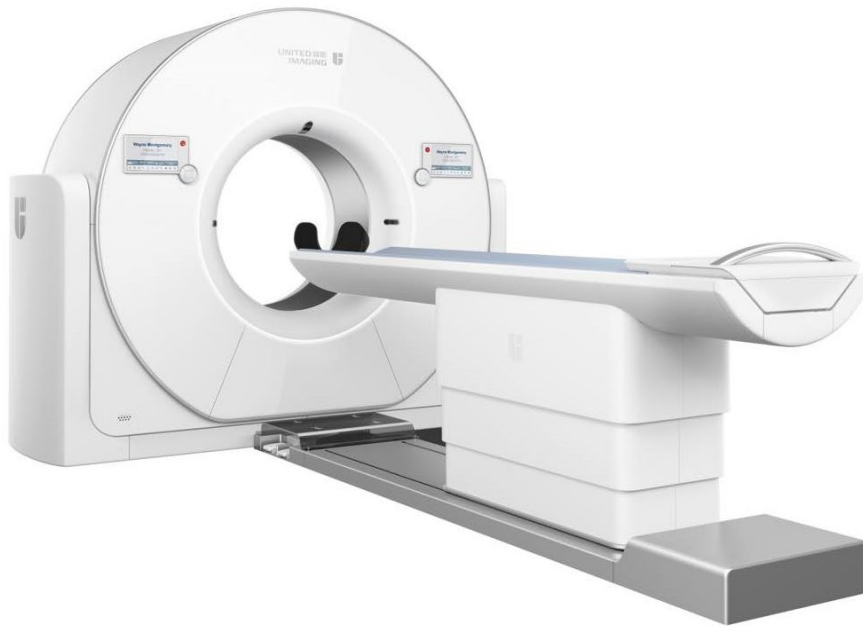**FOR HT medica Spain**

# uCT 960+ Computed Tomography System

# Configuration List



**Shanghai United Imaging Healthcare Co., Ltd.**

**2022/03**

# Scanning System Standard Configurations

| Standard Scanning System Configuration | |
| :--- | :--- |
| 1 | **Gantry** |
| | ● Supports rotation speed as fast as 0.35s/360° |
| | ● 0.35 s, 0.38 s, 0.5 s, 0.8 s, 1.0 s 1.5 s, 2.0 s for full 360° scans |
| | ● Aperture Φ82 cm |
| | ● Tilt ±30° with 0.5° increment |
| 2 | **Equivalent 30 MHU X-ray Tube** |
| | ● With the advanced liquid-metal bearing technology, the X-ray tube allows for efficient heat dissipation and reliable performance. |
| | ● The tube has equivalent anode heat capacity of 30 MHU and maximum anode heat dissipation of 20 kW (1696 kHU/min), and ensures fluent scanning with large patient throughput and consecutive high power examinations. |
| | ● Triple focal spot design of 0.4 mm × 0.8 mm, 0.6 mm × 0.8 mm, 1.1 mm × 1.2 mm. |
| 3 | **High-Voltage Generator** |
| | ● Max. Power of HV generator: 100 kW |
| | ● Range of tube current: 10mA-833mA (1mA increment) |
| | ● kV settings: 70kVp, 80kVp, 100kVp, 120kVp, 140kVp. |
| | ● Multiple kVp settings allows flexible and optimized dose, and meet the requirements of different clinical applications. |
| 4 | **Z-Detector** |
| | ● The uCT 960+ features the 160 mm Z-Detector as the foundation of the system. Compared with conventional solid-state detectors, the Z-Detector has combined the photodiode and the ADC into one Application-Specific Integrated Circuit (ASIC) by using Through-Silicon Via (TSV) technology, thus reducing the distance of the signal chain down to the micron level. This structure can largely reduce the electronic noise of the acquired signal, and enables the ultra-low noise of acquired data and reconstructed images. |
| | ● Z-coverage: 160 mm |
| | ● Number of detector rows: 320 rows |
| | ● Total number of detector elements: 299,520 |
| | ● Maximum slices generated per rotation: 640 slices |
| 5 | **Minimum Slice Thickness 0.5mm** |
| | ● Support minimal slice thickness of 0.5mm |
| 6 | **100 seconds Continuous Exposure Time** |
| | ● Support the maximum continuous exposure time of 100 seconds for helical scan mode. |
| 7 | **Touchable Digital Display Panels (DDP)** |

