UNITED IMAGING

uCT 550

**Powerful.
Proven.**

ABOUT UIH

Shanghai United Imaging Healthcare Co., Ltd. develops and produces a full portfolio of advanced medical imaging and radiotherapy equipment and offers medical IT and intelligent solutions. Founded in 2011 and headquartered in Shanghai, the company has subsidiaries and R&D centers across China, US, and other parts of the world. Half of its 3,300 employees work on research and development. To date, more than 3,000 hospitals worldwide are using UIH products.

To learn more, visit https://www.united-imaging.com

uCT 550

Along with the ultra-low noise Z-Detector, the powerful imaging chain and the advanced software platform, uCT 550（40/80 Slice）enables high resolution images with low radiation dose. With our innovative Easy-Logic Intelligent prediction platform, the system helps to ensure high efficiency in operation and boosts daily patient throughput capability.

| Innovative Imaging Chain

| Enhanced Clinical Performance

| Comprehensive Applications

Innovative
Imaging Chain

Based on the high-performance imaging chain, uCT 550 enables comprehensive and advanced clinical applications, assists precise clinical diagnosis and helps establish and expand your CT business efficiently.

Z-Detector

The ultra-low noise detector fundamentally improves the image quality.

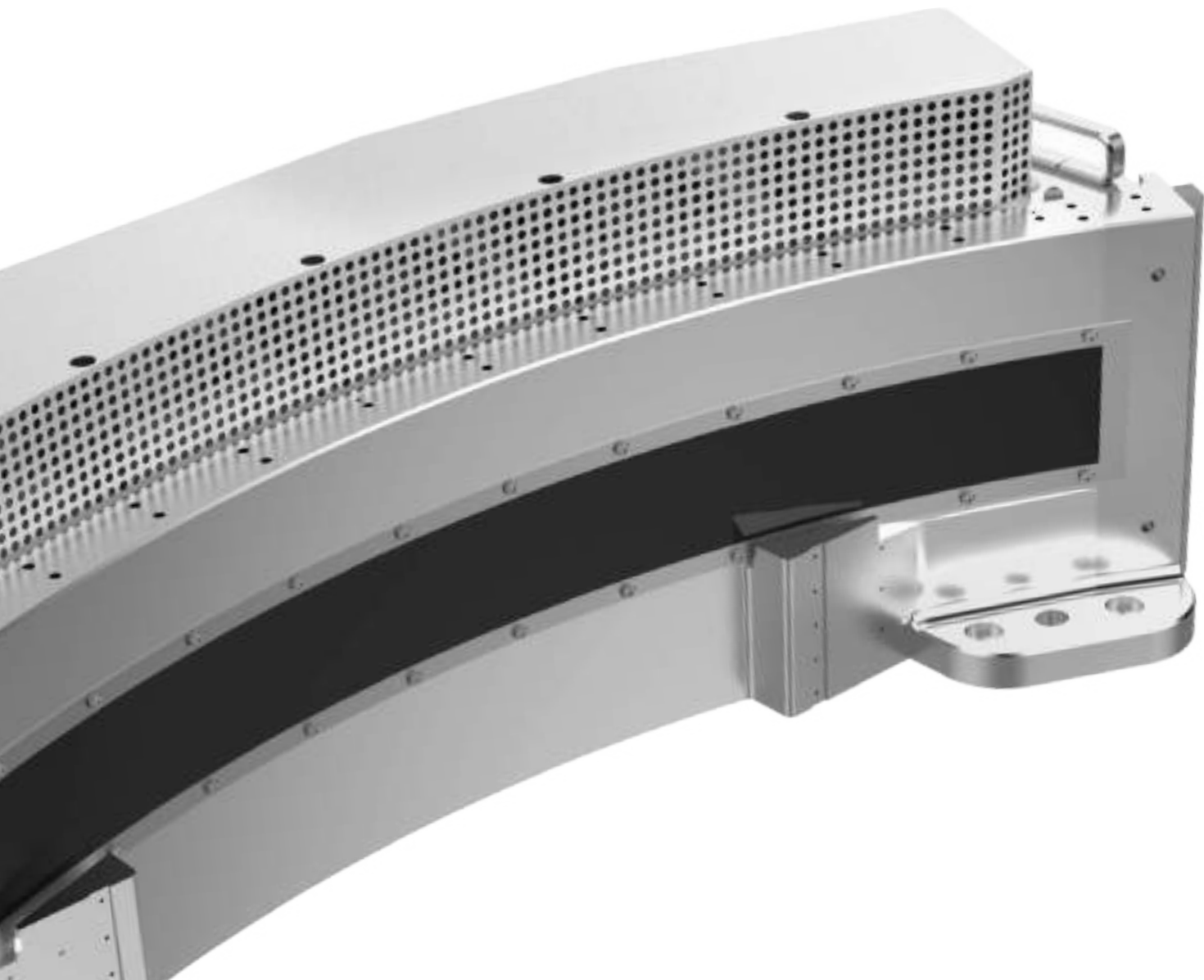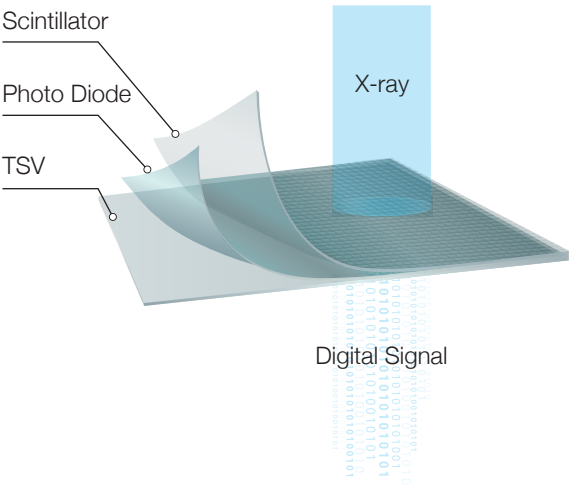| **1st** Generation | Gas detector Split Design | ⟫ | **2nd** Generation | Solid-State GOS detector Split Design | ⟫ | **3rd** Generation | Solid-State GOS detector DOD Structure | ⟫ | **4th** Generation | Digital detector Through-Silicon Via (TSV) Technology |

Ultra-low Noise Design

With Through-Silicon-Via (TSV), Z-Detector enables direct output of digital signal, which achieves not only overall noise reduction, but also helps to ensure optimal image quality with low radiation dose.
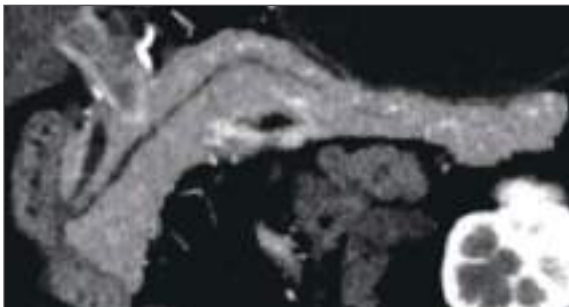
Scintillator

