

Caring for you



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 NeuSoft Medical Systems

 NeuSoft Medical



# NeuViz 128

Redefining Precision with AI

NeuViz 128 / V23.04

**Neusoft** Medical Systems



# Are you curious about ultra high definition imaging via AI technology?

AI (Artificial Intelligence) has been significantly impacting the radiology marketplace. In recent years, AI has made substantial contributions to CT imaging. Neusoft Medical has always been seeking and exploring the potential for AI to optimize the real experience in all steps.

NeuViz 128 comes with advanced technology, optimizes the traditional procedure, and brings more convenient man-machine interaction experiences, delivering a revolutionary impact on the CT industry.

The intelligent workflow starts from the image acquisition to the results reporting, AI-enabled automated patient positioning, smart surview capture, and image reconstruction to drive precision in dose, speed, and image quality.

Ultra high-end Deep Learning Reconstruction(DLR) algorithm can yield highly accurate performance for radiologists. High sensitivity without loss of precision in detecting lesions enables perfectly clear images at low dose. Clear and precise imaging goes through each specific anatomy, which is the gold standard for the output. Now, more practical and meaningful interactions with Neusoft Medical intelligence are ready to be involved in medical care.

NeuViz 128 brings precision diagnosis, which will be of great help to doctors in their daily work. It delivers clinical decision support such as full-range solutions, accurate results and image interpretations. As this efficient support helps to gain broader adoption in practice, the potential for improving patient care is substantial.

*Understand the new AI technology that can  
make a difference in the outstanding NeuViz 128!*

## Advance imaging accuracy

via **NeuAI** positioning system and highly automated processes.



## Sense infinite possibilities

via **ClearInfinity** technology developed by AI reconstruction algorithm.

AI

## See more than ever before

via high definition imaging-chain effective integration of hardware and software.



## Stimulate clinical potentials

via patient-centric solutions by powerful diagnostic performance.

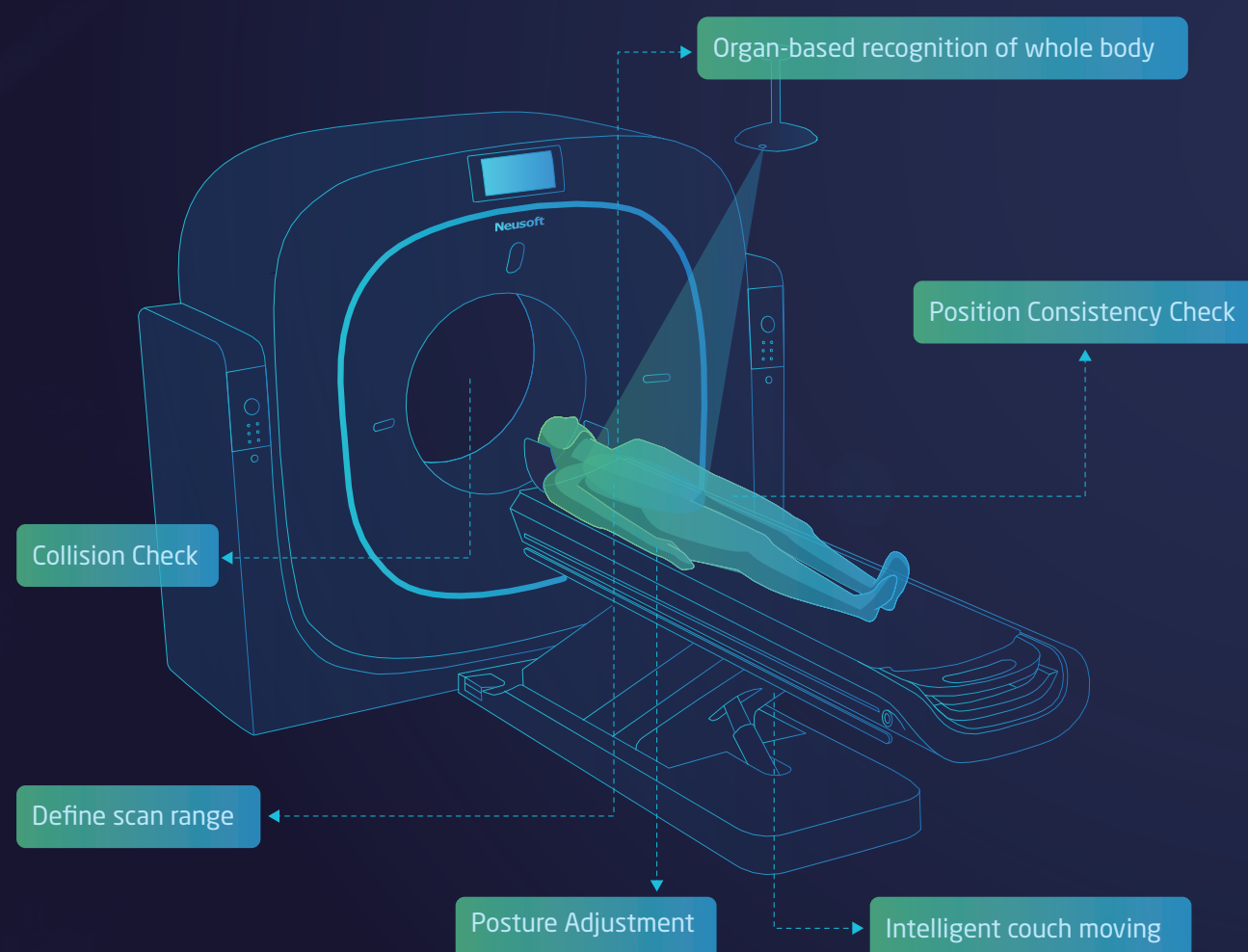




# Advance imaging accuracy with Smart steps

## Precise Positioning

NeuAI positioning system always focuses on every small step of your daily operation. The fast workflow will definitely make the process more efficient. It will equip you with extraordinary handling feelings with intelligent procedure and genuine patient care all the time, delivering the accurate images you have been longing for.