| | |
|---|---|
| | • Two touchable and digital display panels on both sides of the front gantry cover for the display of patient information, scan time, exposure status, table lock status, ECG signal, table horizontal and vertical positions, gantry tilt angle and other useful information.<br>• Various functions for table movement are provided including customizable A/B position buttons, one-click release button and one-click exterior/interior laser marker table movement for improved workflow efficiency. |
| **8** | **Gantry Control Panel Set** |
| | • Four control panels on both sides of the front and rear gantry cover allows the staff to work closely with the patient on all 4 sides of the system. |
| **9** | **Automatic Breathing Navigation System** |
| | • Breathing navigation is able to guide patients to control their breaths during scans and reduces artifacts caused by respiratory motions.<br>• The system provides default English navigation voices and users can record their own customized breathing navigation.<br>• Breathing navigation icon is illuminated during scans to specifically assist patients with hearing impairment. |
| **10** | **Laser Lights** |
| | • Two groups of inner/outer laser lights define both internal and external scan planes to ±1mm accuracy. |
| **11** | **Patient Table and Integrated ECG Module** |
| | • Maximum table load: 318 kg (700 lbs)<br>• Maximum scan range: 2000 mm<br>• Foot pedals for fast positioning on both sides of the table.<br>• An integrated ECG module that moves together with the table during scanning, and helps to prevent the cables from being dragged and tangled. The real time ECG signal is displayed on the digital display panel and console UI. |
| **12** | **Table Mattress and Strap Rails** |
| | • Table mattress is attached to the patient table top to provide a comfortable position for the patient on the table top.<br>• Strap rails are attached to both sides the patient table top. Then, the straps can be inserted into the rails. |
| **13** | **Power Supply Cabinet** |
| | • Power supply for gantry, patient table, console and other scanner components.<br>• Power type: Three-phase distribution source<br>• Voltage:<br>  ◇ 380 VAC 90% ~ 110%<br>  ◇ 400 VAC 90% ~ 110%<br>  ◇ 415 VAC 90% ~ 110%<br>  ◇ 440 VAC 90% ~ 110%<br>  ◇ 460 VAC 90% ~ 110% |

| | |
|---|---|
| | ✧ 480 VAC 90% ~ 110% |
| | ● Power input: ≥160 kVA |
| 14 | **System Phantom** |
| 15 | **Scanner Accompanied Accessories** |
| 16 | **uCT 960+ Manual Set (English)** |
| 17 | **System Cable (Switchboard Power Cable)** |
| 18 | **System Cable (Equipment Cable)** |

# Operation System Standard Configurations

| Operation System Standard Configurations | |
|---|---|
| 1 | **Console Computer (PC)** |
| | ● Equipped for image acquisition, post-processing, image storage, etc. |
| | ● Console Computer: |
| | ✧ CPU: Intel Xeon, 3.5GHz, 4-core (or higher configuration), |
| | ✧ RAM: 24GB |
| | ✧ Hard disk: 1TB + 1.92T |
| | ✧ Operating system: Windows 10 |
| 2 | **Keyboard** |
| 3 | **Mouse** |
| 4 | **Console PC Monitor** |
| | 24-inch LCD monitor display with 1920×1200 resolution |
| 5 | **Reconstruction Computer (PC)** |
| | ● CPU: Intel Xeon, 2GHz, 32-core (or higher configuration) |
| | ● RAM: 64 GB |
| | ● Hard Disk: 4TB + 960 GB |
| | ● Operating system: Windows 10 |
| 6 | **Console & Reconstruction Computer Cabinets** |
| | ● Two cabinets to store and protect the console and reconstruction computers in operation and scanning room relatively. |
| 7 | **CT Control Box** |
| | ● Allows control of patient table movement, scan radiation exposure, and intercom in the operation room |
| 8 | **Console Table** |
| 9 | **Operation System** |
| 9.1 | **Prospective ECG-gated Coronary Artery Angiography (CCTA) of Cardiac** |
| | ● The system triggers the X-ray exposure based on the R-tag of the ECG signal and the preset gating range. |
| | ● With the 160mm z-coverage and fast gantry rotation speed, One-beat CCTA is supported for the user to confidently perform coronary CTA scans without having to repeat scans, therefore lowering the patient radiation and contrast dose. |

