location. Therefore, early detection and treatment are required to prevent severe conditions. Also, the treatment method varies depending on the symptoms and location so it is necessary to pinpoint the exact location.

JBS-05K is an artificial intelligence medical solution that detects ischemic stroke from a patient's brain CT and provides visualization by detecting the probability and location of the cerebral infarction.

### | Key Components & Performance

- Single Data Center AUC AUC 92%
- Analysis Time : within 15 seconds
- Convenient patient data management through PACS interworking
- Display analysis result as the web-based user interface

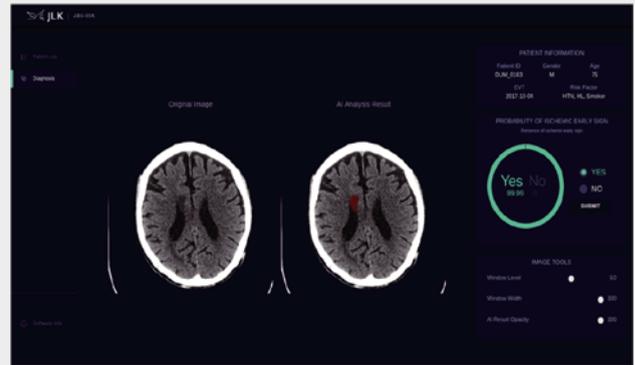
### | Input / Output

- **Input Data**                      Patient's Brain CT DICOM
- **Output Information**            Ischemic Stroke Area, Ischemic Stroke Probability

## Solution UI

PATIENT ID	NAME	AGE	GENDER	ACQUISITION DATE	DIAGNOSIS
0001	UNKNOWN	71	F	2018-02-12	Diagnosis
0002	UNKNOWN	81	F	2018-03-04	Diagnosis
0003	UNKNOWN	74	F	2018-06-25	Diagnosis
0004	UNKNOWN	84	F	2017-09-17	Diagnosis
0005	UNKNOWN	81	F	2017-07-12	Diagnosis
0006	UNKNOWN	71	F	2017-04-04	Diagnosis

1 Analyzed Ischemic Stroke patients list UI



2 Ischemic Stroke Analysis result UI

## Unique Functionality

- Ischemic Stroke early detection based on CT
- Ensemble algorithm is applied to U-Net and Patch-based U-Net to accurately detect Ischemic Stroke regions of various sizes



# JBS-06K

## AI based Hyperacute Stroke Volume Mismatch Analysis Solution

### | Summary

An Ischemic stroke occurs when a blood clot blocks a blood vessel, preventing sufficient blood flow to each cell. There are two major treatment methods for Ischemic stroke such as thrombolytic drug administration and vascular insertion. For thrombolytic drugs, there is a risk of progression to cerebral hemorrhage, so it is important to know the exact onset time and progress. Therefore, analyzing the image signal information that can determine the exact progress status and cause of occurrence can help doctors to provide accurate treatment.

JBS-06K assists in proper treatment by providing information on the comparison of the infarct core and the penumbra area.

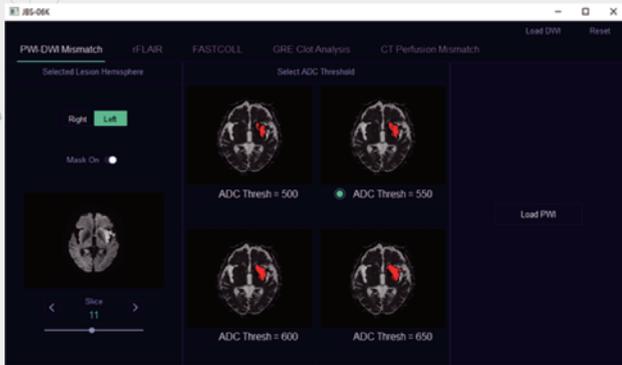
### | Key Components & Performance

- Analysis Time within 300 seconds
- Convenient patient data management through PACS interworking
- Display analysis result within the program-based user interface

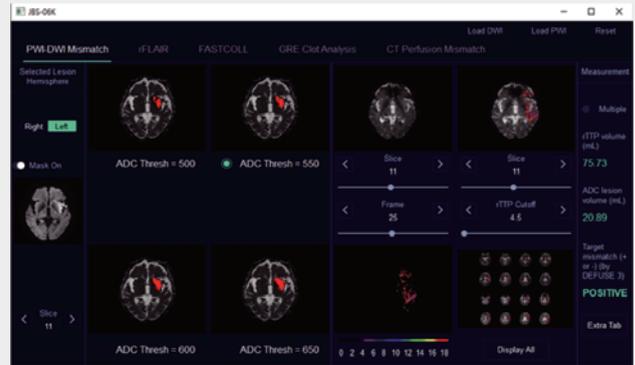
### | Input / Output

- **Input Data**                      Patient's Brain MRI DICOM (DWI, PWI)
- **Output Information**        Ischemic Core Volume, Penumbra volume, Mismatch

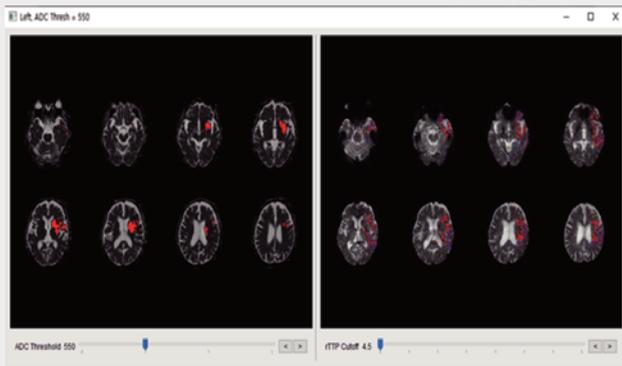
## Solution UI



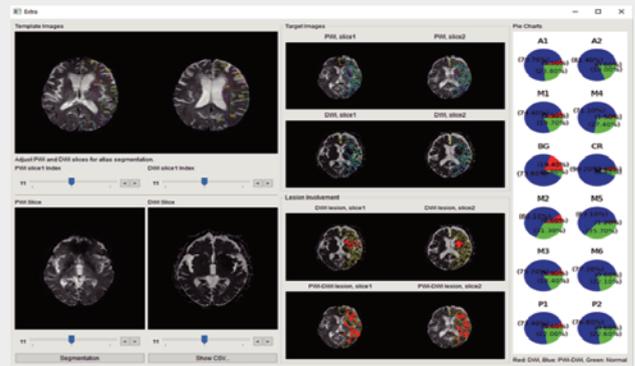
1 Ischemic core segmentation UI



2 Penumbra area segmentation UI



3 Multi slice comparison UI



4 Localization analysis UI

## Unique Functionality

- DWI, PWI lesion Localization function
- Provides data for each vascular phase that can judge the severity of Ischemic stroke
- Provides survival rate by estimated time within the lesion area
- 5 segmented analysis of the marked thrombus area



# JBS-07K

## AI based Hyperacute Onset Time Prognosis Solution

### | Summary

An Ischemic stroke occurs when a blood clot blocks a blood vessel, preventing sufficient blood flow to each cell. There are two major treatment methods for Ischemic stroke such as thrombolytic drug administration and vascular insertion. For thrombolytic drugs, there is a risk of progression to cerebral hemorrhage, so it is important to know the exact onset time and progress. Therefore, analyzing the image signal information that can determine the exact progress status and cause of occurrence can help doctors to provide accurate treatment.

JBS-07K provides information on the onset time of Ischemic stroke to assist in proper treatment.