## Accurate Setting

Automatically selects scan range based on the target organ, requiring a lower radiation dose without under or over scanning.

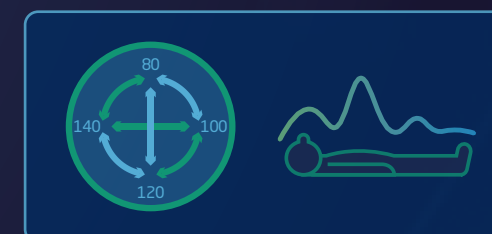


Focuses your patients into the center, adapting to each patient's body type, and achieving the best imaging location without the need to double check.

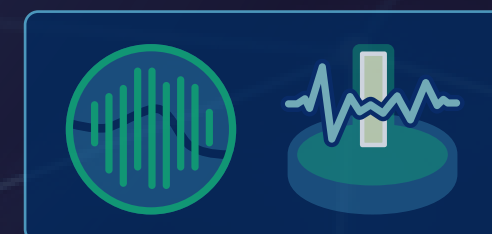


## Exact Caring

Always on the optimized kV, allowing for more accurate diagnosis. It enables Triple-low scanning (low dose, low contrast concentration, low contrast volume) while maintaining high image quality.



Tube current is modulated based on the anatomy in the scan field to deliver anatomically optimized dose. Reduces tube current during non-imaging phases of the Cardiac Cycle to minimize patient dose.



# Sense infinite possibilities with ClearInfinity technology



Deep learning has now gradually succeeded iterative reconstruction as a state-of-art technology for image reconstruction on clinical CT scanners. We are very excited to announce that ClearInfinity is coming to you as a deep learning technology that leads the way throughout the industry. It is an advanced and leading AI technology that brings us great images. The best time to experience artificial intelligence has arrived.

ClearInfinity greatly reduces noise while having no plasticky texture, which is not possible with traditional iterative techniques. Also, it produces adequate image quality under certain conditions. Even at ultra-low dose, ClearInfinity improves subject detectability and ensures that anatomical and pathological features in the images are not compromised.