| 9.2 | **Retrospective ECG-gated Coronary Artery Angiography (CCTA) of Cardiac** |
|---|---|
| | • The system continuously acquires data in a helical mode with a small pitch, while simultaneously recording the ECG and synchronizing it to the acquired image data. Then, the images of the preferred R-to-R phases may be reconstructed.<br>• ECG-gated dose modulation can be applied to use a full dose during a preferred phase, and to reduce the dose during the rest of the cardiac cycle. |
| 9.3 | **Calcium Scoring Scan** |
| | • Prospectively & retrospectively ECG gated scan mode for calcium scoring scanning. |
| 9.4 | **Bolus Tracking** |
| | • The contrast CT value of a user-defined ROI will be tracked and measured in real-time by consecutive scanning after contrast injection commences. Once the desired ROI value is reached, the main contrast scan will be initiated either automatically or manually. |
| 9.5 | **Test Bolus** |
| | • After an ROI is placed, the Technologist can observe the time-density curve over a preset time period of scanning following a small contrast injection. The post-injection delay can be obtained and used for the main contrast scan, based on the time-to-peak analysis. |
| 9.6 | **Auto ALARA mA** |
| | • Auto ALARA mA is an automatic exposure control function designed to tailor the radiation dose to each patient based on the patient's size, attenuation, anatomy and the user's requested quality criterion.<br>• Based on the estimated size and attenuation level of different planes along the scan range, Auto ALARA mA generates the optimal dose distribution and performs a 3D mA adjustment in order to achieve the requested quality criterion.<br>• Dose modulation is presented intuitionally with curves to facilitate dose control and reduce radiation. |
| 9.7 | **Easy-Logic Intelligent Prediction Platform** |
| | • On the intelligent prediction platform, the subsequent operation is predicted and the system is prepared in prior. The system hardware and software work in parallel to provide improved scan efficiency. |
| 9.8 | **English User Interface** |
| | • User-friendly design brings a new level of operation experience |
| 9.9 | **PACS/HIS/RIS Connection Management** |
| | • Supports the transfer of patient information and DICOM images among PACS, HIS and RIS |
| 9.10 | **Patient Registration & Administration System** |
| | • Patient registration system allows simultaneous information registration |

| | |
|---|---|
| | <ul><li>for up to five patients.</li><li>Emergency registration mode that allows users to conduct scans first and add or edit the required information later in case of emergency.</li><li>Patient administration system allows sorting and searching for patient information as well as image preview.</li><li>Patient registration and administration can be performed simultaneously with scan planning and image reconstruction.</li></ul> |
| **9.11** | **Scan Planning System** |
| | <ul><li>Scan parameters can be flexibly adjusted in allowed ranges, and suggested parameters will be prompted when errors occur in user inputs.</li><li>One-click extend or repeat scan for more efficient workflow</li><li>Scan planning can be performed simultaneously with patient registration and management as well as image reconstruction.</li><li>Scan planning (or image acquisition) can only be performed for one patient at all times, preventing the occurrence of scan planning errors and misuse of planning from other patients.</li></ul> |
| **9.12** | **Image Acquisition and Reconstruction Systems** |
| | <ul><li>Real-time scan preview</li><li>Online reconstruction</li><li>Offline reconstruction</li><li>Image acquisition, image archiving and image reconstruction can be performed simultaneously. Speed of image reconstructing will not be influenced.</li></ul> |
| **9.13** | **Filming and Archiving** |
| | <ul><li>Users can customize filming layouts through the filming tool</li><li>Users can transfer patient information and DICOM images to portable storage devices (USB drive, DVD disks, etc.) through the archiving tool.</li></ul> |
| **9.14** | **2D & 3D Image Review** |
| | <ul><li>Free adjustment of window width/level</li><li>Organ-specific windowing settings</li><li>Cine mode image review</li><li>Reference line displayed on scout image</li><li>Display of crosshair & scale</li></ul> |
| **9.15** | **2D & 3D Image Edit** |
| | <ul><li>Image zooming, panning & mirroring</li><li>2D/3D image rotation</li><li>Virtual scalpel for tissue cutting</li><li>Automatic removal of patient table</li><li>Image subtraction & addition</li><li>Gray-scale inversion</li><li>Pseudo color</li><li>ROI magnification</li><li>Image annotation & labeling</li></ul> |