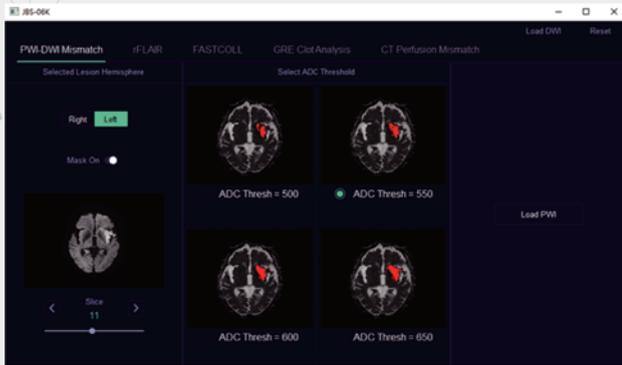
### | Key Components & Performance

- Analysis Time within 300 seconds
- Convenient patient data management through PACS interworking
- Display analysis result within the program-based user interface

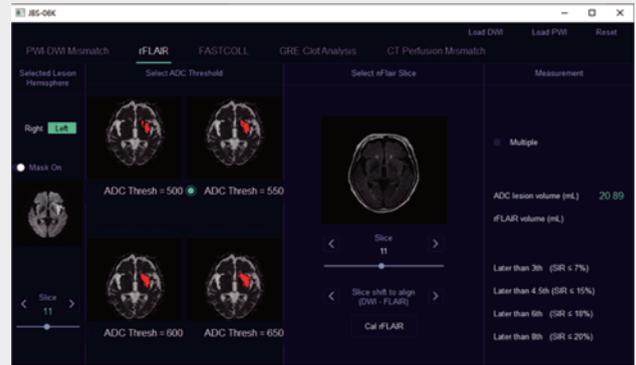
### | Input / Output

- **Input Data** Patient's Brain MRI DICOM (DWI, FLAIR)
- **Output Information** Ischemic Core Volume, FLAIR Intensity ratio by distribution

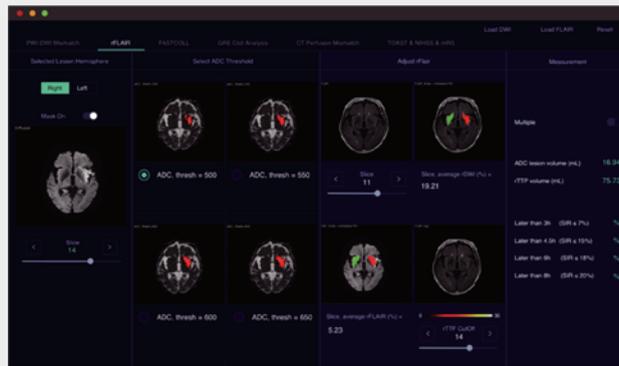
## Solution UI



1 Ischemic core segmentation UI



2 Slice matching UI



3 Relative Flair analysis UI

## Unique Functionality

- DWI, PWI lesion Localization function
- Provides data for each vascular phase that can judge the severity of Ischemic stroke
- Provides survival rate by estimated time within the lesion area
- 5 segmented analysis of the marked thrombus area



# JBS-08K

## AI based Hyperacute Clot Subtype Analysis Solution

### | Summary

An Ischemic stroke occurs when a blood clot blocks a blood vessel, preventing sufficient blood flow to each cell. There are two major treatment methods for Ischemic stroke such as thrombolytic drug administration and vascular insertion. For thrombolytic drugs, there is a risk of progression to cerebral hemorrhage, so it is important to know the exact onset time and progress. Therefore, analyzing the image signal information that can determine the exact progress status and cause of occurrence can help doctors to provide accurate treatment.

JBS-08K provides information on clot type analysis to assist in proper treatment progress.

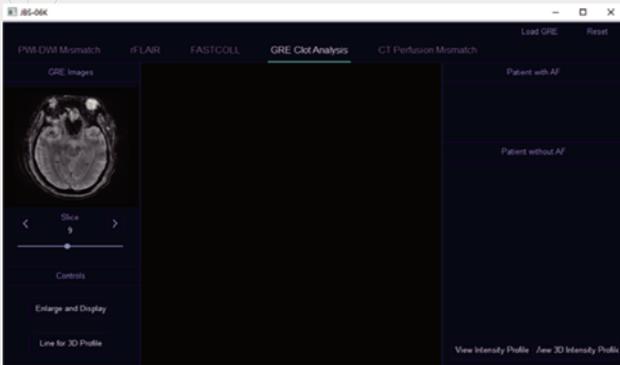
### | Key Components & Performance

- Analysis Time within 300 seconds
- Display analysis result within the program-based user interface

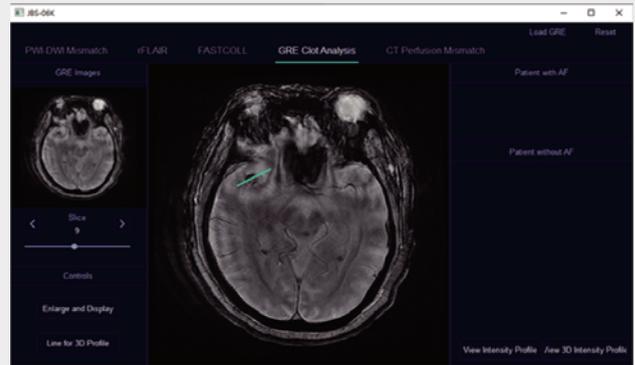
### | Input / Output

- **Input Data**                      Patient's Brain MRI DICOM (GRE), Clot location
- **Output Information**            Probability of clot and A-fib clot

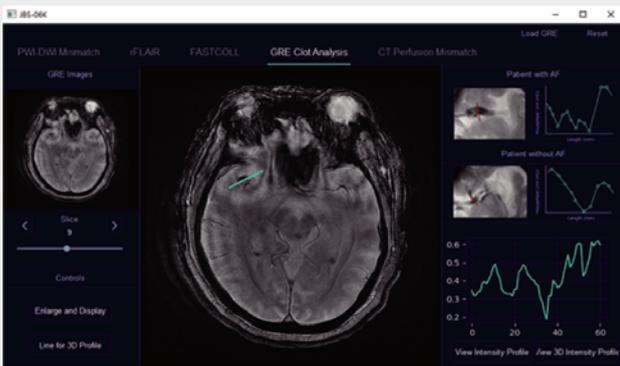
## Solution UI



1 Slice selection UI



2 Clot location selection UI



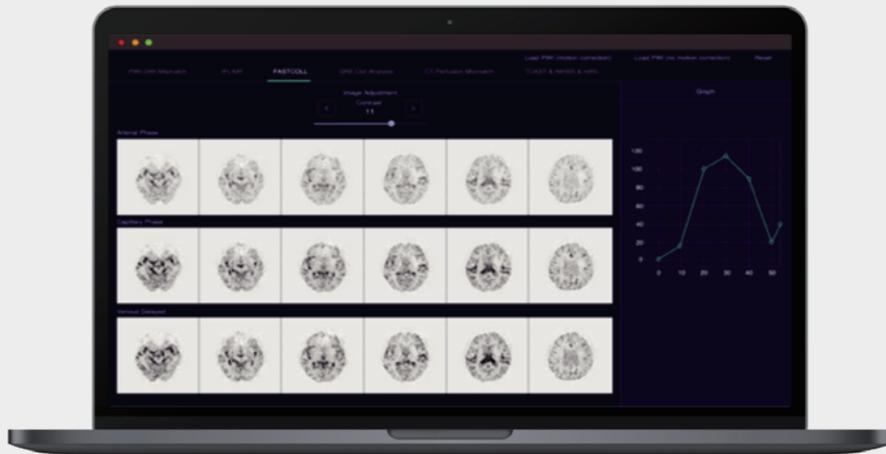
3 Clot intensity analysis UI



4 Clot type analysis UI

## Unique Functionality

- DWI, PWI lesion Localization function
- Provides data for each vascular phase that can judge the severity of Ischemic stroke
- Provides survival rate by estimated time within the lesion area
- 5 segmented analysis of the marked thrombus area



# JBS-09K

## AI based Hyperacute Collateral Map Analysis Solution

### | Summary

An Ischemic stroke occurs when a blood clot blocks a blood vessel, preventing sufficient blood flow to each cell. There are two major treatment methods for Ischemic stroke such as thrombolytic drug administration and vascular insertion. For thrombolytic drugs, there is a risk of progression to cerebral hemorrhage, so it is important to know the exact onset time and progress. Therefore, analyzing the image signal information that can determine the exact progress status and cause of occurrence can help doctors to provide accurate treatment.

JBS-09K provides information on vascular phase analysis to assist in appropriate treatment progress.