## Compared with FBP

at the same quality

85%

Dose reduction

at the same noise conditions

88%

improved spatial  
resolution

at the same dose radiation

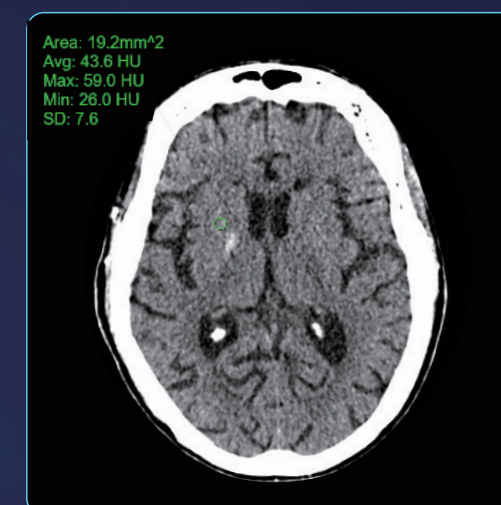
90%

lower noise

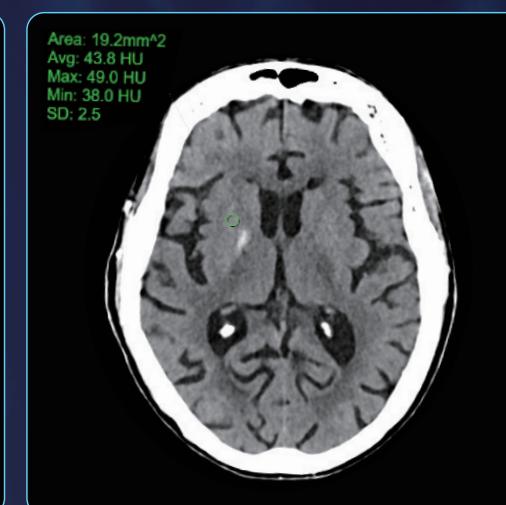
135%

improved low-contrast  
resolution

## Lower Noise

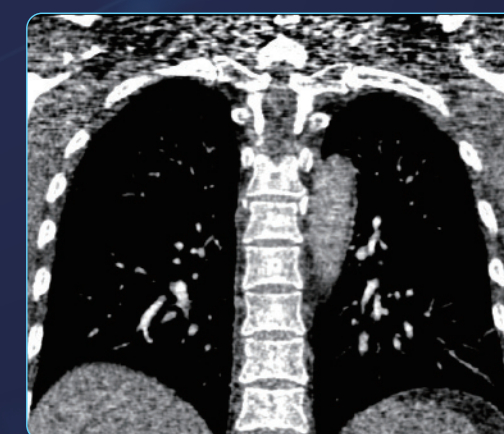


FBP

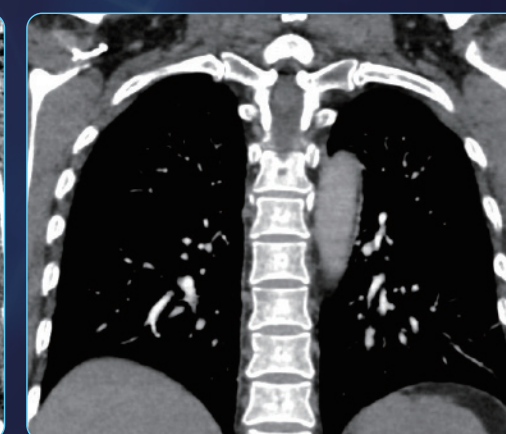


ClearInfinity

## Artifacts Reduction



FBP



ClearInfinity

ClearInfinity DLR can reduce the blurring appearance caused by excessive noise removal in traditional reconstruction technology.

It can restore the original and real texture of the image to the maximum extent, maintain the uncompromising contrast visualization with clear anatomy and lesion edges and minimize artifacts while greatly reducing the noise. ClearInfinity is bringing the future image standard to you.



# See more than ever before with high definition imaging-chain



## Micro-STAR detector

- True cone beam geometric design
- Ultra-thin photosensitive coating
- X-Ray conversion efficiency to 99.99%
- Precision cutting technology
- 4,640 sampling views/rotation

## 1024 Reconstruction Matrix

1024 x 1024 matrix technology and small focal spot provide the spatial resolution necessary from tiny lesions like lung nodule, inner ear, etc.

## iHD (isotropic High Definition)

The iHD function can improve the spatial resolution of the system, through which a high resolution recon of 24lp/cm@0%MTF can be achieved.

## ClearInfinity

ClearInfinity utilizes important patient data to enable AI technology to improve the signal and reconstruct images with improved spatial resolution, sharper edges and lower noise images.

## Quad-Sampling

By dynamically moving the focal spot axially and longitudinally, sampling density is increased to 400%. This means improved resolution, reduced artifact and extended scanning ranges.



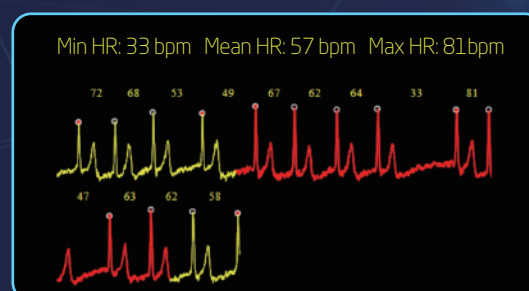


# Stimulate Clinical Potentials with Patient-Centric Solutions

*Anomalous heartbeat? Don't worry!*

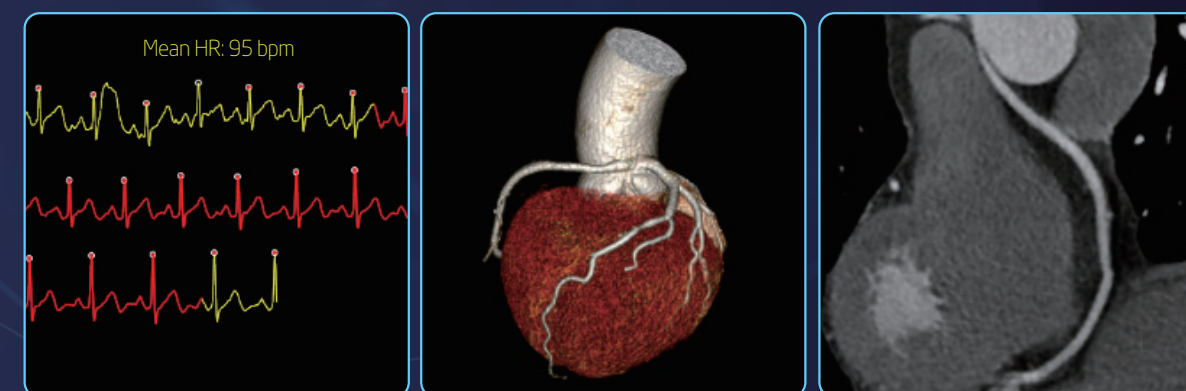
## Arrhythmia Heart Rate

As one of the direct causes of sudden cardiac death, arrhythmia not only threatens the patient's life, but also poses a huge challenge to CT heart scan. The Arrhythmia Handling technology configured by NeuViz 128 can intelligently identify and process abnormal R waves and trigger scanning when the next normal R wave arrives which can greatly improve the success rate of scanning.