| | |
|---|---|
| | • ROI and profile statistical evaluation including CT value, area/volume, standard deviation, mean value, min./max. values, and histogram<br>• Distance & angle measurement |
| **9.16** | **Multi-planar Reconstruction (MPR)** |
| | • Real-time reconstruction for images on any plane according to user-defined axial directions |
| **9.17** | **Maximum Intensity Projection (MIP)** |
| | • Enhances the display of tissues with high density such as bones and blood vessels with contrast agent |
| **9.18** | **Minimum Intensity Projection (MinIP)** |
| | • Enhances the display of tissues with low density such as airways and tracheae |
| **9.19** | **Curved Planar Reconstruction (CPR)** |
| | • Real-time reconstruction and flat display for images on curved plane according to user-defined curved direction |
| **9.20** | **Volume Rendering (VR)** |
| | • 3D reconstruction to provide vivid display of various tissues and structures |
| **9.21** | **Volume Rendering Template (VRT)** |
| | • Provides various templates for volume rendering |
| **9.22** | **Shaded Surface Display (SSD)** |
| | • 3D surface reconstruction to provide 3D spatial information from multiple angles of view |
| **9.23** | **Image Subtraction** |
| | • Image subtraction can be conducted for two series with identical image number and reconstruction matrix.<br>• Subtracting the non-contrast images from the contrast-enhanced images will eliminate the impact of high density tissue such as bones and calcifications. |
| **9.24** | **Regional Growth** |
| | • Automatic color labeling of tissues with similar densities according to user needs<br>• Different colors can be assigned to different structures<br>• Display/hide labeled tissues and structures |
| **9.25** | **Automatic Bone Removal Of Body** |
| | • Bone tissues can be removed automatically for better visualization of blood vessels in body CTAs. |

# CT System Optional Configurations

| CT System Optional Configurations | |
|---|---|
| 1 | **Fastest Rotation Speed 0.25s/360°** |

| 2 | **Fastest Rotation Speed 0.28s/360°** |
|---|---|
| 3 | **60 kVp** |
| | ● Support the kVp level of 60 kV |
| 4 | **120 Seconds Continuous Exposure Time** |
| | ● Support the maximum continuous exposure time of 120 seconds for helical scan mode. |
| 5 | **uAI Vision 3D Camera and Workflow** |
| | ● With the uAI Vision 3D camera, the system provides an efficient, standardized and personalized scanning experience for each patient.<br>● The uAI Vision 3D Camera builds real-time digital models for the patient utilizing an AI-based deep learning technology. Anatomical structures of the patient can be identified.<br>● EasyPositioning allows for single-click patient positioning with the scout scan range precisely located based on the protocol selected<br>● EasyISO provides the correct isocenter position at the pressing of button, in order to optimize the image quality and patient dose distribution |
| 6 | **EasyRange Planbox Recommendation** |
| | ● EasyRange automatically sets the exam scanning range on the scout image, using an AI-based deep learning organ recognition technology. |
| 7 | **KARL 3D  (Iterative Denoising Reconstruction Algorithm)** |
| | ● The customizable KARL 3D iterative de-noising reconstruction algorithm can maintain consistent image quality with reduced dose compared to conventional FBP. |
| 8 | **1024×1024 High-Resolution Reconstruction Matrix** |
| | ● 1024×1024 High-Resolution Reconstruction matrix contains four times information compared to conventional 512×512 reconstruction matrix.<br>● Better visualization of small structures such as small nodules or inner ears<br>● 768x768 reconstruction matrix is also provided |
| 9 | **Metal Artifact Correction Algorithm (MAC)** |
| | ● MAC is able to reduce the metal artifacts and improve image quality while preserving body structural and anatomic details. |
| 10 | **600 mm Extended Reconstruction Field of View (FOV)** |
| | ● Support the maximum reconstruction field of view to be extended from 500 mm to 600 mm |
| 11 | **CardioXphase** |
| | ● Automatically analyzes and evaluates the motion of the coronary artery, and directly reconstructs cardiac images with the optimal phase.<br>● CardioXphase can be built into the reconstruction so that the images with optimized phase can be generated directly after the scan without manual operation.<br>● CardioXphase can be applied in systole and diastole of the cardiac cycle. |
| 12 | **CardioCapture** |