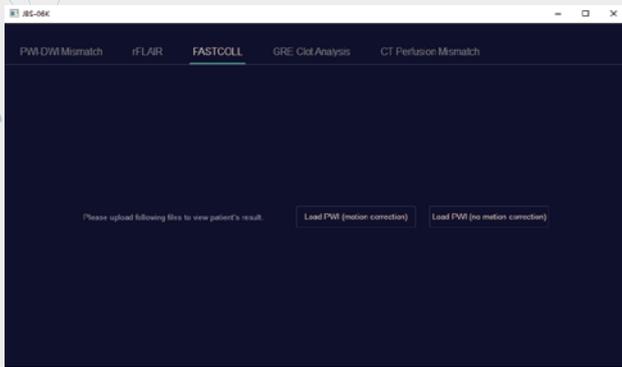
### | Key Components & Performance

- Analysis Time within 300 seconds
- Convenient patient data management through PACS interworking
- Display analysis result within the program-based user interface

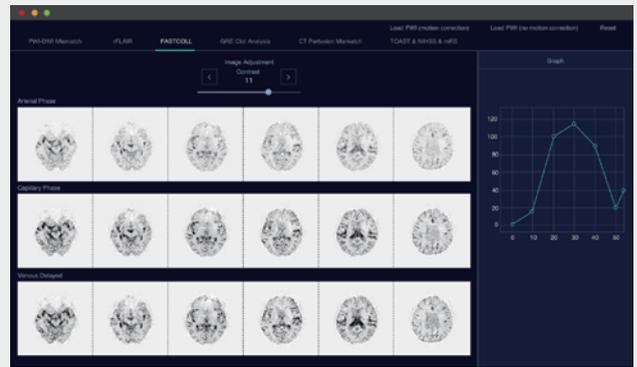
### | Input / Output

- **Input Data**                      Patient's Brain MRI DICOM (PWI)
- **Output Information**        Image by vascular phase

## Solution UI



1 Motion correction UI



2 Visualization of vascular phase UI

## Unique Functionality

- DWI, PWI lesion Localization function
- Provides data for each vascular phase that can judge the severity of Ischemic stroke
- Provides survival rate by estimated time within the lesion area
- 5 segmented analysis of the marked thrombus area



# JBS-10K

## AI based Hyperacute CT Perfusion Analysis Solution

### | Summary

An Ischemic stroke occurs when a blood clot blocks a blood vessel, preventing sufficient blood flow to each cell. There are two major treatment methods for Ischemic stroke such as thrombolytic drug administration and vascular insertion. For thrombolytic drugs, there is a risk of progression to cerebral hemorrhage, so it is important to know the exact onset time and progress. Therefore, analyzing the image signal information that can determine the exact progress status and cause of occurrence can help doctors to provide accurate treatment.

JBS-10K assists in proper treatment by providing information on the comparison of the infarct core and the penumbra area.

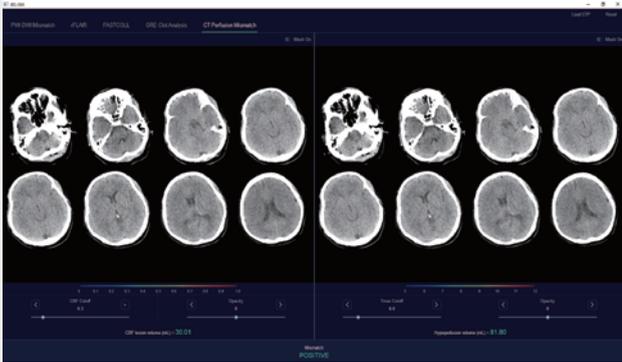
### | Key Components & Performance

- Analysis Time within 300 seconds
- Convenient patient data management through PACS interworking
- Display analysis result within the program-based user interface

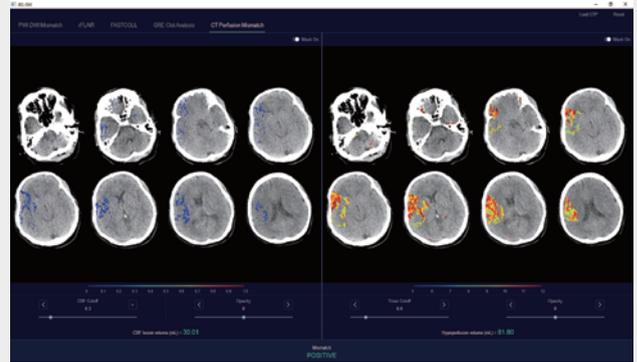
### | Input / Output

- **Input Data** Patient's Brain CT DICOM (Perfusion)
- **Output Information** Ischemic Core Volume, Penumbra volume, Mismatch

## Solution UI



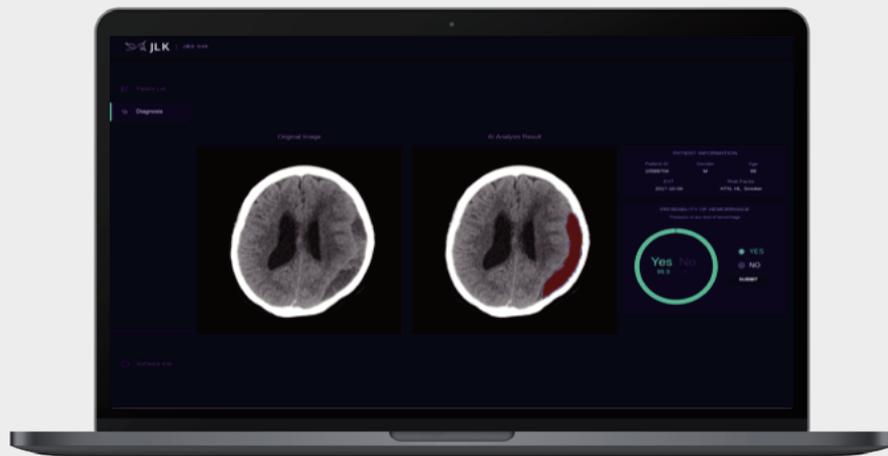
1 Slice selection UI



2 Mismatch analysis UI

## Unique Functionality

- DWI, PWI lesion Localization function
- Provides data for each vascular phase that can judge the severity of Ischemic stroke
- Provides survival rate by estimated time within the lesion area
- 5 segmented analysis of the marked thrombus area



# JBS-11K

## AI based Subarachnoid Hemorrhagic Stroke Detection Solution

### | Summary

Cerebral hemorrhage is a disease caused by an external shock, high blood pressure, and rupture of the cerebral blood vessels due to a cerebral aneurysm. And depending on the cause, area, and amount of bleeding, it is treated with medication or emergency surgery.

JBS-11K is a medical solution based on artificial intelligence, which detects cerebral hemorrhage from patient brain CT. This solution targets fast cerebral hemorrhage diagnosis in emergency situations and provides a lesion area and location for cerebral hemorrhage analysis.

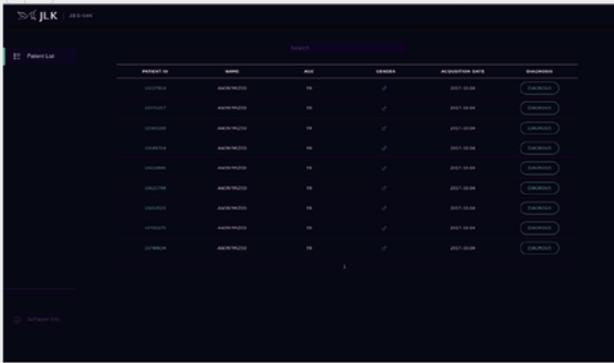
### | Key Components & Performance

- Single Data Center AUC 98.35%
- Analysis Time within 10 seconds
- Convenient patient data management through PACS interworking
- Display analysis result within the web-based user interface

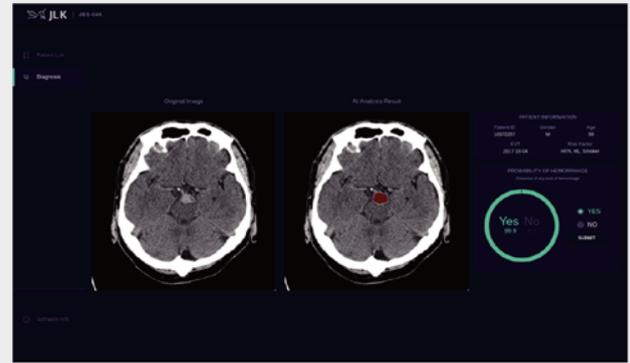
### | Input / Output

- **Input Data**                      Patient's Brain CT DICOM
- **Output Information**        Cerebral Hemorrhage Area, Cerebral Hemorrhage Probability

## Solution UI



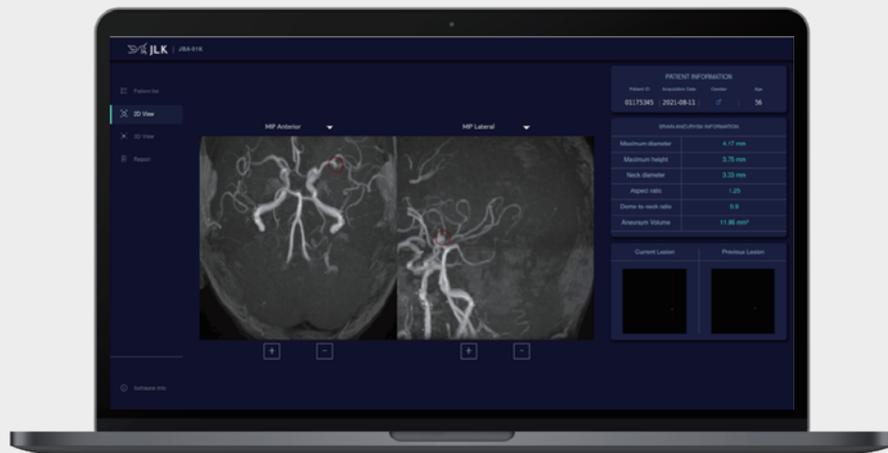
1 Analyzed Cerebral hemorrhage patients list UI



2 Cerebral Hemorrhage Analysis result UI

## Unique Functionality

- Provide Subarachnoid Hemorrhage(SAH) location and probability
- Provide fast analysis and result for emergency situations
- Provide by visualizing the detected cerebral hemorrhage area



# JBA-01K

## AI based Cerebral Aneurysm Detection Solution

### | Summary

A cerebral aneurysm is an abnormal dilation of a part of a blood vessel in the brain. These dilated blood vessels can rupture easily, which is a major cause of cerebral hemorrhage. The most common location of such abnormality is the subarachnoid space. If a cerebral aneurysm ruptures at the location, about 30-50% of deaths occur. Therefore, early detection and treatment are required to prevent the rupture of the cerebral aneurysm.