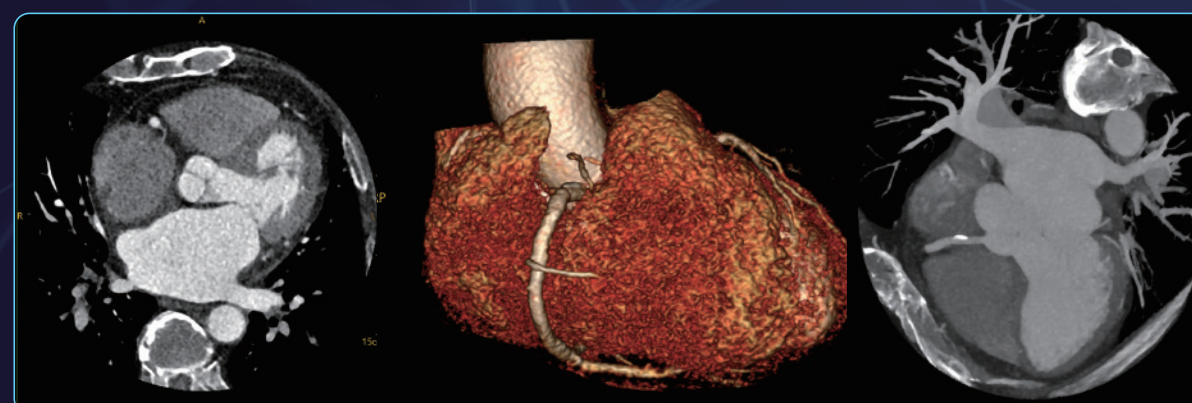
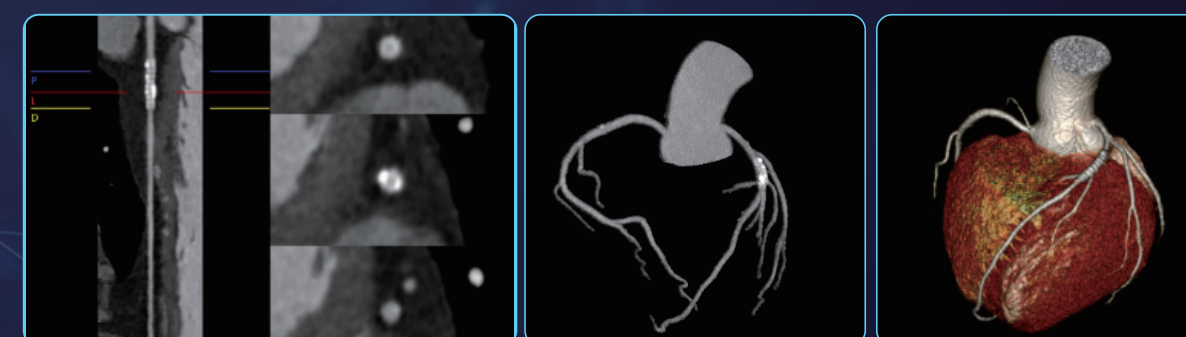
## High Heart Rate

Patients with excessive heart rate have always presented great challenges for coronary CT examination. It delivers remarkable image quality even at abnormally high heart rates, contributing to its industry-leading 25ms temporal resolution with CMC technology.



## Postoperative Evaluation

Evaluation after coronary stenting relies on imaging studies. CT imaging can better detect and diagnose stent restenosis, and evaluate whether the stent is unobstructed. CTA can show the stent location, thrombus, pseudoaneurysm, distal and proximal plaque and stenosis. In addition, high definition imaging chain integrated with advanced MAR+ technique can improve the diagnostic rate of stent restenosis.



Coronary Arteries After ECG Edit



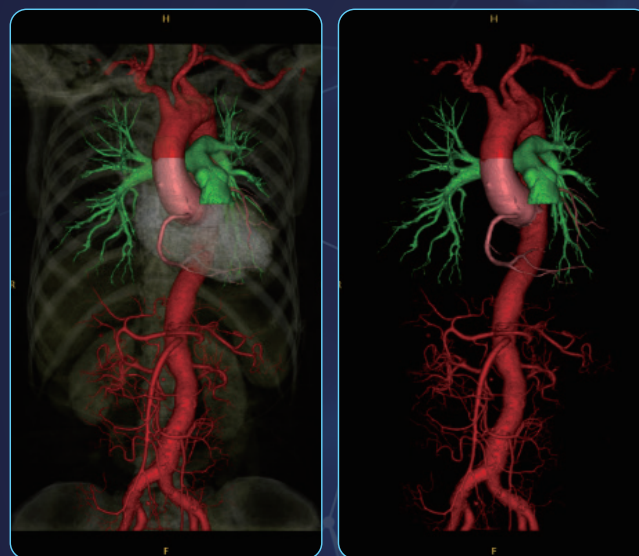
# Stimulate Clinical Potentials with Patient-Centric Solutions

*Emergency cases need diagnosis? Don't worry!*

## One-stop Scanning

For emergency cases, time is life, especially for patients at high risk for chest pain. NeuViz 128 delivers one-stop scanning technology to solve that. One-stop scanning can obtain all data needed and ensure that each exposure is exactly when the contrast agent is retained in the vessels with maximum concentration.

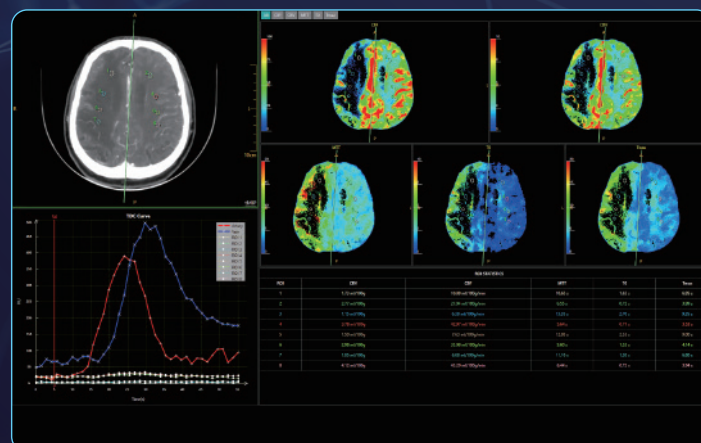
Fast rotation speed can avoid unnecessary superior vena cava imaging and capture the pulmonary artery, coronary artery, and aorta accurately at one time. It helps reduce doctors' pressure and improve patient treatment accuracy.