| | |
|---|---|
| | • CardioCapture is designed to effectively reduce the coronary motion artifact with AI-based coronary artery extraction for precise movement tracking.<br>• Together with the 160 mm detector coverage and industry leading rotation speed, the innovative CardioCapture technology further boosts the effective whole-heart temporal resolution to 25 ms, providing confident diagnostic images for patients with especially high heart rates and arrhythmias. |
| 13 | **Brain Stationary Perfusion Scan with Max. 160 mm Coverage** |
| | • The system supports the whole brain perfusion acquisition with up to 160 mm coverage without moving the table. |
| 14 | **Body Stationary Perfusion Scan with Max. 160 mm Coverage** |
| | • The system supports the whole organ perfusion acquisition, such as liver, kidneys, pancreas and other organs, with up to 160 mm coverage without moving the table. |
| 15 | **Dynamic Scan for Head and Body** |
| | • The system enables dynamic scanning in the helical mode with the table moving back and forth at a variable pitch, which can be used for the perfusion scanning with the range over 160 mm.<br>• Maximum of 400 mm scanning range is supported with this scan mode. |
| 16 | **Dual Energy Scan** |
| | • Support the acquisition of two CT images of the same anatomical location using different tube voltages and currents.<br>• The 80 kVp and 140 kVp setting is used for the low and high energy imaging with separately adjustable currents.<br>• The dual energy images can be combined and used for the visualization and further analysis of the anatomical and pathological structures. |
| 17 | **Organ-Based Auto ALARA ma with AI-based Deep Learning Technology** |
| | • A combined chest and abdomen scan is commonly required for many clinical scenarios. Auto ALARA mA can be further optimized with the automatic recognition of the chest and abdomen on the scout with an AI-based, deep learning technology.<br>• Consequently, the dose modulation parameters can be optimized for the chest and abdomen, respectively. This feature provides a more precise dose modulation with expected image quality and a lower dose to the patient. |
| 18 | **Auto ALARA kVp** |
| | • Auto ALARA kVp is an automatic kVp feature designed to select the suitable kVp for each patient according to the patient's size, anatomy and clinical examination type. Auto ALARA kVp can work together with Auto ALARA mA to optimize dose and image quality, as well as reduce the manual adjustment of dose for patients of different sizes. |
| 19 | **Real Time 3D** |