JBA-01K is an artificial intelligence medical solution that detects the location of a cerebral aneurysm from a patient's brain MRA. This solution provides size, ratio, and change in the cerebral aneurysm. It also consists of a customized patient report.

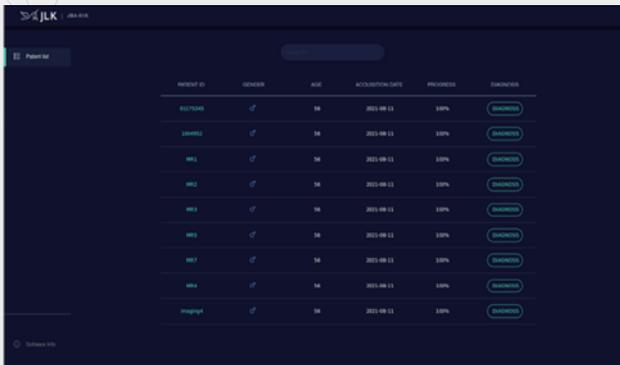
### | Key Components & Performance

- Multi Data Center Sensitivity 91.40% / Specificity 86.00%
- Analysis Time : within 300 seconds
- Convenient patient data management through PACS interworking
- Display analysis result within the web-based user interface
- Provide customized patient report

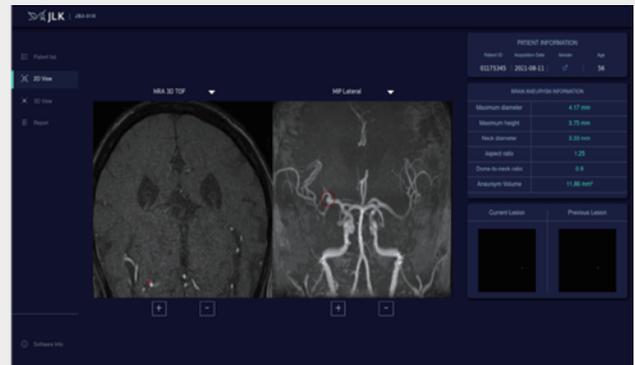
### | Input / Output

- **Input Data** Patient's Brain MRI DICOM (3D TOF)
- **Output Information** Cerebral Aneurysm location, Cerebral Aneurysm Size information

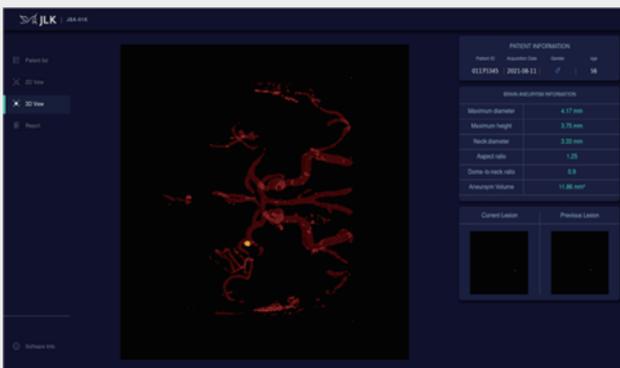
## Solution UI



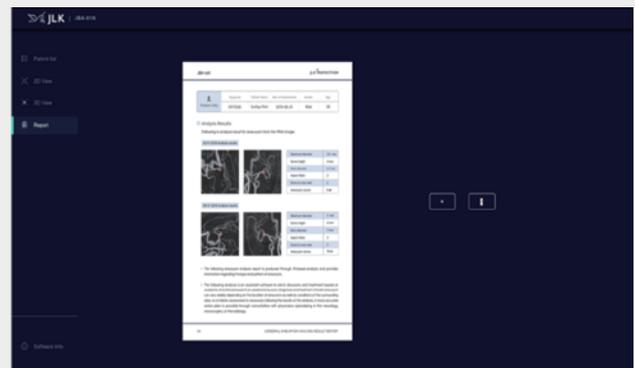
1 Analyzed Cerebral Aneurysm patients list UI



2 Cerebral Aneurysm Analysis result UI (2D View)



3 Cerebral Aneurysm Analysis result UI (3D View)



4 Analysis Report UI

## Unique Functionality

- Provide visualization of cerebral aneurysm detection of each MIP and MRA
- Provide 3D brain blood vessel configuration for cerebral aneurysm recognition
- Provide results on cerebral aneurysm size and ratio analysis
- Provide analysis result report



# JAD-02K

## AI based Cortical Thickness Analysis Solution

### | Summary

Dementia is a disease in which prevention is more important than treatment, because treatment method has not been developed yet. The cortical thickness of the cerebral cortex is a biomarker for managing brain health, and it can help management through rapid and stable results and quantitative information through artificial intelligence.

JAD-02K provides useful information for brain health management and diagnosis by structurally classifying 3D MRI regions and analyzing the cortical thickness of each region.

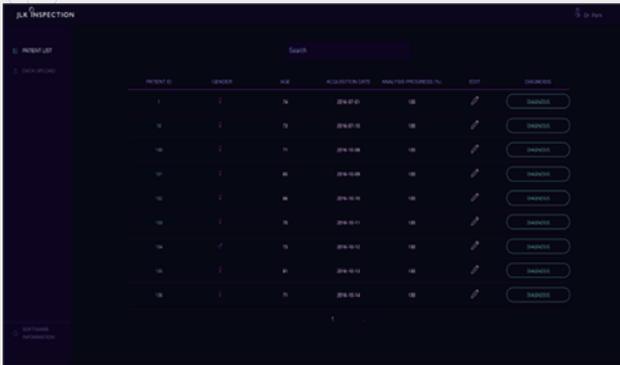
### | Key Components & Performance

- Public data Dice Coefficient 85.67%
- Analysis Time : within 1,200 seconds
- Convenient patient data management through PACS interworking
- Display analysis result within the web-based user interface

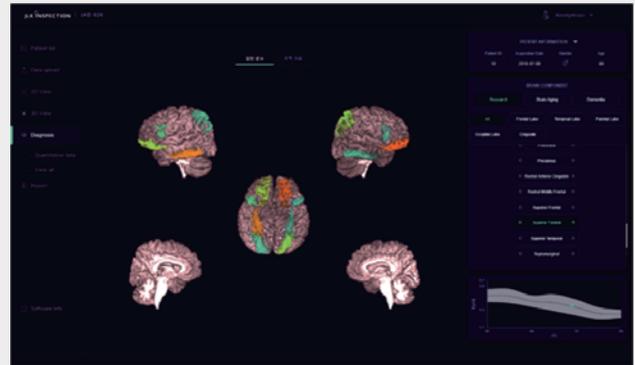
### | Input / Output

- **Input Data** Subject Brain MRI DICOM (T1 MPRAGE), Clinical information
- **Output Information** Cortical thickness of each region

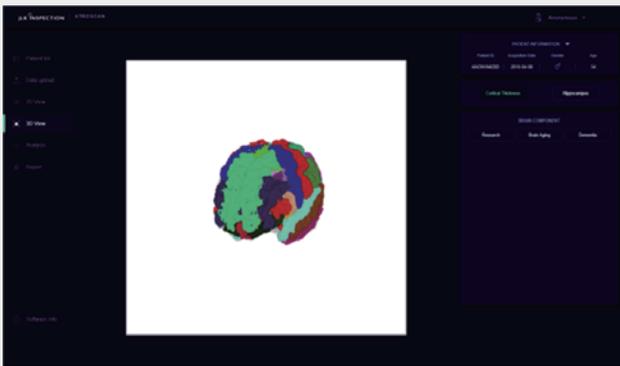
## Solution UI



1 Patient list UI



2 Cortical thickness analysis UI



3 3D visualization UI



4 Analysis reports UI

## Unique Functionality

- Measure the thickness of the brain cortex by area and provide a heat-map compare with previous population data
- Provides three-dimensional segmentation of the subject's brain
- Provides functions for tracking analysis/management
- Numerous analysis data and quantitative comparison analysis function
- Provides personalized reports on analysis results



# JPC-01K

## AI based Prostate Cancer Detection Solution

### | Summary

Prostate cancer is increasing rapidly in Korea due to westernized eating habits. Prostate cancer is a disease that requires analysis on various types of MRI in order to make a correct judgment. It is very difficult and time-consuming for experts to be accurate. Therefore, artificial intelligence analysis is needed to reduce the time required for reading and assist diagnosis.