## One-stop Stroke Solution

NeuViz 128 delivers whole brain perfusion, which is an integration of "morphology and function" of the cerebrovascular system.

Fast rotation speed and shuttle mode with bi-directional table movement ensure CT perfusion is feasible and accurate. With one single injection, NeuViz 128 dynamically obtains images of CTP and CTA. Brain Perfusion can accurately show the location/position, volume of the stroke area, and some visualized information, such as CBF and CBV. This could be of value in making acute stroke management decisions in the cerebrovascular system.



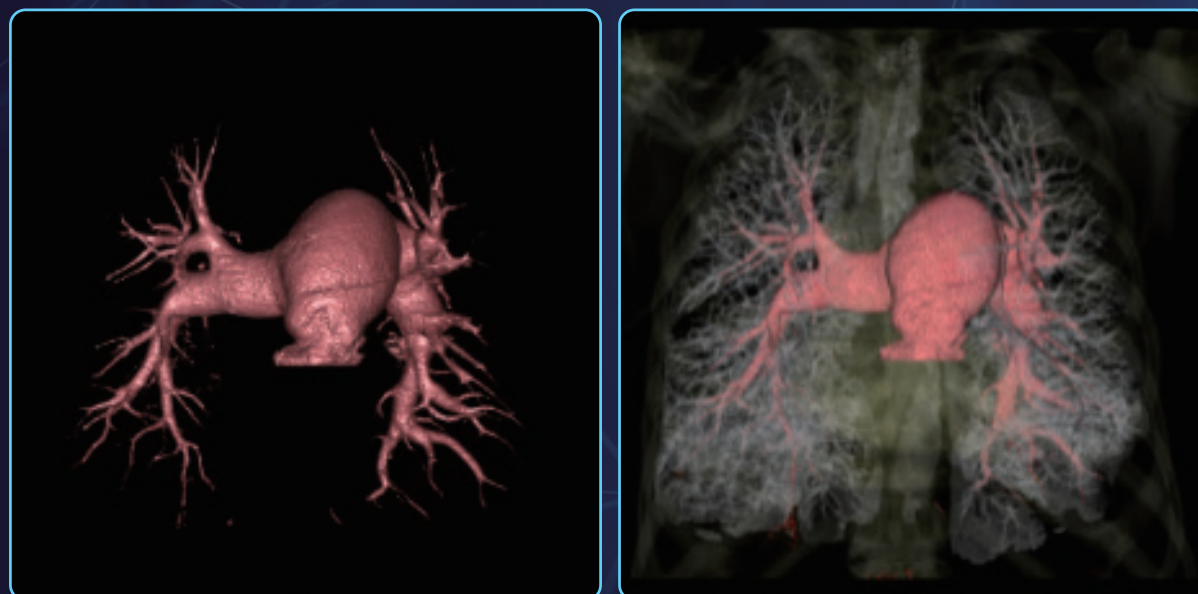


# Stimulate Clinical Potentials with Patient-Centric Solutions

*Emergency case needs diagnosis? Don't worry!*

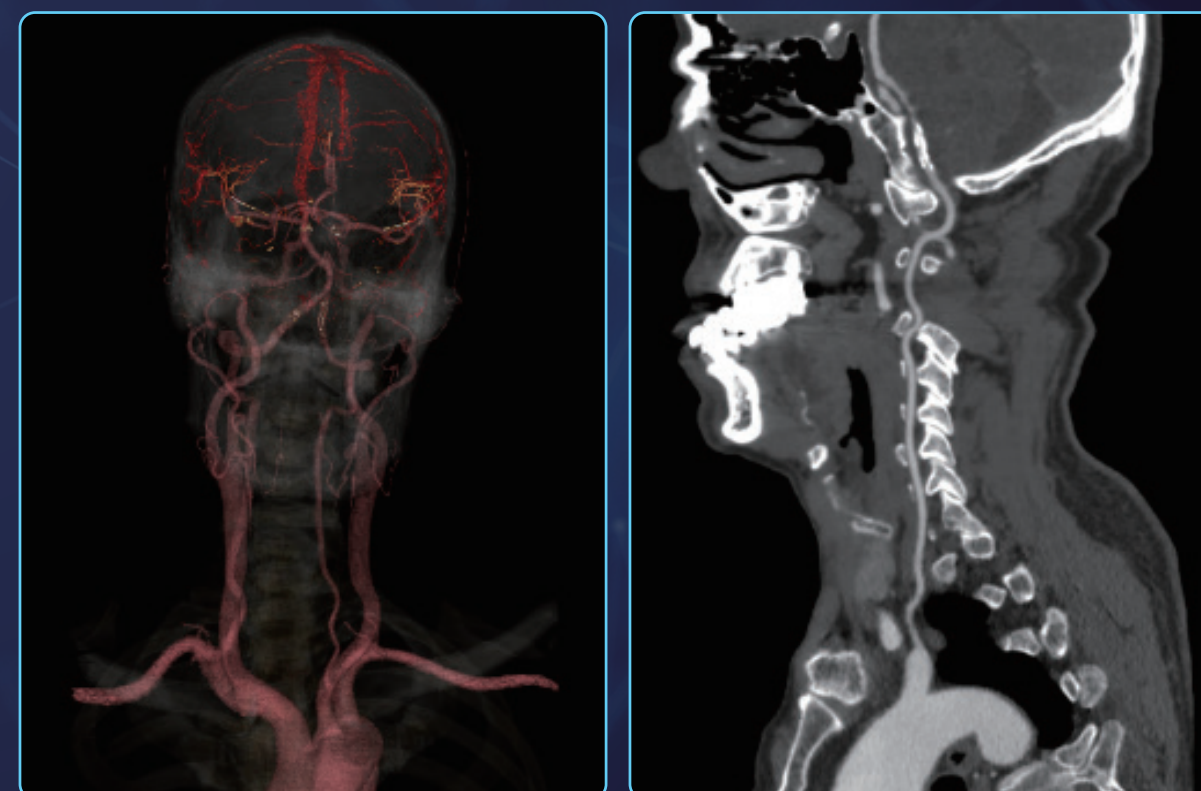
## Urgent and Frequently-Occurring Disease