Photo Diode

TSV

X-ray
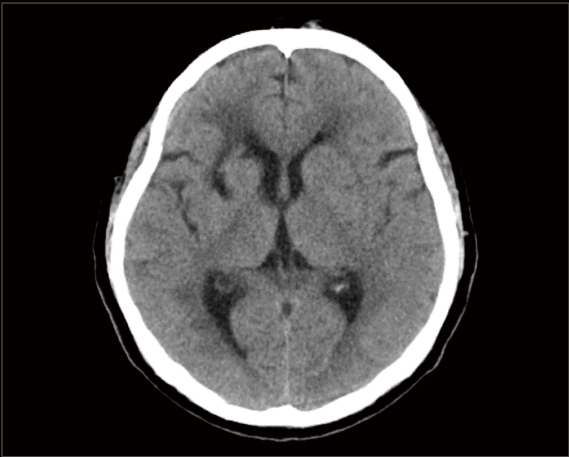
Digital Signal

Fine Sampling

The very fine sampling voxels acquire massive amount of information, bringing exquisite visualization of fine anatomic details.
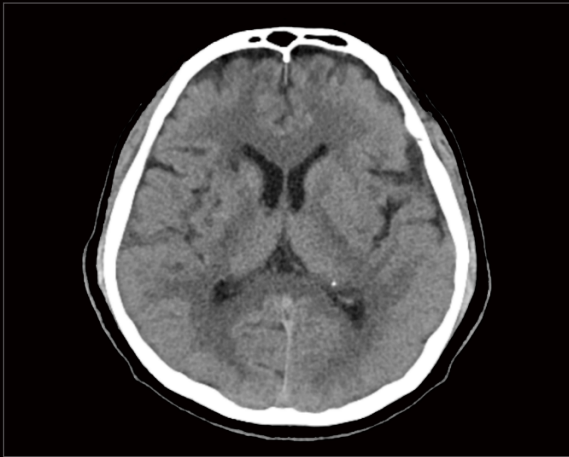
Clear pancreatic duct and pancreas boundary.

Efficient Material

The high conversion efficiency of GOS boosts X-ray conversion rate while maintaining quick response time.

Improve Low Contrast Detectability

Z-Detector delivers reduced noise and improved grey/white matter differentiation.

Conventional detector
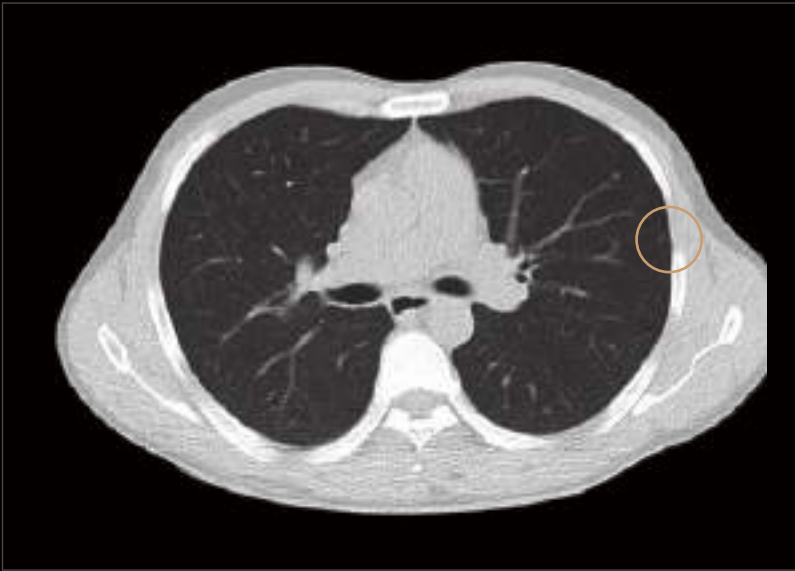CTDIvol=58mGy

Z-Detector
CTDIvol=40mGy

Improved Small Vessel Visualization

Wider z-direction coverage and thinner acquired images boosts small vessel visualization.

Specialized Scan Mode for Low Dose Screening

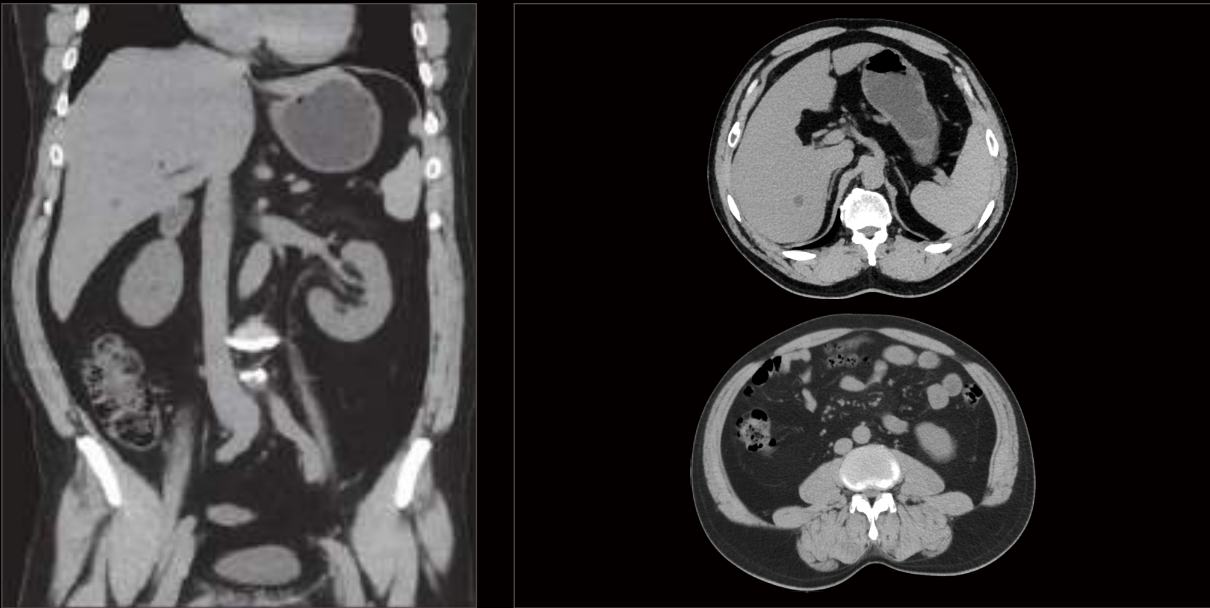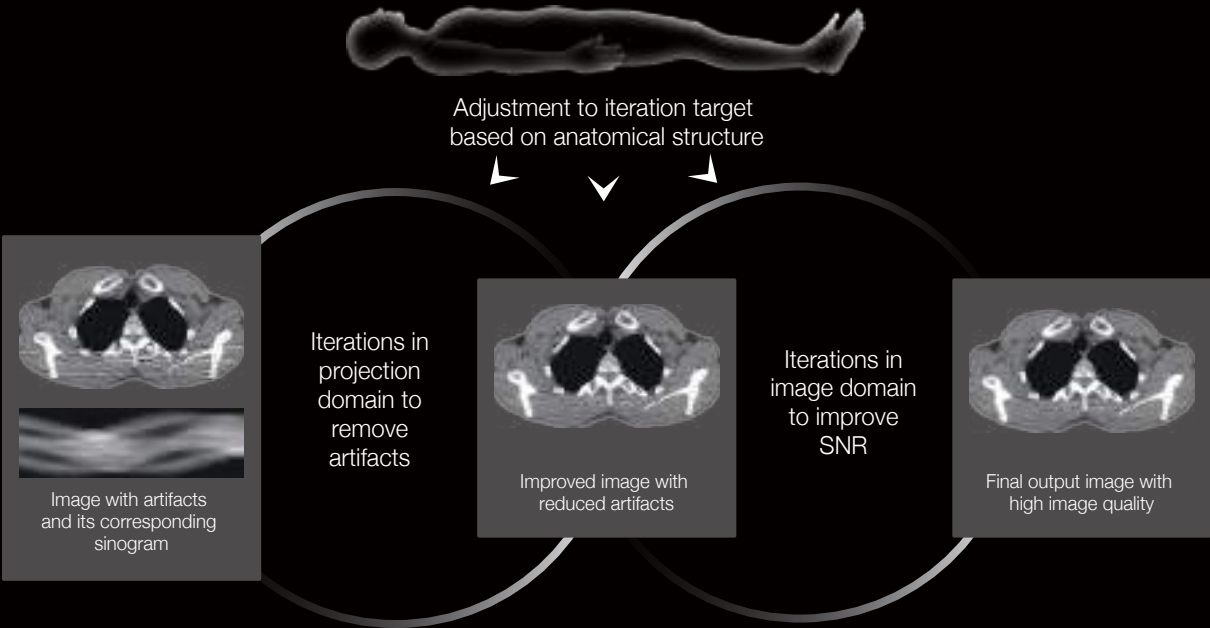With the Z-Detector, the image noise for 70 and 80 kVp scans can be minimized.