| | |
|---|---|
| | • Real Time 3D automatically produces MPR or VR preview images in real-time (along with the axial real-time preview images) as the acquisition is taking place.<br>• It can help the Technologist confirm that the desired anatomical area has been imaged, and/or assess the effectiveness of the contrast bolus very easily. |
| **20** | **Online MPR** |
| | • Online MPR can automatically generate MPR/MIP/minMIP images with prospective settings in the protocols.<br>• These images can be transferred to the PACS automatically. |
| **21** | **Remote Assistance** |
| | • Remote Assistance is intended for remote support and service, and can be used in the scenarios including remote scanning assistance from senior technologists, or remote training / service by customer training / service engineers. |
| **22** | **View 3D Head and Neck Bone Removal** |
| | • Bone tissues of head and neck can be automatically removed by one click in the 3D viewer for reconstructed images. |
| **23** | **MPPS** |
| | • Supports information exchange during whole examination process. Inform information closely related to operation management to corresponding workflow manager, generally PACS and RIS. |
| **24** | **Accessory Cabinet** |
| | • Stores patient table accessories |
| **25** | **External DVD Driver** |
| | • For image archiving on DVDs |
| **26** | **Deep IR Image Reconstruction Method with Specially Designed Reconstruction Computer** |
| | • Deep IR is an innovative image reconstruction method that combines a full modal-based iterative reconstruction with a cutting edge, AI-based deep learning technology.<br>• Deep IR has the ability to significantly reduce image noise and artifacts, while at the same time greatly improving low contrast detectability and spatial resolution.<br>• By incorporating an AI-based deep learning de-noising technology, Deep IR incorporates a strong de-noising capability along with desirable noise patterns. |

| Optional Patient Table Accessories | |
|---|---|
| **1** | **Patient Table Accessories (Head Package)** |
| **1.1** | **Head Holder** |
| | • Inserted into the slot of the patient table for routine exam use |
| **1.2** | **Head Cushion** |

| | | |
|---|---|---|
| | | ● Placed in the head support to make the patient's head more comfortable |
| 1.3 | **Head Side Pads** | |
| | | ● Placed in the head support to reduce head motions |
| 1.4 | **U-Shape Head Cushion** | |
| | | ● Placed in the head support to make the patient's head more comfortable |
| 1.5 | **Headrest** | |
| | | ● The headrest is for the comfortable positioning of the patient's head. It can be placed directly on the patient table. |
| 1.6 | **Coronal Head holder** | |
| | | ● Support the patient head to assist coronal plane head scan |
| 2 | **Patient Table Accessories (Tabletop Extension)** | |
| 2.1 | **Tabletop Extension** | |
| | | ● Inserted into the slot of the patient table to extend the table top<br>● Used for higher patients or feet first positions |
| 2.2 | **Tabletop Extension Pad** | |
| | | ● Placed on the tabletop extension to improve patient comfort |
| 3 | **Patient Table Accessories (Assistant Positioning Package)** | |
| 3.1 | **Straps** | |
| | | ● Forehead strap<br>● Chin strap<br>● Chest straps<br>● Abdomen straps |
| 3.2 | **Head-arm Support** | |
| | | ● Support head and arms to make the patient more comfortable |
| 3.3 | **Knee Support** | |
| | | ● Placed under the patient's legs during a lumbar vertebra study or when the patient is lying on the table and cannot stretch the legs |
| 4 | **Infusion Holder and Tray Package** | |
| | | ● IV stand facilitates the scans for patients undergoing intravenous transfusion.<br>● Tray holder stores personal belongings for patients.<br>● Paper towel holder that holds disposable paper towel for a clean patient table. |
| 5 | **Paper Towel Roll** | |
| | | ● Disposable paper towel for a clean patient table |
| 6 | **Flat table top** | |
| | | ● Flat table top can be installed on the patient table top, in order to provide an even surface.<br>● Special protocols are provided for the scanning with flat table top. |