For emergency disease(e.g., pulmonary hypertension), fast diagnosis in routine examination is of great value for choosing clinical treatments and predicting recovery. NeuViz 128 has powerful scan ability to capture the pulmonary artery and obtain more benefits for the patient' s subsequent decision.



## Non-Invasive Imaging of Arterial Disease

Diagnosing arterial disease has remained challenging and time-consuming. In combination with advanced application tools, such as vessel analysis. These can allow far more detailed characterization of disease in a fraction of the time. Given this, it is conceivable that NeuViz 128 can enhance the evaluation of vessels by providing improved visualization of calcium.



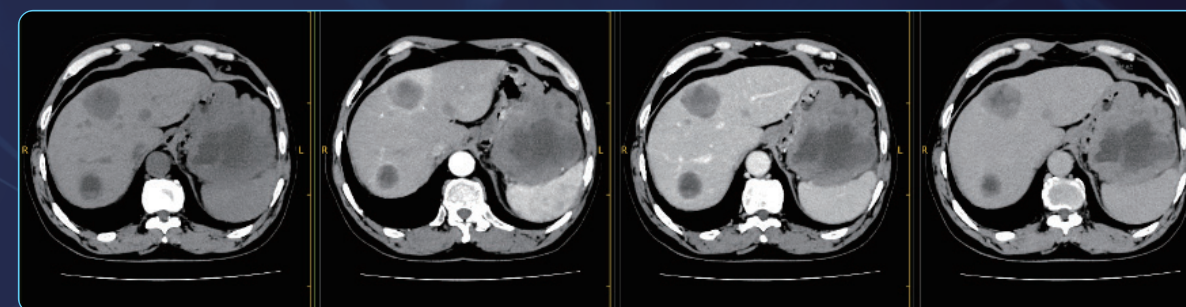


# Stimulate Clinical Potentials with Patient-Centric Solutions

*More and more cancer patients? Don't worry!*

## First Visit Examination

Cancer, the most common cause of disease-related death worldwide, is on the rise. In this case, accurate reporting results in the first visit examination is critical. NeuViz 128 increases the diagnosis precision of cancer and delivers accurate clinical outcomes with outstanding contrast resolution.



Plain scan

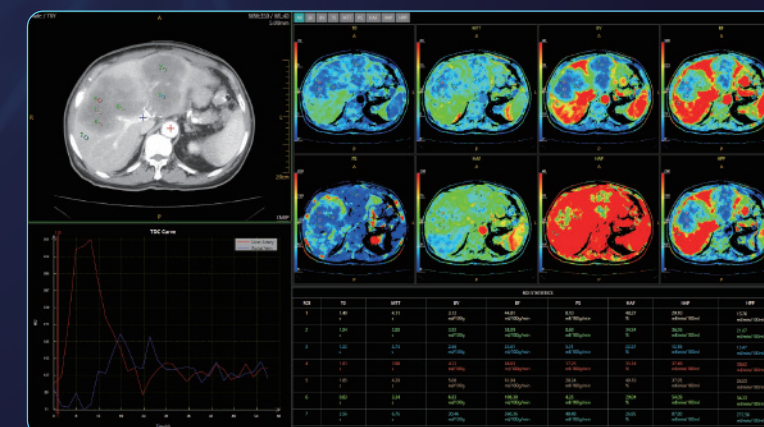
Arterial phase

Venous phase

Delay phase

## Large Coverage Body Perfusion

Hepatocellular carcinoma (HCC) is the most common primary liver cancer worldwide with high mortality. Accurate diagnosis of new or recurrent disease in at-risk patients provides the best opportunity for effective treatment and improves long-term disease-free survival. NeuViz 128 excels in dynamic 4D perfusion. With this technology, we can provide precise diagnosis in large coverage for radiation therapy and even quantitative data of tumor cells. Through the perfusion of tissues and organs on the cellular level, it is conducive for radiologists to deliver multi-parameter diagnosis that can be very helpful in tumor imaging.