70kV Lung Screening
0.82mGy (over 3 times lower than the 3 mGy CMS threshold)
A nodule found in 5mm image, GGO?

A solid nodule is verified through 0.55mm thin slice image reconstruction.
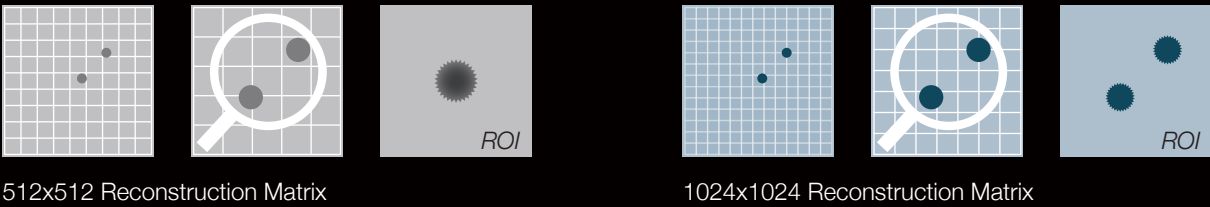
KARL 3D Iterative Denoising※

KARL 3D employs iterative algorithm in both projection space and image space. It helps deliver image with outstanding quality while significantly reducing image noise.

Adjustment to iteration target based on anatomical structure

Image with artifacts and its corresponding sinogram

Iterations in projection domain to remove artifacts

Improved image with reduced artifacts

Iterations in image domain to improve SNR

Final output image with high image quality

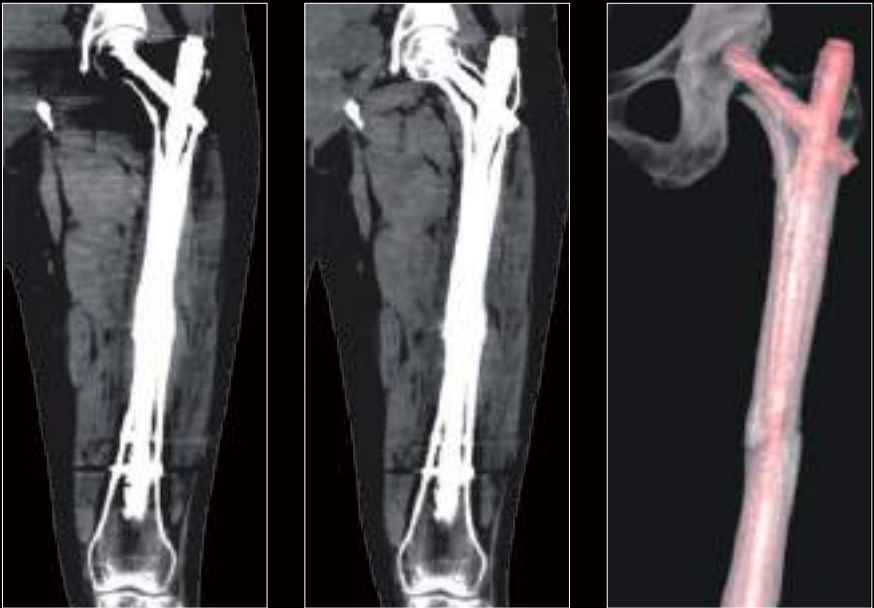Abdominal exam for patient with BMI 31.4

1024x1024 HD Reconstruction Matrix※

The high-definition reconstruction matrix reveals the fine details of inner ear, small joints and lung structures, etc.

ROI

ROI

512x512 Reconstruction Matrix

1024x1024 Reconstruction Matrix

MAC Metal Artifact Correction※

MAC can be used prior to or after the scan. It aims to remove metal artifacts and keep the important surrounding structural details.

Effectively reduces metal artifacts induced by the hip joint implant and allows clear visualization of surrounding soft tissue and bone structure.
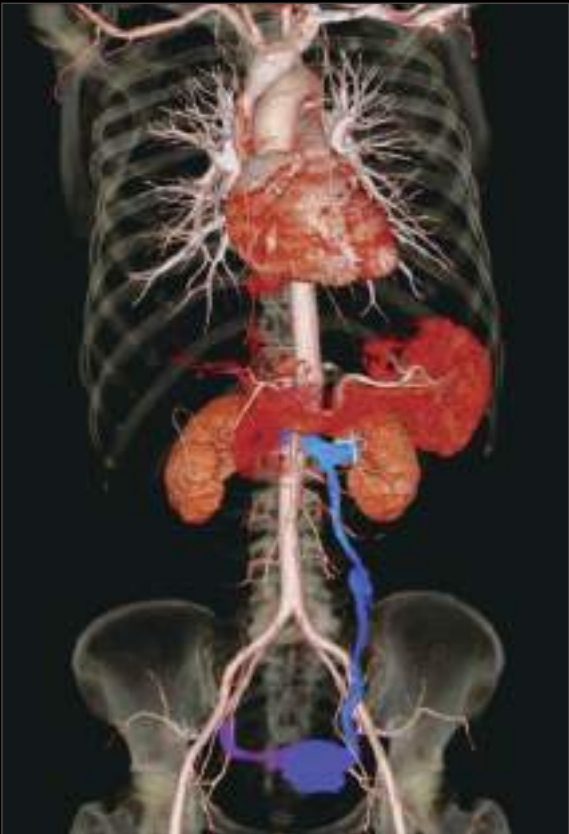
Enhanced Clinical Performance

Combing the powerful hardware platform and the Easy-logic prediction platform, uCT 550 provides streamlined workflow and extends the capability of routine clinical practices with high patient throughput.
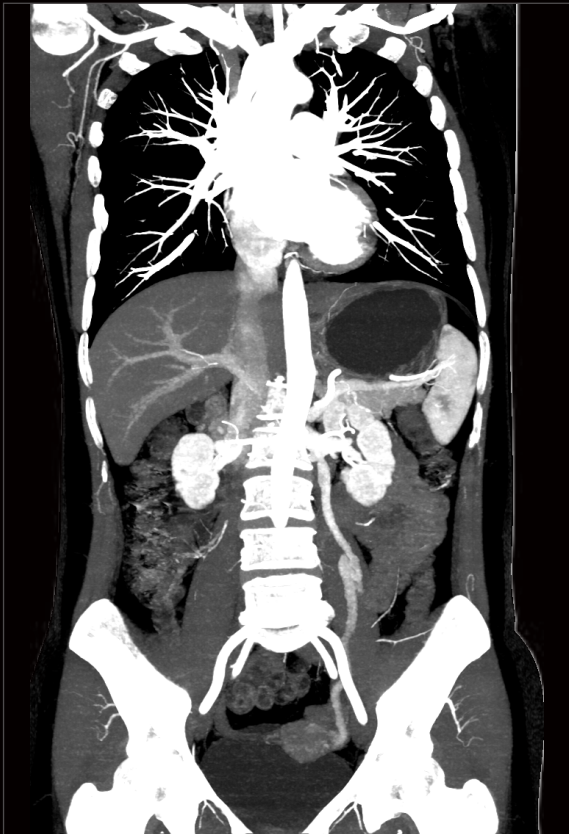
Powerful Hardware Platform

The uCT 550 incorporates a 5.3MHU X-ray tube with a fast cooling rate of 815kHU/min, which helps to ensure a fluid clinical workflow even for institutions with a large patient volume.