JPC-01K is an artificial intelligence-based medical solution that detects suspected prostate cancer areas through analysis of Multi-Sequence prostate MRI and assists doctors in diagnosing prostate cancer. It provides useful and convenient functions from artificial intelligence results to assist in diagnosing prostate cancer.

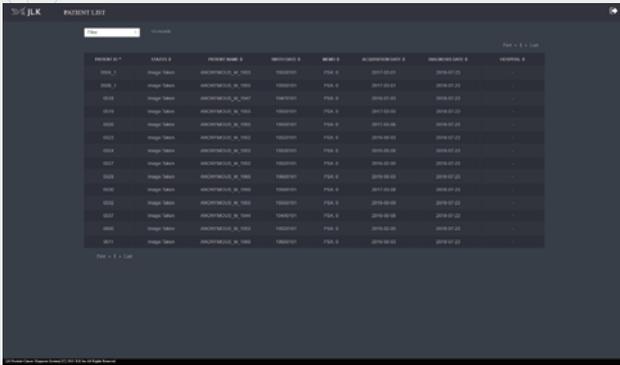
### | Key Components & Performance

- Single Center Data Accuracy 99.65%
- Analysis Time : within 120s
- Convenient patient data management through PACS interworking
- Display analysis result within the web-based user interface
- Provide customized patient report

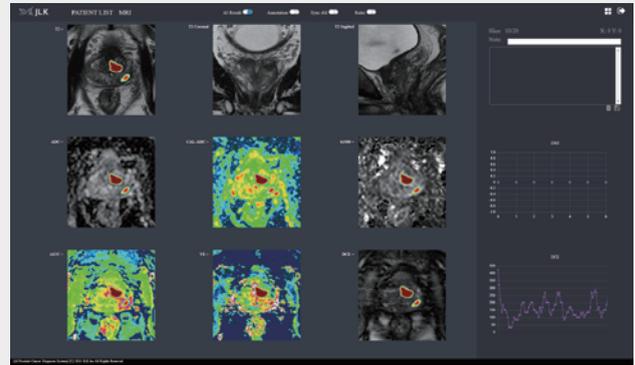
### | Input / Output

- **Input Data**                      Patient Prostate Multi-Sequential MRI DICOM (T2, DWI, DCE)
- **Output Information**        Prostate cancer detection region

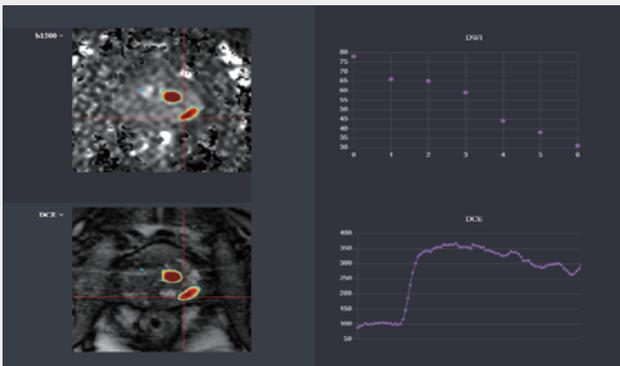
## Solution UI



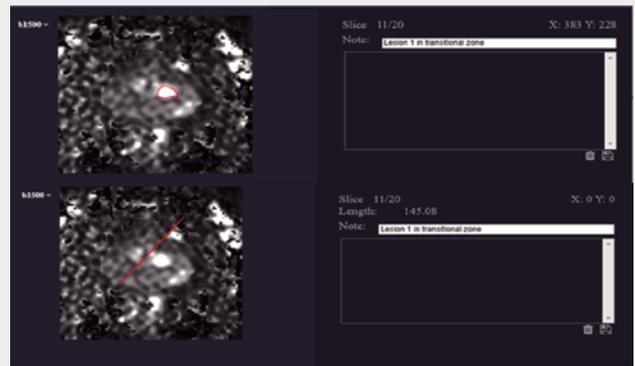
1 Managing registered patient UI



2 Multi-sequential MRI viewer UI



3 Detected area analysis UI



4 Prostate cancer region annotation and analysis UI

## Unique Functionality

- Detect suspected prostate cancer areas through AI-based multi-sequential MRI analysis
- Check the probability of AI prediction through heat-map output
- Provide up to 9 types of Multi-sequential MRI can be read simultaneously
- Provide diagnostic assistance through DWI and DCE pixel graphs
- Provide functions to manage registered patients



# JVIEWER-X

## AI based Chest X-Ray Lung Image Analysis Solution

### | Summary

If abnormalities in the lungs are found in chest radiographs, diseases such as pneumonia, pulmonary tuberculosis, and lung cancer can be suspected. In the case of pulmonary tuberculosis, the risk is low, but it is highly contagious and takes a long time to cure. Pneumonia and lung cancer are diseases with high risk as they are one of the highest causes of death, but if they are detected early and taken appropriate measures, the survival rate increases dramatically.

JVIEWER-X is a solution that analyzes lung images with artificial intelligence to visualize results & provide quantitative scores. This solution can help radiologists to read 16 lung lesions and diseases that occur in the lung.

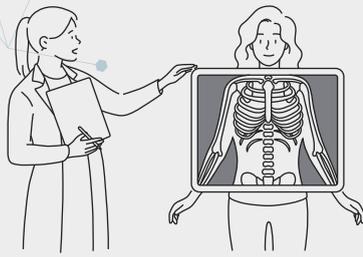
### | Key Components & Performance

- Single organization data AUC 99%
- Analysis Time : within 20s
- Simple image input/output function through PACS interworking module
- The function of checking results and outputting reports through its own UI

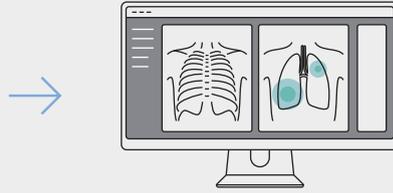
### | Input / Output

- **Input Data**                      Patient's chest X-ray DICOM File
- **Output Information**            Chest X-Ray analysis report

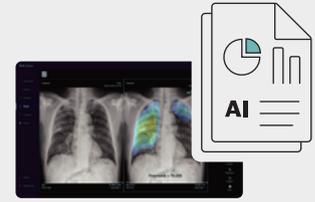
## How it works



Take Chest X-Ray



Abnormality Lesion Visualization & Abnormality Scores



Analysis Result Report

## Unique Functionality



- Visualization of Heat-map format for lung image analysis results
- Providing quantitative scores for chest X-ray image analysis of AI
- More than 1 million validated chest X-ray data learning
- Providing tools for lesion indication and modification
- Providing statistical data on patient information and AI analysis results by period.