# uWS-CT Image Post-processing Workstation (Optional)

| | Standard Workstation Configuration | |
|---|---|---|
| **1** | **uWS-CT Medical Image Processing Software Workstation** | |
| **1.1** | **uWS-CT Workstation Configuration Basic:** <br><br> • CPU: 3.6GHz, 4Core (or higher configuration) <br> • Memory: 32GB <br> • Hard disk: 480G SSD + 960G SSD <br> • Operating system: Windows 10 <br> • One set of mouse and keyboard <br> • Standard configuration includes patient administration, 2D image viewer, 3D image viewer, filming. | |
| | **Workstation Hardware Options** | |
| **1** | **Workstation Desk** | |
| **2** | **Workstation Chair** | |
| **3** | **Workstation Host Computer Cabinet** | |
| | • Stores and protects the workstation computer | |
| **4** | **uWS-CT Workstation External DVD Driver Set** | |
| | • For image archiving on DVDs | |
| **5** | **Workstation monitor** | |
| 5.1 | Workstation monitor-Single monitor | |
| | **Workstation License Options** | |
| **1** | **View 3D Head and Neck Bone Removal** | |
| | • Bone tissues of head and neck can be automatically removed by one click in the 3D viewer for reconstructed images. | |
| **2** | **CT Vessel Analysis** | |
| | • Automatic bone removal for head and neck, DSA, abdomen, limb and so on. <br> • Auto vessel extraction, major vessels labeling, and vessel contours generation. <br> • Semi-automatic vessel extraction with multi clicks track methods <br> • Centerline editing <br> • Vessel contour display and editing <br> • Measurement of vessel parameters such as cross-section area, diameter, vessel length and stenosis estimation. | |
| **3** | **CT Heart** | |
| | • Multi-Phase Loading <br> • Heart chamber segmentation and visualization, including the left ventricle, left atrium, right ventricle, right atrium, left ventricle myocardium. <br> • Aorta and coronary artery extraction, visualization and editing. <br> • Centerline extraction, naming and editing after coronary artery | |

segmentation.

- Stenosis analysis, including manually adding of stenosis, measurement the parameters of the lesion (such as area, diameter etc.), listing the location and parameters of the lesion in the table. Allow users to analyze the lesion by adjusting the reference lines and correcting the contour of vascular cross section.
- Plaque analysis, including manually adding and editing of the plaque, displaying the plaque on MPR and VR images, parameter measurement such as volume, distance to the aorta, plaque component.
- Cardiac function assessment, including left and right ventricular volume, stroke volume, ejection fraction, cardiac output, wall thickness, wall motion, and wall thickening. These parameters are displayed in the form of tables, polar maps or curves.

| 4 | **CT Calcium Scoring** |
|---|---|
| | <ul><li>Suspected calcium sites segmentation and editing</li><li>Calcification integral parameters analysis, including mass, volume, Agatston score and volume score.</li></ul> |
| 5 | **CT Lung Nodule** |
| | <ul><li>Automatically detects and highlights of the suspicious volume of interest (VOI)</li><li>Right and left lungs and trachea segmentation</li><li>Manually marking of the suspected nodules</li><li>Nodule segmentation and measurement such as the volume of nodules, major diameter, and vertical major diameter.</li><li>Follow-up Analysis for comparing two data sets of the same patient, which can reveal whether and to what extent the lesion has changed over a certain period of time.</li></ul> |
| 6 | **CT Lung Density** |
| | <ul><li>Automatic segmentation of the right and left lungs and the trachea.</li><li>Pulmonary emphysema calculation:</li><li>Lung contour editing</li><li>Pulmonary lobes segmentation and editing</li><li>Airway segmentation and displaying</li><li>Airway tree extraction, displaying and editing</li><li>Airway contour editing</li><li>Pulmonary emphysema marking in the lung tissue. Volume and percent values are shown in table based on the setting of the threshold or percent parameter.</li><li>Density histogram for both lungs. Quantitative calculation of lumen area, wall area, wall thickness for each trachea, and etc.</li></ul> |
| 7 | **CT Dynamic Analysis** |
| | <ul><li>Dynamic CT data loading and 3D/4D display</li><li>Motion correction</li></ul> |