The combination of detector, rotation speed and table speed results in rapid scanning capabilities, with exceptional image quality.

Continuous pulmonary and abdominal CTA scans with high spatial resolution and superb image details.

Easy-logic Prediction Platform

EasyRegister

The most frequently used protocols are sorted, updated and placed in the front page shortcut area, for easy selection.

Along with the pre-set patient positions, the patient registration can be completed with a few clicks of the mouse.

Easy-Logic

The system predicts the next user operation and is fully prepared prior to the command conducted, including tube preparation, gantry preparation and data pre-processing.

Minimizes the wait time between operation procedures and accelerates CT exam workflow significantly.
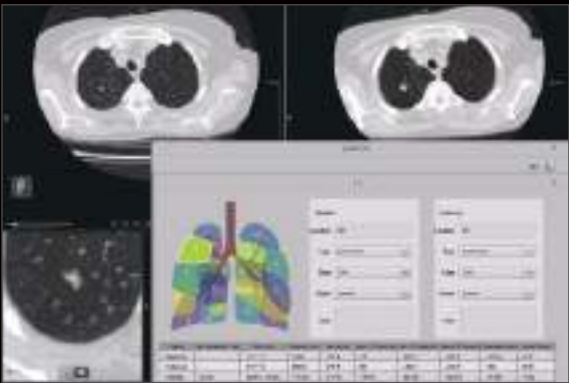

Easy-Logic
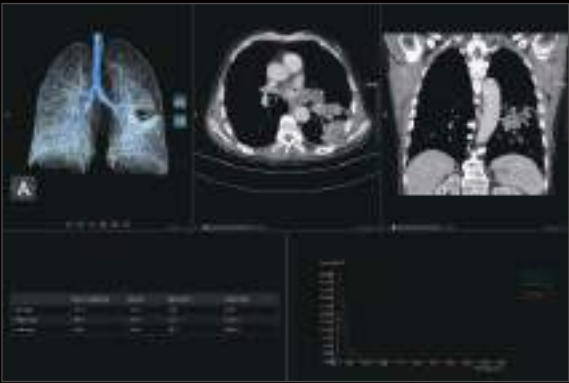Always a ahead

Comprehensive Applications

uCT 550 provides multiple advanced post-processing applications for high efficiency and improved diagnostic confidence.

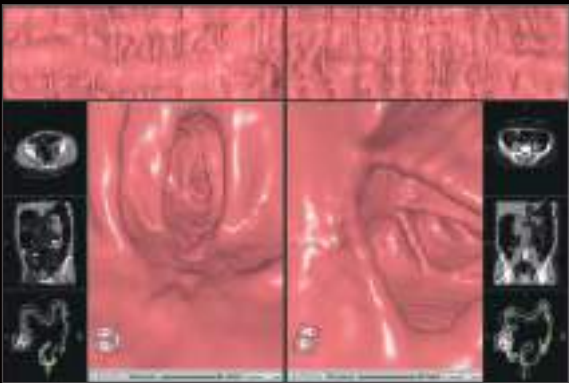# Integrated Advanced
Applications on the Console

Lung Nodule Analysis

Assist detection, segmentation, and measurement of nodule.

Nodules quantitative analysis.
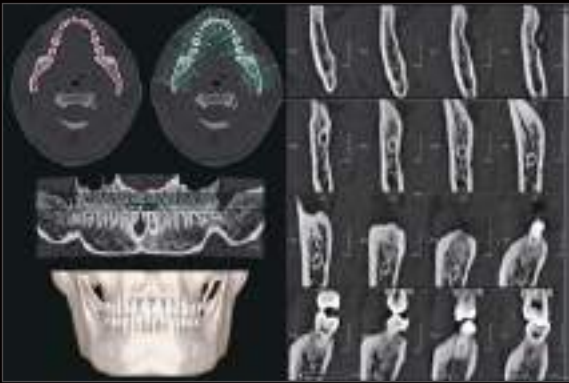
Follow-up analysis.

One-step structured report.

CT Colonoscopy

Automatic colon segmentation.

Electronic colon cleansing.

Virtual endoscopy.

Lung Density Analysis

Lung Extraction and Contour Editing.

Pulmonary Density and Volume Measurement.

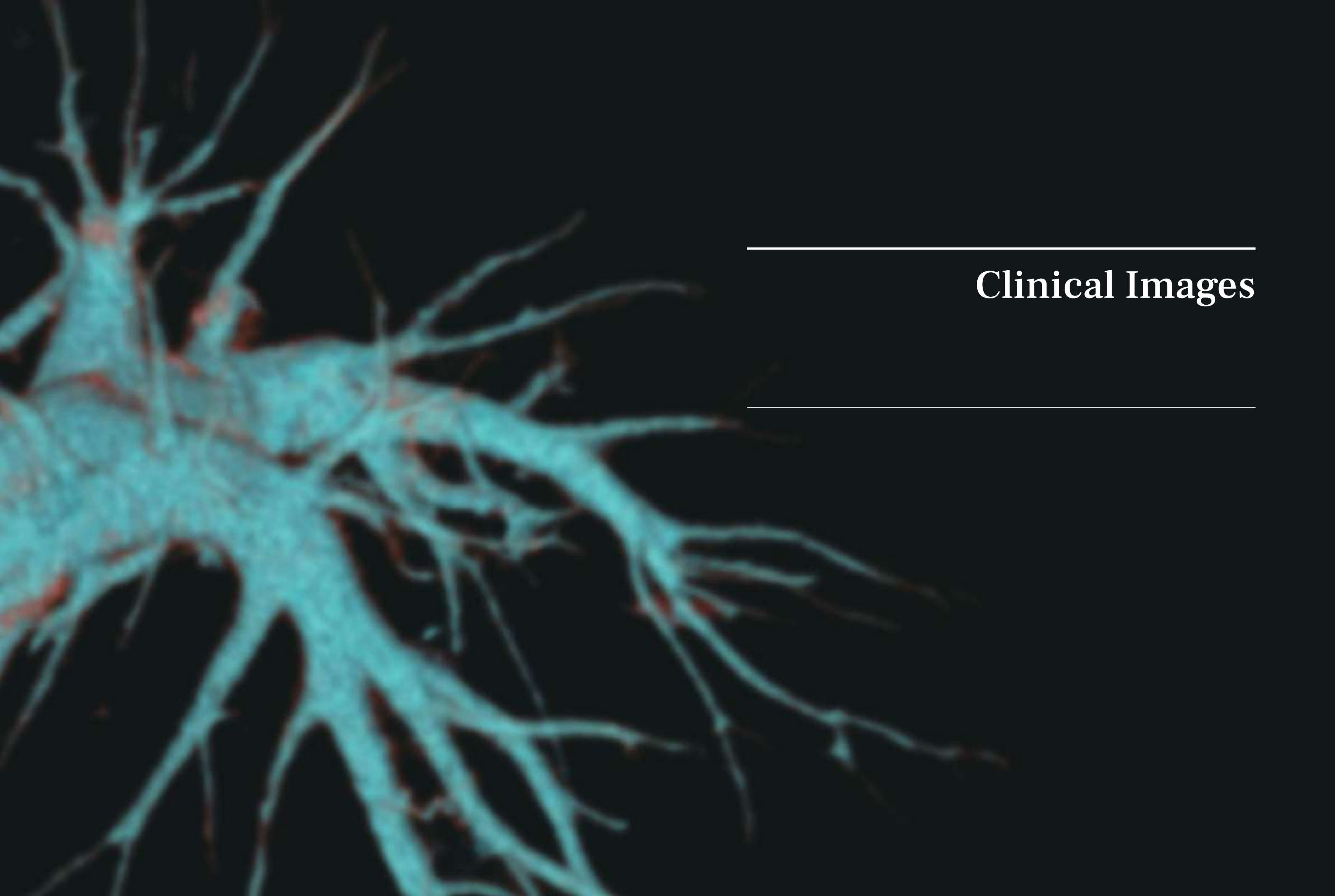Emphysema Ratio Quantification.