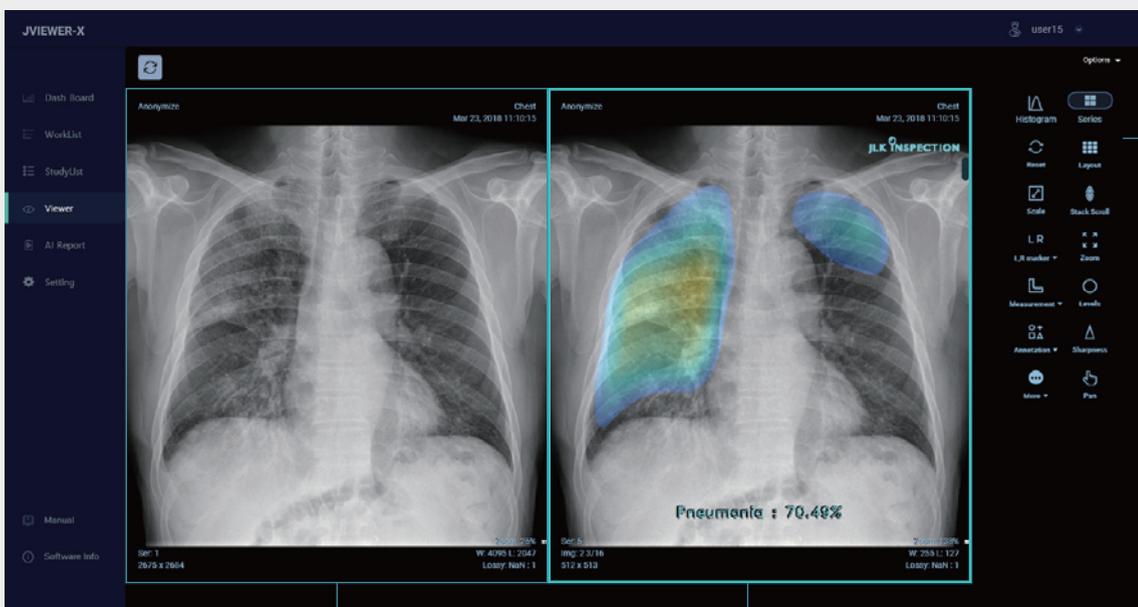
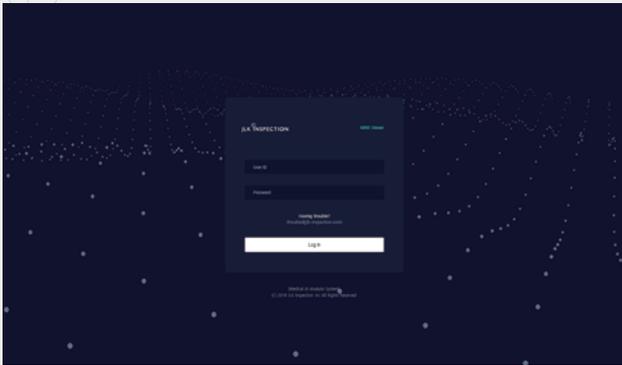


Image Processing & Annotation Tool

High Quality X-Ray Image

AI Results Visualization with abnormality score

## Solution UI



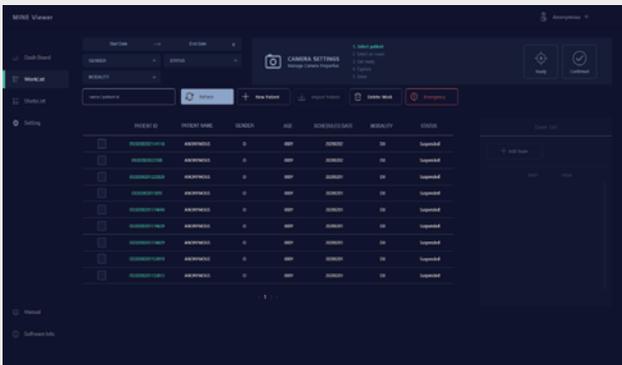
### LOGIN

Only licensed users can use the product. Enter the ID & Password authorized by the administrator.



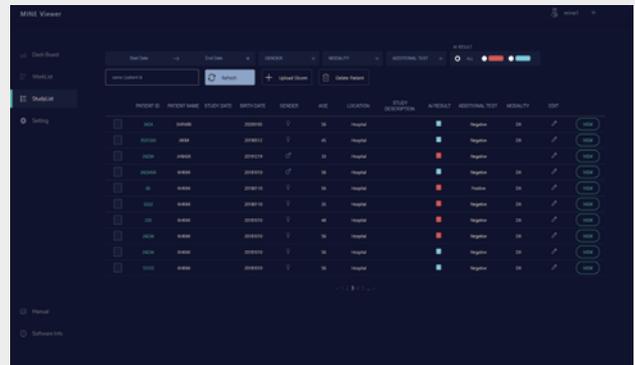
### DASHBOARD

The subject information is listed with statistical data by period. All resulted through AI analysis.



### WORK LIST

Add a new subject by uploading X-ray image data to the subject information.



### STUDY LIST

Check and edit the subject's information, and the result of the image analysis.



### AI VIEWER

AI Results Visualization with abnormality score.



### REPORT

View the AI-based chest X-ray analysis report and download it in PDF file.

PACS & DICOM standard-based medical image viewer

AI based Pneumonia diagnosis result visualization



# HANDMED

AI based portable chest X-Ray analysis solution

## | Summary

Lung cancer is a cancer that occurs in the tissues of main bronchus, bronchioles, and alveoli. It accounts for the highest percentage of major cancer deaths worldwide. Lung cancer, unlike other major cancers, has a particularly high mortality rate due to its high incidence, metastasis, and absence of certain early symptoms. As such, lung cancer is a high-risk disease, but early detection through regular diagnosis is the best method to cure if detected early and taken appropriate treatment measures.

HANDMED assists specialists to diagnose 16 types of lung lesions regardless of time & place, by conveniently integrating JVIEWER-X, an AI-based chest X-ray image analysis solution, and a portable X-ray machine.

## | Key Components & Performance

- Single organization data **AUC 99%**
- East to carry
- Analysis Time : within 3s per scan
- Wireless X-ray machine like a regular camera
- Low output radiation
- Simple image input/output function through PACS interworking module
- 16 different detailed abnormality scores including TB
- Heatmap visualization of abnormal lesion
- Analysis result report
- Trained over 1.1 million chest X-Ray date with full
- AI model based on the state-of-the-art Convolutional Neural Network algorithm
- The function of checking results and outputting reports through its own UI

## Unique Functionality



- Visualization of Heat-map format for lung image analysis results
- Providing quantitative scores for chest X-ray image analysis of AI
- More than 1 million validated chest X-ray data learning
- Providing tools for lesion indication and modification
- Providing statistical data on patient information and AI analysis results by period.

## How it works



Take Chest X-Ray with portable camera



Abnormality Lesion Visualization & Abnormality Scores



View & Download Analysis Result Report

## Camera Spec

※ No Electric Power Supply / Internet Need, Get Report Anywhere & Anytime

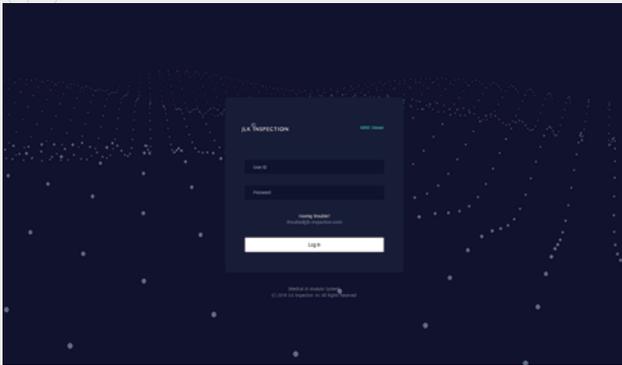


<b>X-Ray Unit Input Power</b>	DC 5~12V, 2.1A	<b>Output Power</b>	120W
<b>Battery Charger Input Power</b>	DAC 100~240V, 50~60HZ, 1A	<b>Power Supply</b>	DC 11.1V (Battery)
<b>Tub kV/mA</b>	60kV/2mA [Fixed]	<b>Focal spot size</b>	0.4mm
<b>Weight</b>	1.8kg		

## Input / Output

- **Input Data**                      Patient's chest X-ray DICOM File
- **Output Information**          Chest X-Ray analysis report

## Solution UI



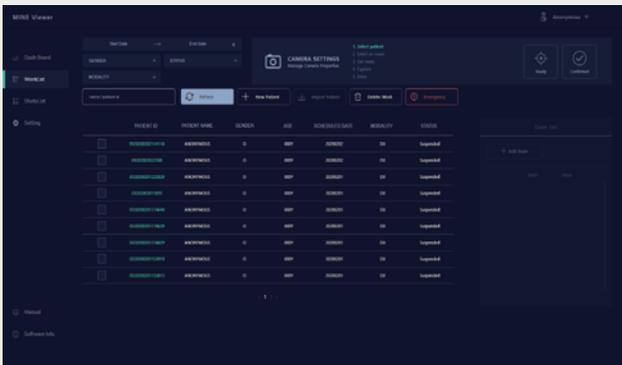
### LOGIN

Only licensed users can use the product. Enter the ID & Password authorized by the administrator.



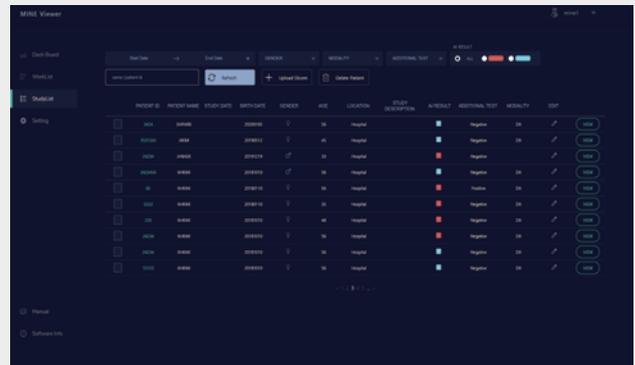
### DASHBOARD

The subject information is listed with statistical data by period. All resulted through AI analysis.