| | |
|---|---|
| | ● Bone removal |
| | ● Artery and vein extraction and display |
| **8** | **CT Brain Perfusion** |
| | ● Motion correction to correct the motion between the volumes |
| | ● Semi-auto or manual arterial detection as input for the perfusion calculation. |
| | ● Parameter map calculation and pseudo-color display, including CBF (Cerebral Blood Flow), CBV (Cerebral Blood Volume), MTT (Mean Transition Time) and TTP (Time to Peak). |
| | ● Time-density curve analysis |
| | ● Statistic table |
| | ● Ischemic penumbra analysis (Mismatch) |
| **9** | **CT Body Perfusion** |
| | ● One-step full-automatic calculation: the system may use default threshold to conduct the soft tissues segmentation, select liver artery and portal vein, and calculate perfusion parameters that are showed in pseudo color format, all in an automatic way; |
| | ● TDC curve; |
| | ● Parameters graphs calculation: calculate kinds of perfusion parameters, including BV, BF, HAP, PVP, HPI, MTT, TTP, and PS, which are showed in the pseudo color format; |
| **10** | **CT Liver Evaluation** |
| | ● Multi-phase data loading and identifying the CT phases volume including non-contrast, artery, portal, and vein. |
| | ● Liver segmentation and editing |
| | ● Lesion segmentation and editing |
| | ● Vessel extraction and fusing display including artery, portal, and vein |
| | ● Vascular editing |
| | ● Divide the liver into different segments by marking points on the liver and blood vessels. |
| | ● Virtual Planning: Define a curved surface on the surface of the liver, adjust the shape of the surface. |
| | ● Vascular territories resection: Support vascular territories resection |
| | ● RFA: Add one or more RF needles on MPR viewport with setting parameters. |
| | ● Measurement: Provide qualification results for liver and lesion. |
| **11** | **CT Bone Structure Analysis** |
| | ● Label the ribs on MPR and VR. |
| | ● Label the spines on MPR |
| | ● Create intervertebral disk batch images with setting increment, thickness and FOV parameters. |
| | ● Manually rib fracture mark on CPR or straighten CPR. |
| | ● Follow-up layout to compare the difference between two time points. |

| 12 | **CT Colon Analysis** |
| --- | --- |
| | • Automatic segmentation and central line extraction of the air-filled colon<br>• Electronic cleansing which removes the oral contrast<br>• Colon editing<br>• Virtual endoscopy view through the lumen of colon.<br>• Manually marking of the suspicious polyps<br>• Automatic marking of the suspicious volume of interest (VOI)<br>• Quantitative calculation and analysis such as volume, average CT value, distance from the anus |
| 13 | **CT Oncology** |
| | • Marking suspicious nodules during view image.<br>• Lung nodules and liver tumor segmentation and quantitative parameters calculation<br>• Segmentation results delivering: Lesions position plotted in the inspection can be automatically delivered to the same position in the follow-up inspections.<br>• Analysis List Statistic: User can get the parameters of lesions segmented over different time phases. |
| 14 | **CT Dental Application** |
| | • Supports volume rendering, panoramic view, sagittal view, labeling of dental floss and nerve pathway.<br>• Supports flat and sectional displays of whole-mouth images. |
| 15 | **CT Inner View** |
| | • 3D virtual endoscopy view.<br>• Auto path planning for vessel, airway, colon<br>• Manual path planning<br>• Modify path<br>• Navigation |
| 16 | **Dual Energy** |
| | • Mono Energetic Analysis, including Mono Energetic Image, Mixed Enhanced Image, CNR (Contrast Noise Ratio) Image and graph analysis.<br>• Material Components Analysis, including Base Material Image, Effective Atomic Number Images, Electron Density Images, Virtual Non contrast Images.<br>• Component analysis of kidney stones<br>• Component analysis of joint gout |
| 17 | **Fusion** |
| | • Fusion is intended to combine acquisitions (MR, CT and PET) performed at different times by overlaying them. Tools are provided for manual adjustment for a better alignment.<br>• Automatic multiple modality image registration, manual registration, Point registration, and registration matrix save.<br>• Customize fusion image display, blend ratio adjustment, multiple pseudo- |

| | |
|---|---|
| | color scenarios, and switching reference data.<br>● Cursor correlation, threshold adjustment, and batch process |
| **18** | **CT Cardiovascular Combined Analysis** |
| | ● Preprocessing<br>● Bone Removal, support head and neck, abdomen, multi-bodypart combined , TAVR<br>● Vessel extract, support head and neck, abdomen, multi-bodypart combined , TAVR<br>● Vessel Centerline and contour Editing<br>● Heart and chamber segmentation<br>● Coronary and centerline extract and edit<br>● TAVR evaluation: Provide the fusion viewport to display the vessel and heart images, and the Aortic annulus location, Right coronary and left coronary location, edit and measurement. |
| **19** | **Remote Control** |
| | ● The local device can be remotely accessed. |