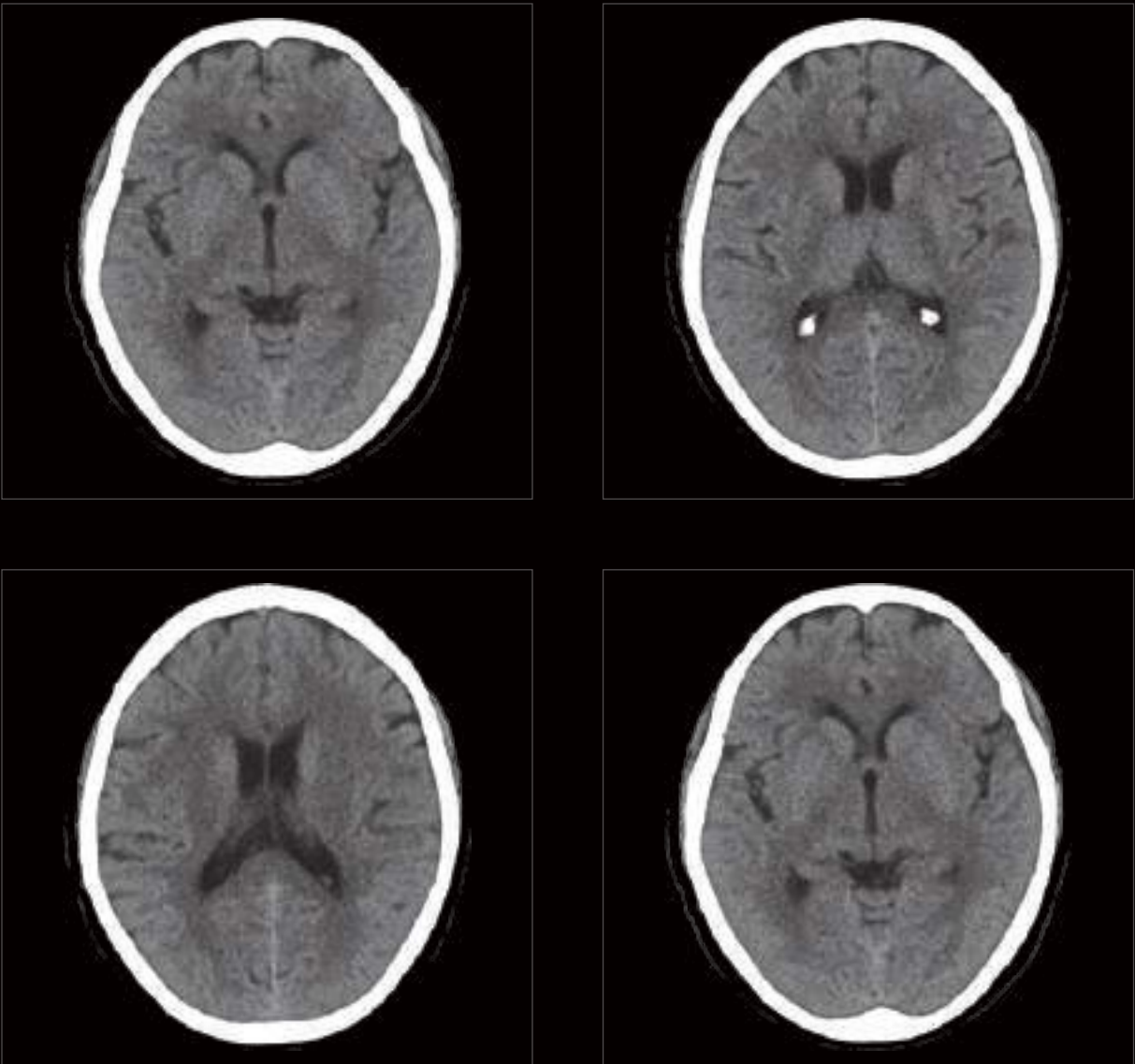Quantitative Data Analysis and Export.

Dental Analysis

Plotting Panoramic Curve.

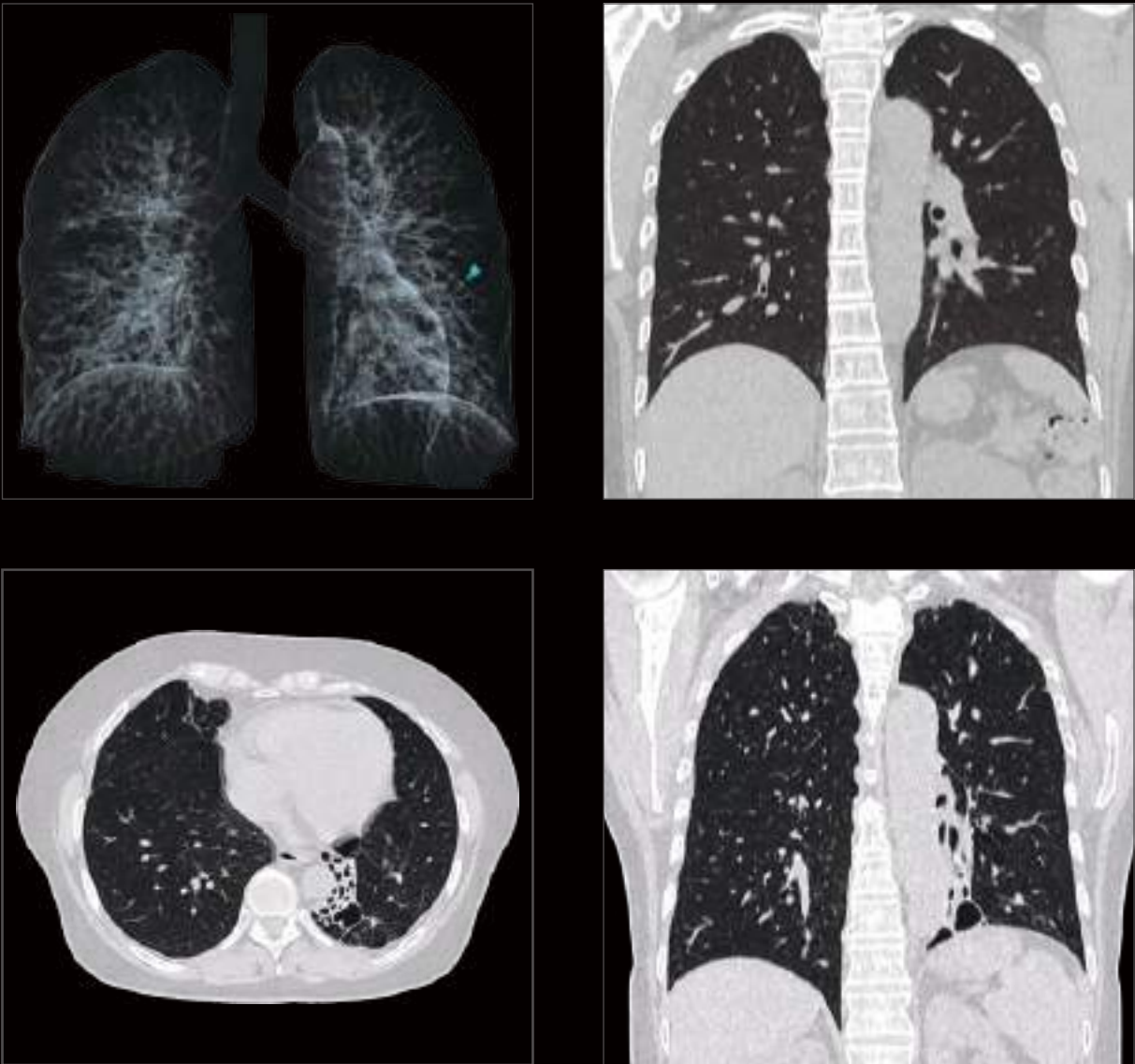Marking Nerve Lines.