### WORK LIST

Add a new subject by uploading X-ray image data to the subject information.



### STUDY LIST

Check and edit the subject's information, and the result of the image analysis.



### AI VIEWER

AI Results Visualization with abnormality score.



### REPORT

View the AI-based chest X-ray analysis report and download it in PDF file.

PACS & DICOM standard-based  
medical image viewer

AI based Pneumonia diagnosis  
result visualization



# JBD-01K

## AI based Breast Mass Detection Solution

### | Summary

Breast cancer is the most common type of cancer in women in Korea. It is crucial to detect cancer in early stage to maintain a healthy life because it can metastasize to the body over time. A mammography exam plays a key role in early breast cancer detection. It shows changes in the breast 2 or 3 years before a patient or physician can actually feel pain. Therefore, screening mammograms are considered the international gold standard for early detection of breast cancer.

JBD-01K is an artificial intelligence breast cancer diagnosis solution that analyzes mammography images to detect breast masses. The solution is trained with a vast amount of verified mammograms so it can detect breast masses that are in various forms and shapes. Medical staff can use JBD-01K to facilitate early diagnoses of breast cancer and to promote fast and accurate results.

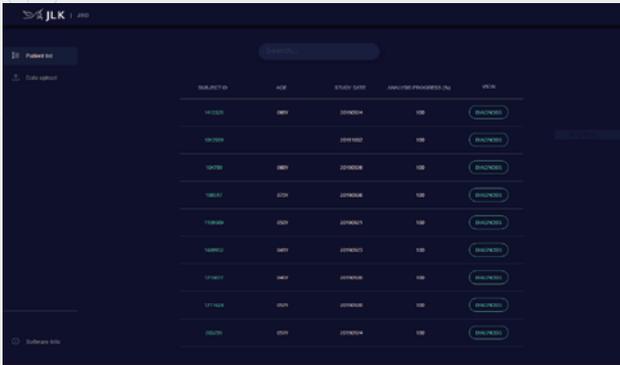
### | Key Components & Performance

- Single Data Center AUC 93.00%
- Analysis Time : within 2s
- Convenient patient data management through PACS interworking
- Display analysis result within the web-based user interface

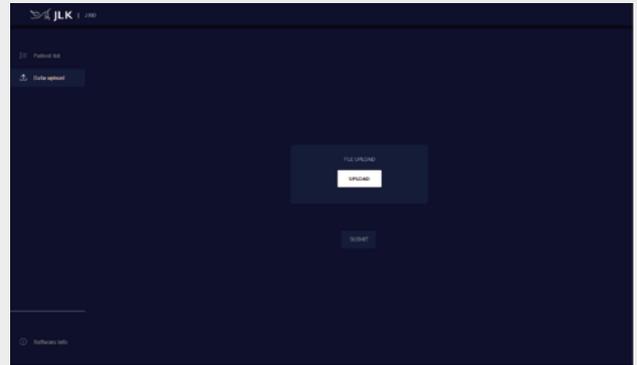
### | Input / Output

- **Input Data**                      Patient's Mammography DICOM
- **Output Information**        Breast Mass Area, Breast Mass Probability

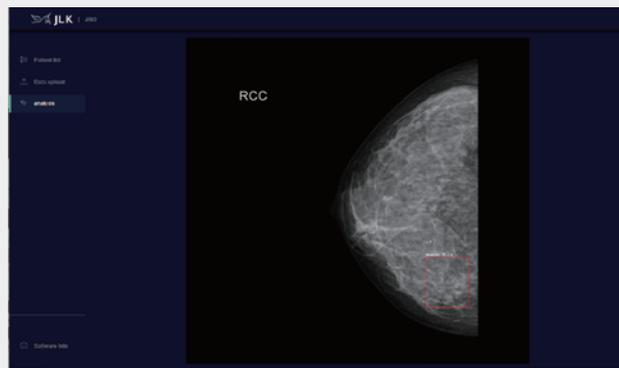
## Solution UI



1 Analyzed breast mass patients list UI



2 Data upload UI



3 Breast mass analysis result UI

## Unique Functionality

- Provides information management function of analyzed patients
- Applies a pectoral muscle area removal algorithm to prevent false positives
- Provide visualization on detected breast mass
- Provides analysis result report



# JBD-02K

## AI based Breast Micro-Calcification Detectino Solution

### | Summary

Breast cancer is the most common type of cancer in women in Korea. It is crucial to detect cancer in early stage to maintain a healthy life because it can metastasize to the body over time. A mammography exam plays a key role in early breast cancer detection. It shows changes in the breast 2 or 3 years before a patient or physician can actually feel pain. Therefore, screening mammograms are considered the international gold standard for early detection of breast cancer.

JBD-02K is an artificial intelligence breast cancer diagnosis solution that analyzes mammography images to detect breast micro-calcification. The solution is trained with a vast amount of verified mammograms so it can detect breast micro-calcification that are easy to miss due to its small size. Medical staff can use JBD-02K to facilitate early diagnosis of breast cancer and to promote fast and accurate results.

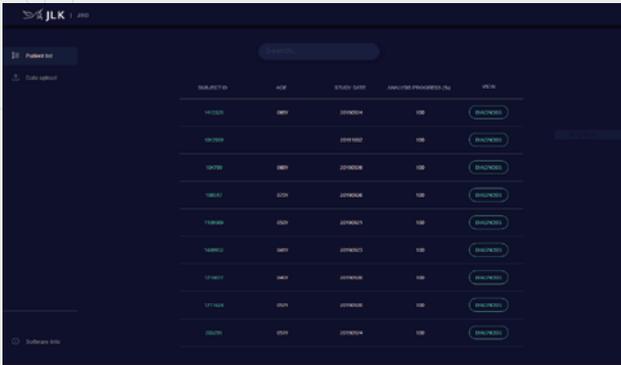
### | Key Components & Performance

- Single Data Center AUC 93.00%
- Analysis Time : within 2s
- Convenient patient data management through PACS interworking
- Display analysis result within the web-based user interface

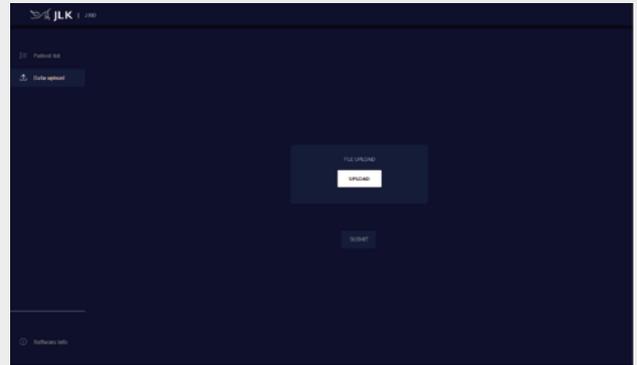
### | Input / Output

- **Input Data** Patient's Mammography DICOM
- **Output Information** Breast Micro-calcification Area, Breast Micro-calcification Probability

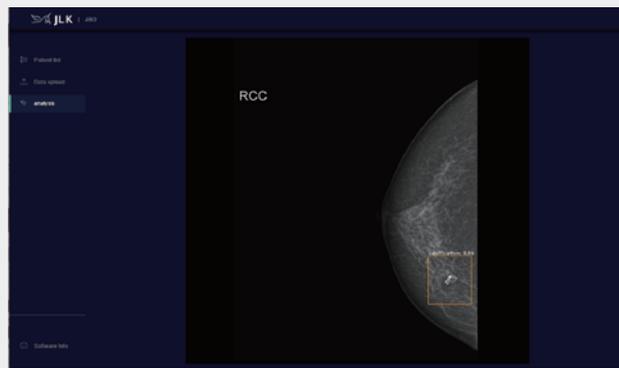
## Solution UI



1 Analyzed breast micro-calcification patients list UI



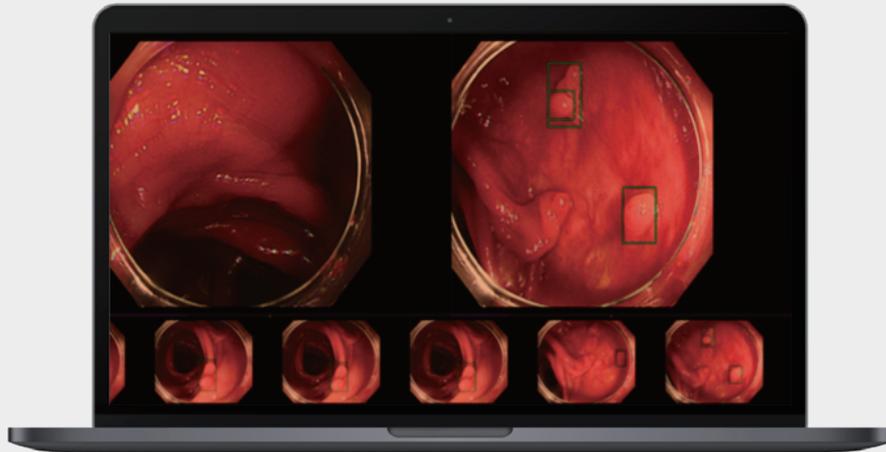
2 Data upload UI



3 Breast micro-calcification analysis result UI

## Unique Functionality

- Provides information management function of analyzed patients
- Applies a pectoral muscle area removal algorithm to prevent false positives
- Provide visualization on detected breast micro-calcification
- Provides analysis result report



# JFD-01K

## AI based Colon Polyp Detection Solution

### | Summary

Colorectal cancer can be easily prevented through early detection and resection of polyps. However, a specialist must check the colonoscopy image from beginning to end. Also, the proficiency of the specialist has a great influence because it is not a standardized image. Therefore, assistance of AI is needed to perform consistent checkups without being affected by the specialist's proficiency or fatigue.