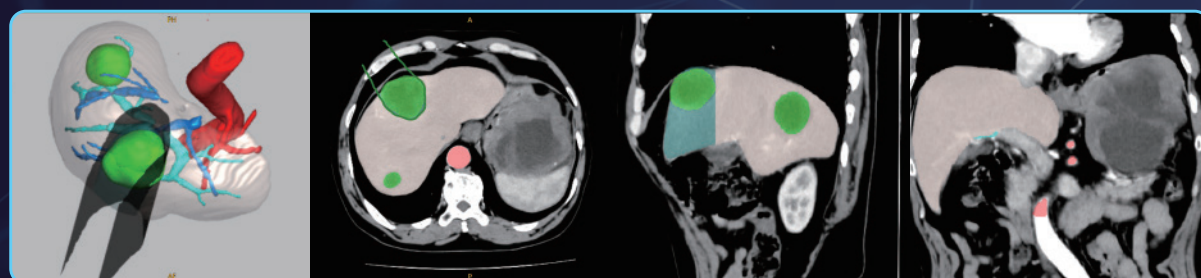


# Stimulate Clinical Potentials with Patient-Centric Solutions

*Lack of diagnostic confidence? Don't worry!*

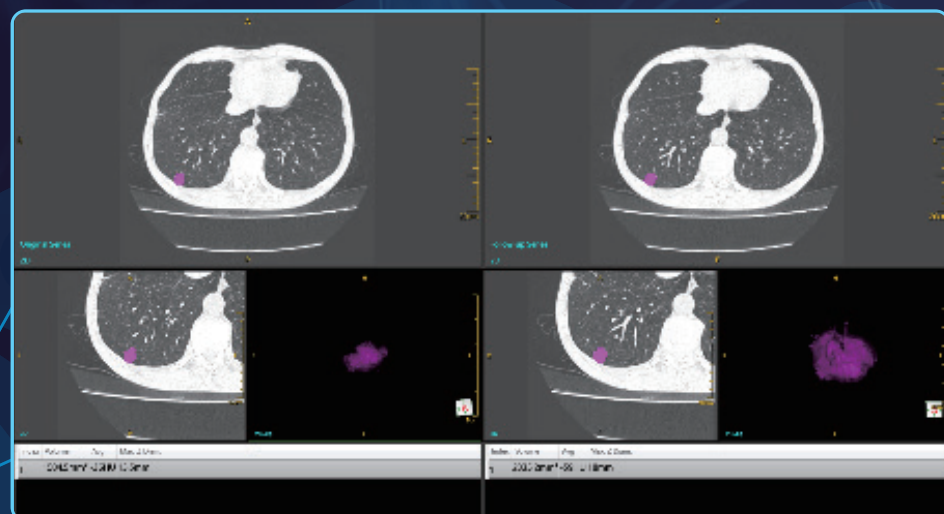
## Liver Analysis+

The liver analysis is an effective tool in the management of primary liver cancer and liver metastasis for treatment planning, monitoring, and follow-up. The CT Liver Analysis provides a comprehensive analysis of the liver, allowing for more effective patient management and treatment planning. This application automatically identifies and extracts the liver and the vessel, as well as assesses the total and functional liver volume, lesion volume, and location relative to functional liver segments and vessels.



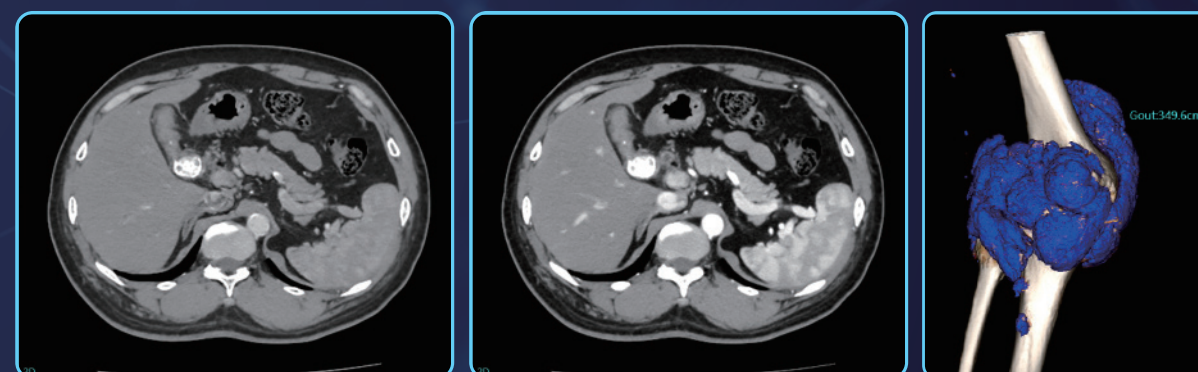
## Follow-Up Diagnosis and Preoperative Evaluation

Lung cancer screening follow-up after a positive CT exam is a necessary step in the process. NeuViz 128 has specialized post-processing tools to help you quickly locate and calculate lesion size. It can also help you follow up on lesion changes, determine the surgery treatment, and select the best option for patients.



## Prism Imaging

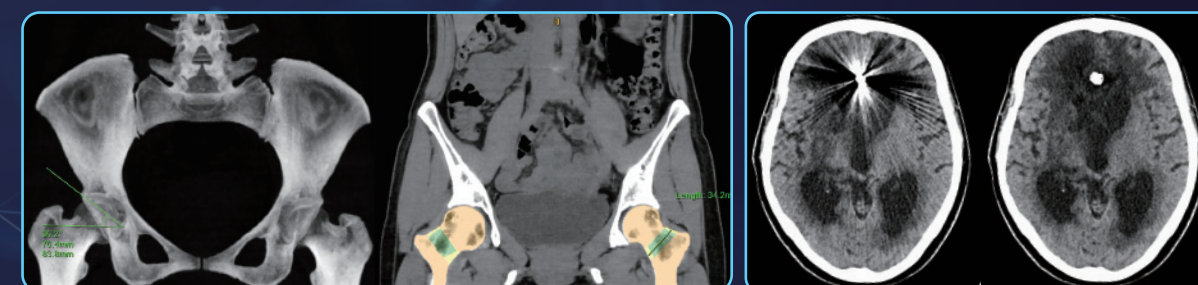
We see CT closing the gap between anatomical and functional imaging thanks in part to the advances in Spectral CT. The introduction of Spectral Imaging on NeuViz 128 is changing the way radiologists across the globe utilize CT imaging in clinical practice. Additionally, specific tools, such as qualitative analysis of calculi composition and metal artifacts removal, have been created to support the data analysis of this rich information. The purpose is to offer the most relevant clinical applications for the use of spectral imaging in clinical practice.