Sectional View Analysis.
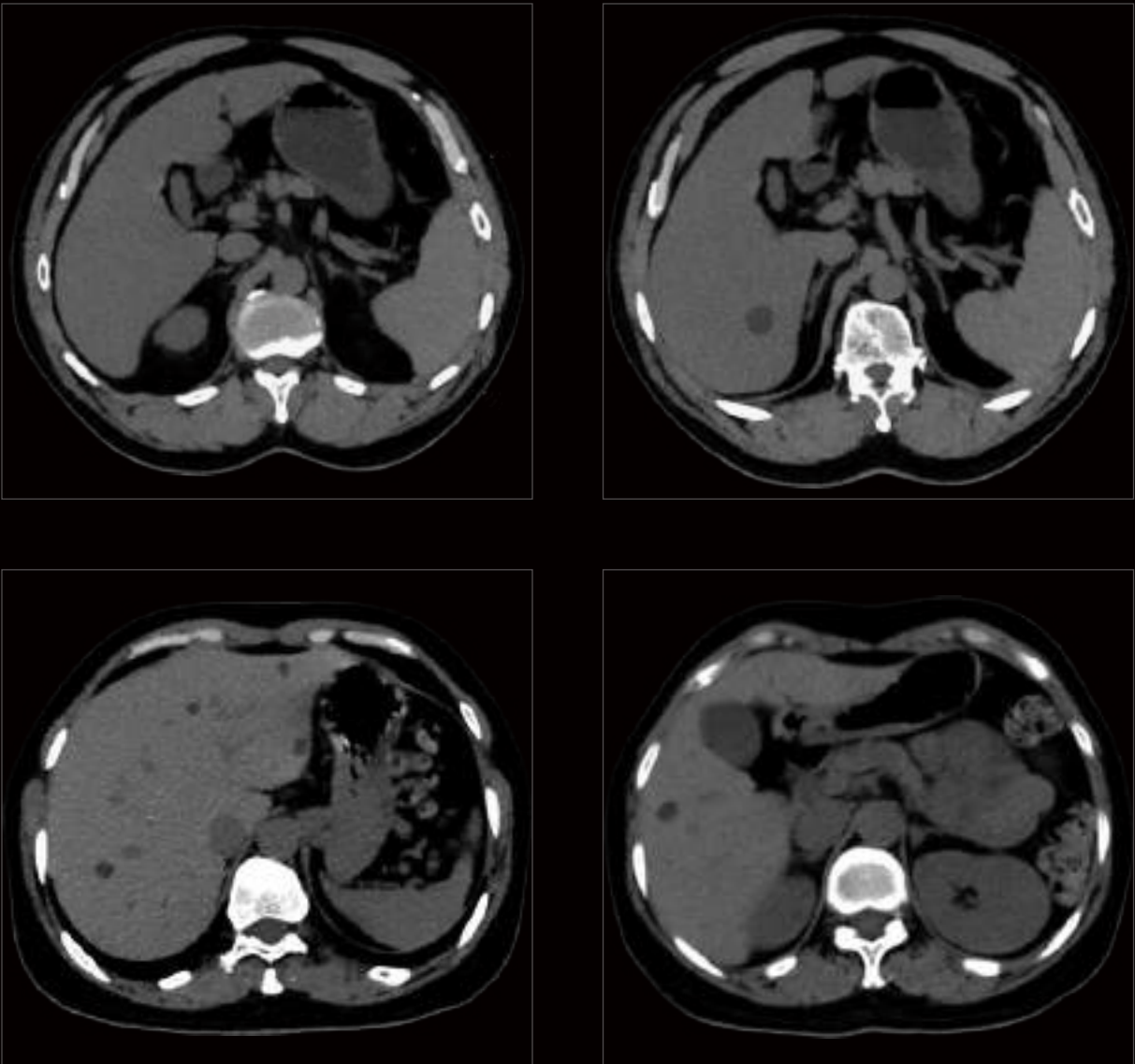
※ Optional

Clinical Images

The Z-Detector reduces image noise and enhances the grey/white