JFD-01K is an AI-based medical solution that detects diseases and abnormalities in colonoscopy images obtained from endoscopic devices. This solution can detect diseases in real time from colonoscopy images and assists diagnosis by indicating the location and probability of the detected area.

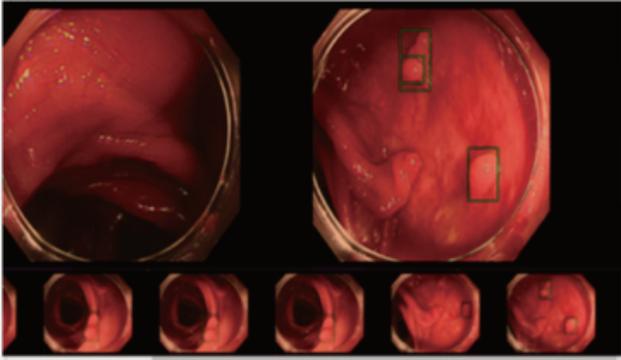
### | Key Components & Performance

- Single data center AP(Average Precision) 96.70%
- Analysis Time : within 0.03s
- Convenient video input/output through PACS
- Display analysis result within user interface

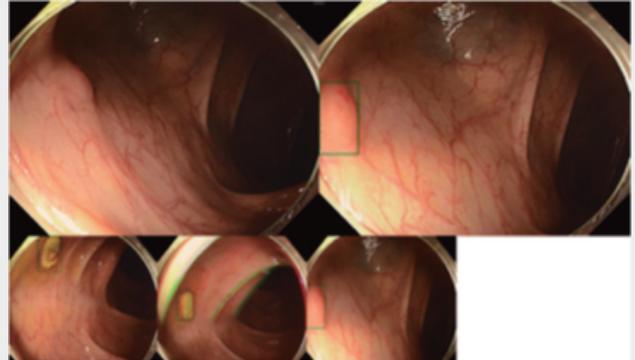
### | Input / Output

- Input Data                      Patient colonoscopy video stream
- Output Information            Location of polyp and its probability

## Solution UI



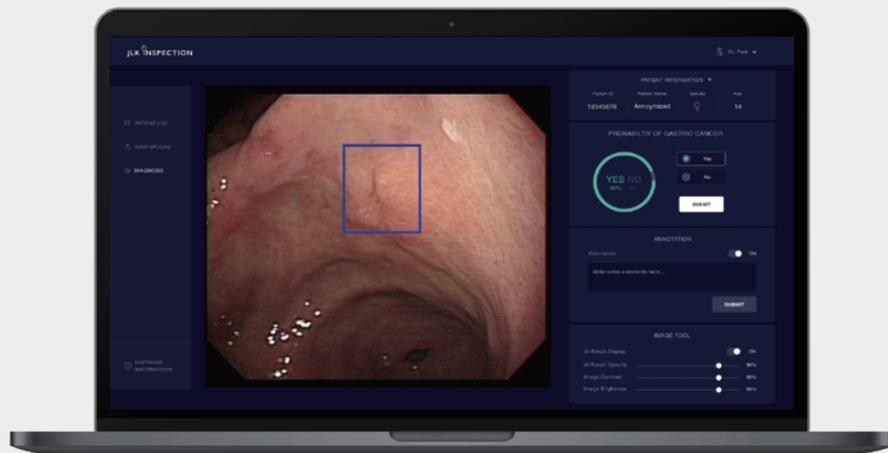
1 Visualization of polyp in colonoscopy (1)



2 Visualization of polyp in colonoscopy (1)

## Unique Functionality

- Real-time detection of polyp in colonoscopy with AI
- Install with ease via capture board
- Provide result auto-save function for future analysis



# JFD-02K

## AI based Gastric Cancer Detection Solution

### | Summary

The survival rate after 5 years of early gastric cancer surgery is high, but recently it has been reported that the number of small sized or atypical type of gastric cancer is increased and it is far more difficult to detect it through an endoscopic examination.

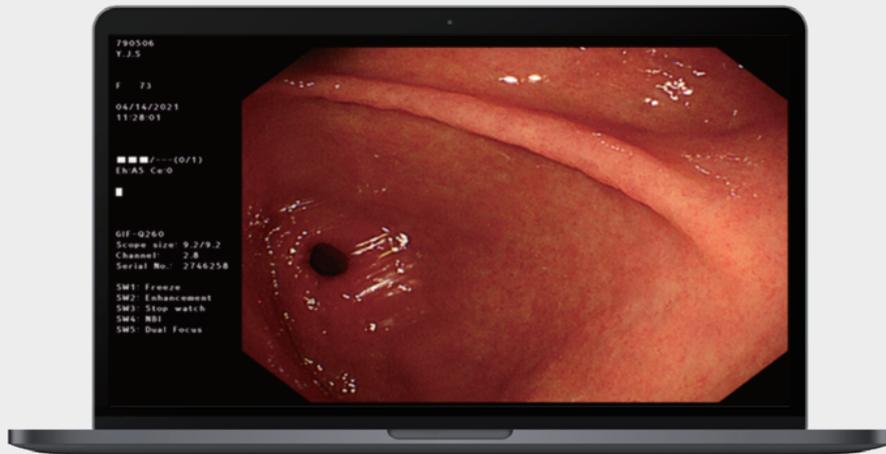
JFD-02K supports diagnosis of doctors by cancer in gastric endoscopy.

### | Key Components & Performance

- Gastric endoscopy image visualization
- Gastric cancer region detection result image visualization
- Various image processing tool (zoom in and out, change of brightness and contrast)

### | Input / Output

- **Input Data**                      Patient's Gastric endoscopy
- **Output Information**            Gastric cancer area, Gastric cancer Probability



# JFD-03K

## AI based EGD Blind-Spot Detection Solution

### | Summary

Esophagogastroduodenoscopy (EGD) is an essential process for diagnosing gastrointestinal diseases. However, the quality of endoscopy varies depending on the examiner, so early detection of diseases such as gastric cancer may not be performed properly.

JFD-03K is an artificial intelligence-based medical solution that assists the examiner to examine all 26 areas in the esophagus, gastrointestinal, and duodenum.

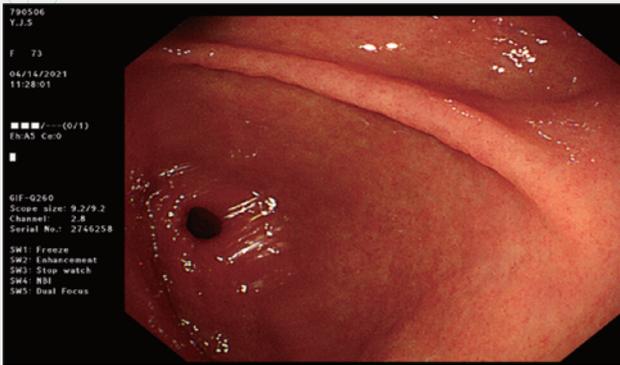
### | Key Components & Performance

- Single Data Center Accuracy 80%
- Convenient patient data management through PACS interworking
- Display analysis result within the web-based user interface

### | Input / Output

- **Input Data** Patient's Gastrointestinal Endoscopy
- **Output Information** Gastrointestinal Endoscopy 26 Sites information

## Solution UI



1 Gastrointestinal Endoscopy Input Data



2 Gastrointestinal Endoscopy spot information

## Unique Functionality

- Gastrointestinal area classification
- Provides detected blind-spot information
- Automatically save the representative of each area image



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