120kV

70keV

Gout Analysis



Bone Measurement

MAR+



# Technical Specifications

## Key data:

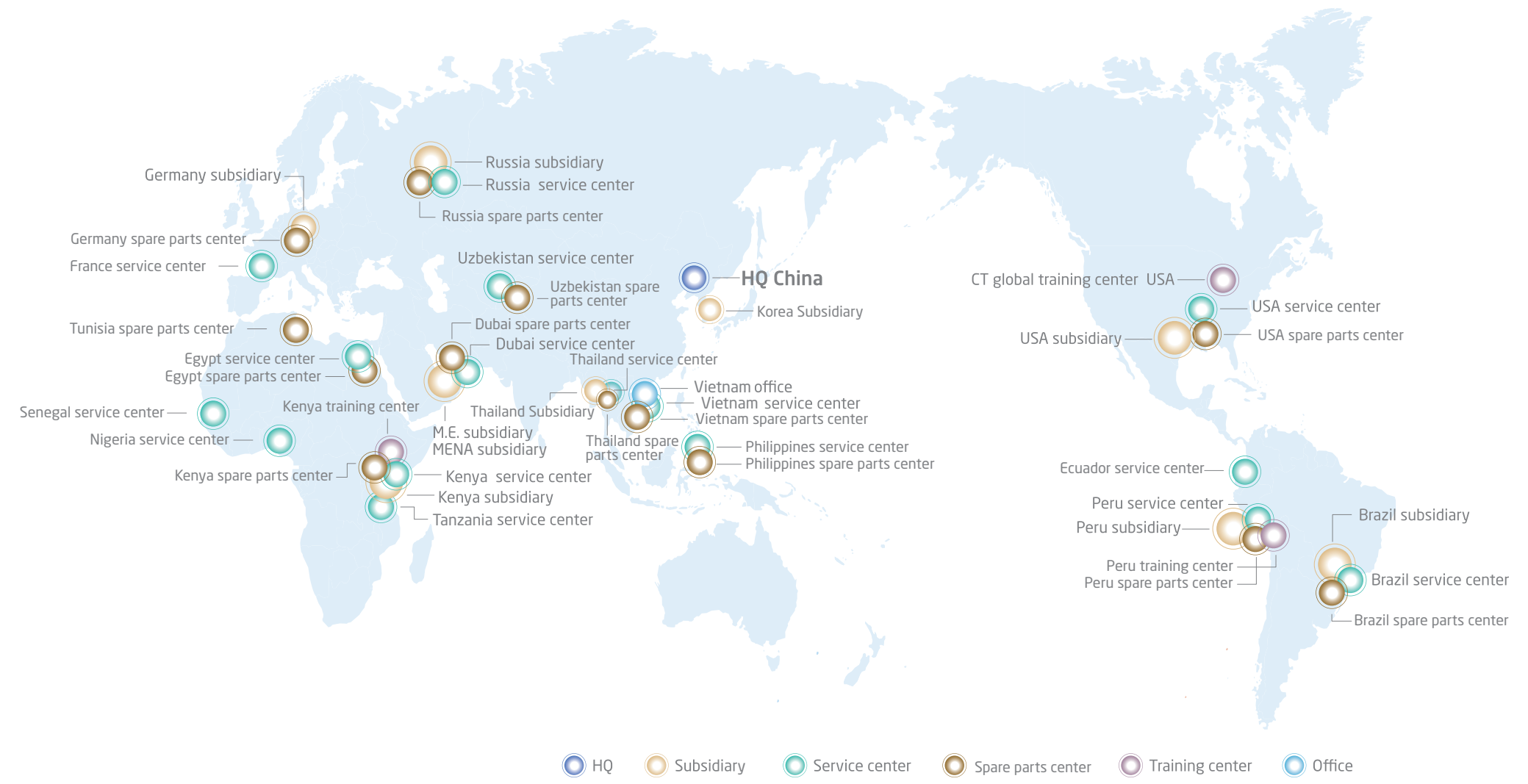
Slices.....	128 slices
Slice thickness.....	Min. 0.3125mm
Tube heat capacity.....	8.0MHU
Generator power.....	80kW
kV step.....	80kV, 100kV, 120kV, 140kV
Pitch.....	0.1-2.1
Rotation time.....	0.374s/360°





# Service and Logistics Support

## Neusoft Global Service & Logistics Network



### After-sales service and support

- Remote service capabilities bring Neusoft expertise to you IMMEDIATELY, no matter where you are!
- Identifying and correcting PROMPTLY and PROACTIVELY, minimizing downtime and patient inconvenience.
- Global logistics network enables fast response regarding parts and supplies.

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