matter differentiation.
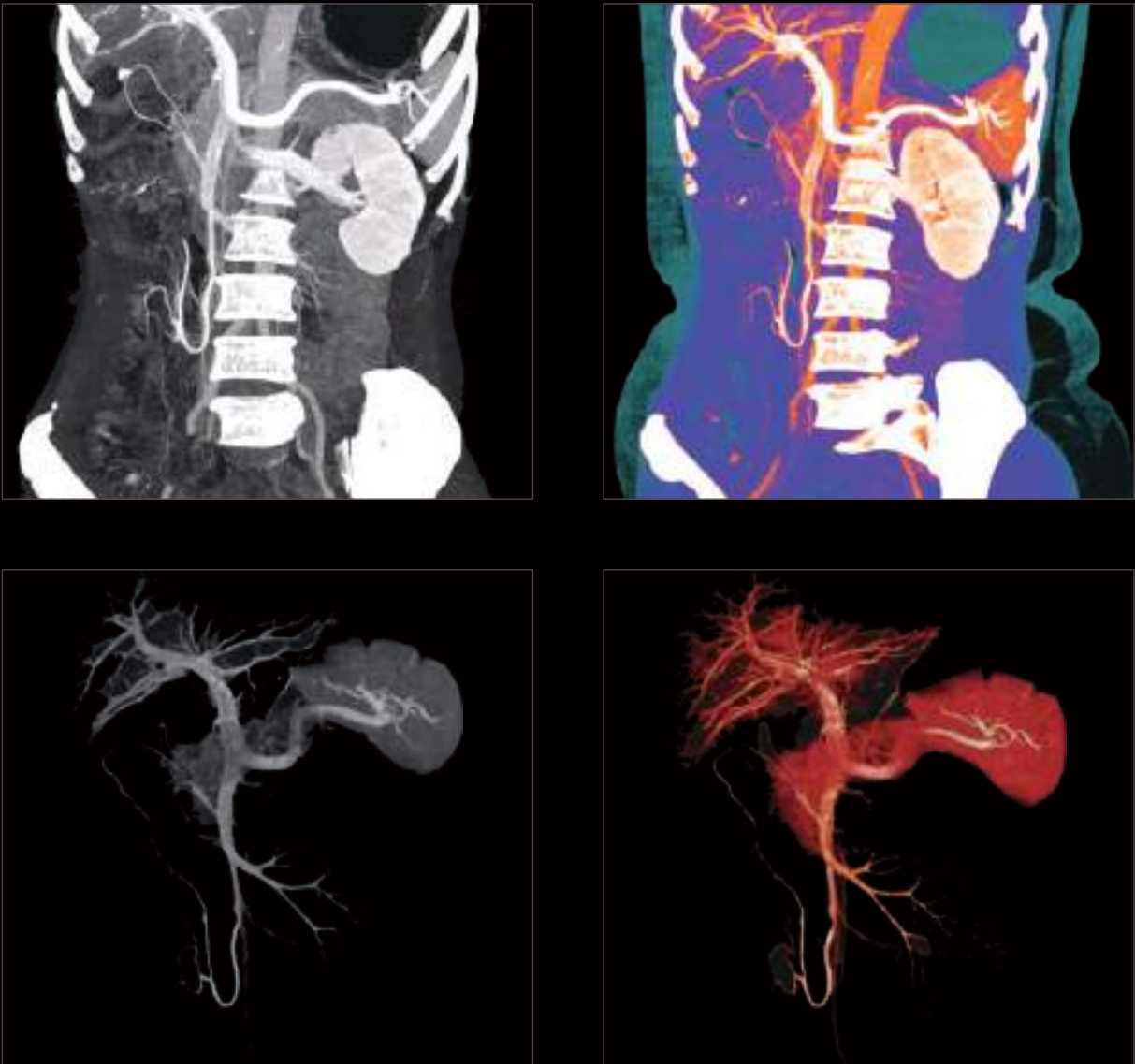
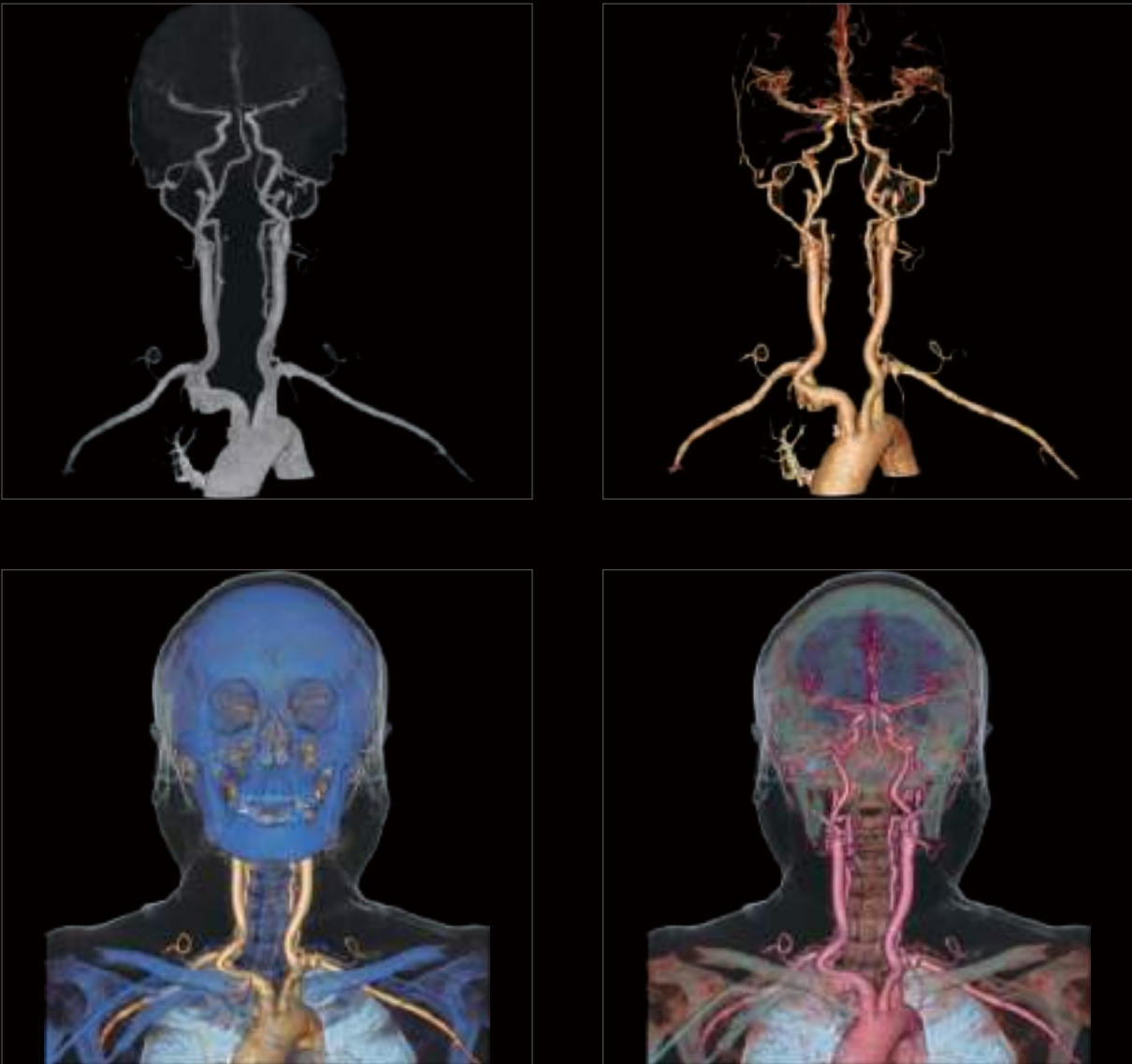Finer image details with 0.55 mm slice thickness.

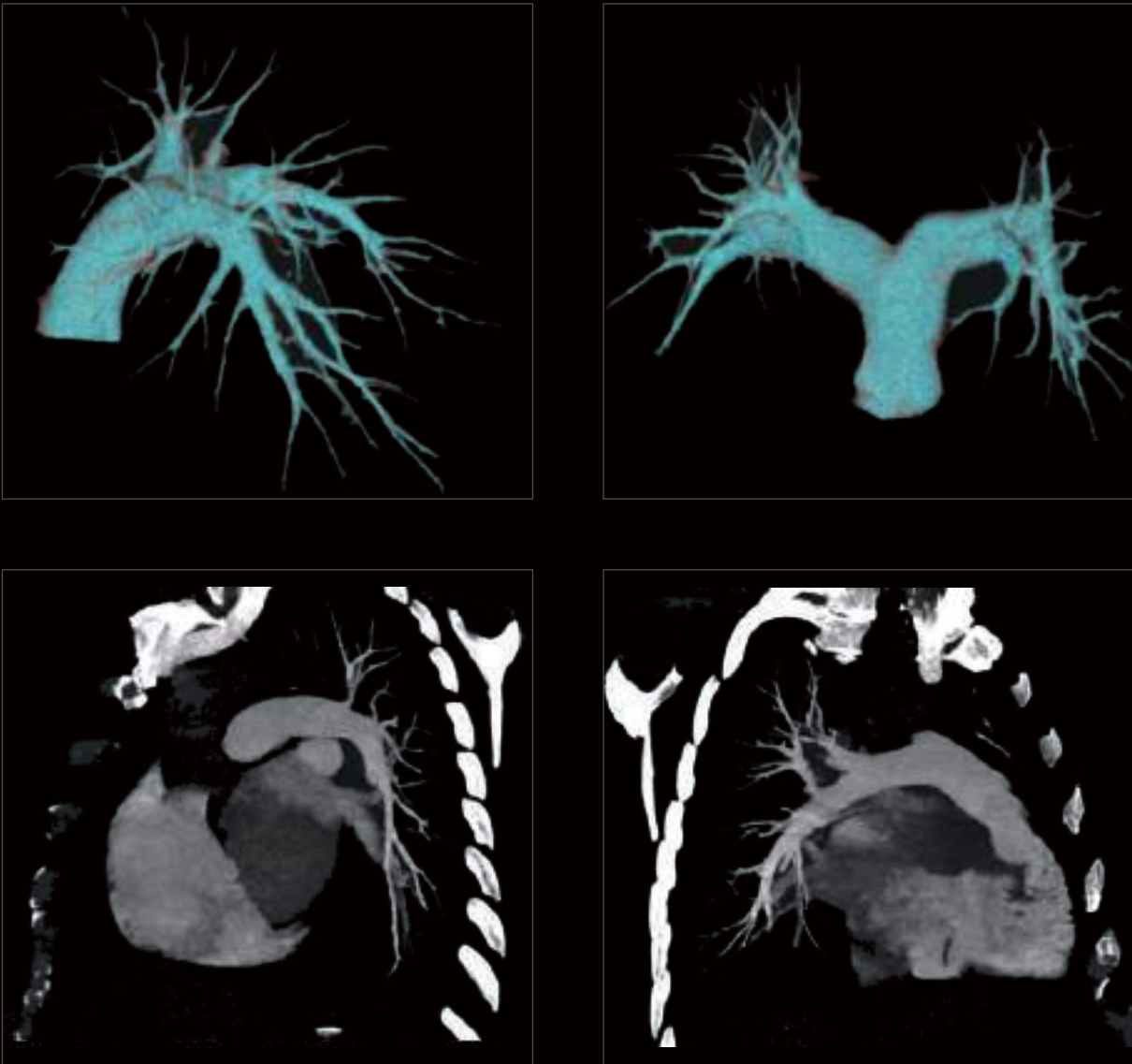Ultra-low noise design boostts the visualization of bile duct and liver.

70 kV scan mode improves the image contrast of hepatic portal system.
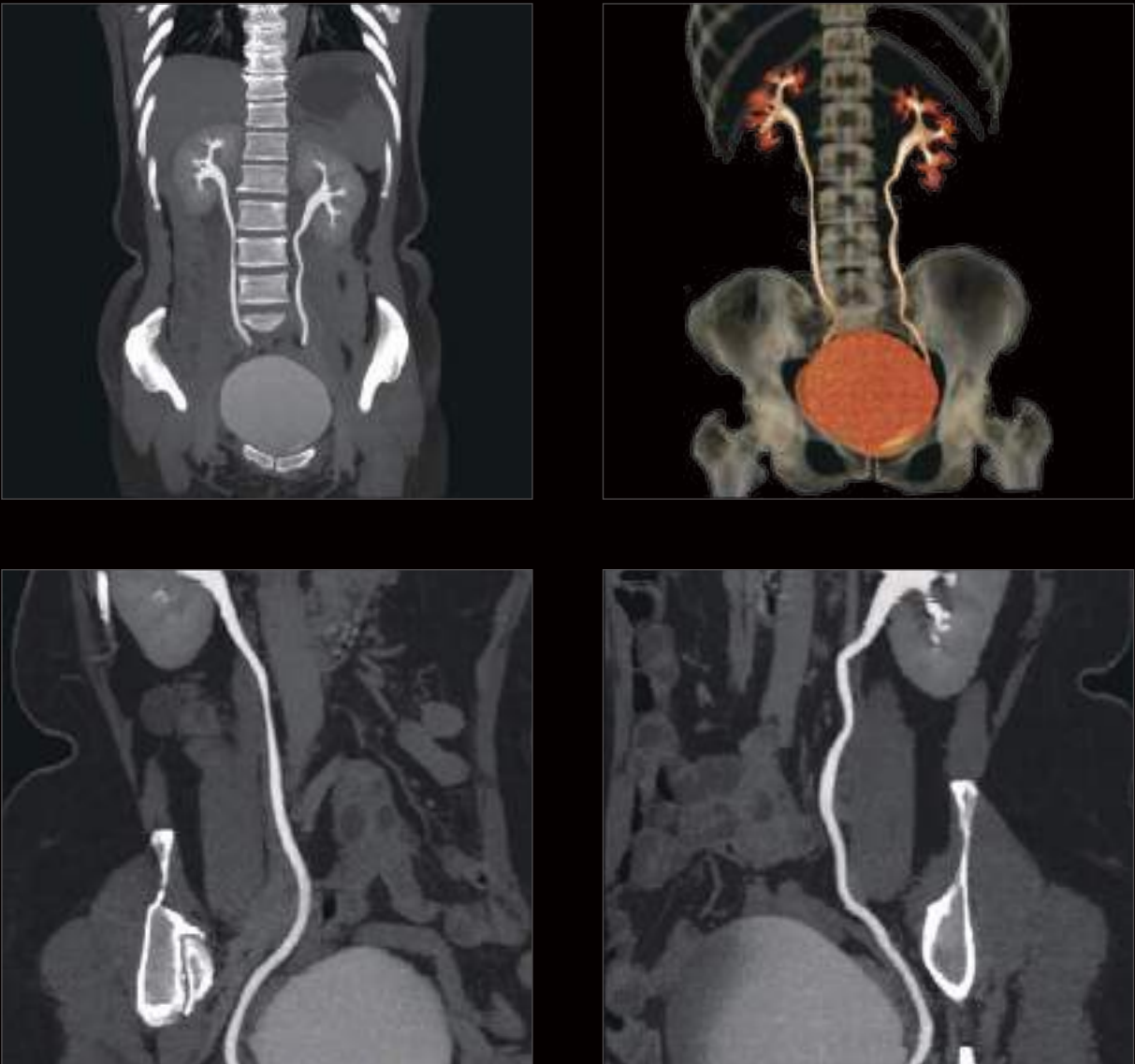
Single-click head & neck bone removal for clear vessel visualization and
easy post-processing operation.

Wider detector z-direction coverage helps to conduct pulmonary CTA
faster with less respiratory artifacts.

CTU is sed to obtain clear images of the whole urinary tract, including the kidneys, bladder and ureters.

The powerful hardware platform helps to ensure rapid CTA scan capabilities with exceptional image quality

Human-Centered Design

Focusing on user experience, uCT 550 combines precise operation with a lightweight and artistic design. We bring aesthetic enjoyment and ease of use to the technology, delivering care, trust and respect through our design.

Pleasing Aesthetics

Our design scheme integrates oriental aesthetics with minimalism, presenting a seamless fusion of traditional and modern styling.

User-Friendly Design

The product design delivers comfort, safety, efficiency and ease-of-use. By applying ergonomic principles the uCT 550 combines innovative design with optimal functionality in order to provide the best possible user experience, optimizing patient comfort during the examination.

Sophisticated Craftsmanship

Driven by the tenets of precision design, we fine-tune every technological detail to embody the spirit of craftsmanship in every product.