

Vscan Air™

Indications Reference Guide

This information is meant to be reference for examples of anatomies and examinations that can be evaluated by this product. The list may not be all inclusive.

Deep Scanning Transducer (Curved Array)

Complete both shallow and deep exams with a simple flip of the 2-sided probe.

The curved array transducer on Vscan Air CL supports Black/ white (B-mode), Color (Color doppler) and Harmonic imaging modes. Vscan Air is indicated for ultrasound imaging, measurement, and analysis of the human body in clinical applications that include the following.

CLINICAL APPLICATION	ANATOMY	EVALUATION
Abdominal ultrasound (Adult/ Pediatrics)	<ul style="list-style-type: none"> • Gall bladder, biliary tree, common bile duct • Liver • Pancreas • Spleen • Bowel including Appendix, small bowel loops • Abdominal aorta • Kidneys 	<ul style="list-style-type: none"> • Gall stones • Gall bladder inflammation (wall thickening, surrounding fluid) • Biliary obstruction (duct dilatation) • Hepatomegaly • Fatty liver • Splenomegaly • Intestinal obstruction • Appendicitis • Peritoneal fluid • Mass/cyst / Abscess • Abdominal aortic aneurysm • Kidney stones
Urology (Adult/ Pediatrics)	<ul style="list-style-type: none"> • Kidneys • Ureter • Urinary Bladder • Uretero-vesicular junction • Prostate 	<ul style="list-style-type: none"> • Kidney, ureteral, bladder stones • Kidney length • Hydronephrosis • Bladder dysfunction • Pre-post Bladder volume • Bladder inflammation (wall and mucosal changes, calcifications) • Prostate size and volume • Mass/cyst • Ureteral jets with color
OB-Gyn	<ul style="list-style-type: none"> • Uterus and endometrium • Ovaries • Cervix • Pouch of Douglas (POD) • Gestational Sac (GS) • Placenta • Amniotic fluid • Fetus(es) 	<ul style="list-style-type: none"> • GS location (Intra-uterine/ extra-uterine) • Fetal viability/ heart motion • Placenta position (including low-lying and previa) • Fetal position and presentation • Amniotic fluid assessment • Cervical length measurement/ cervical insufficiency • Fetal well-being assessment: Biophysical profile (breathing, movements, tone, amniotic fluid) • Confirmation of fetal death • Intrauterine device position • Endometrial thickness measurement • Uterine/ adnexal mass/ cyst (fibroids, cysts) • Free fluid in Pouch of Douglas



Deep Scanning Transducer (Curved Array) Cont.

CLINICAL APPLICATION	ANATOMY	EVALUATION
Lung/Thoracic (Adult/ Pediatrics)	<ul style="list-style-type: none"> • A-lines, B-lines, E-lines • Pleura • Lung tissue • Lung sliding • Lung point 	<ul style="list-style-type: none"> • Pneumothorax and hemothorax • Pleural Effusion • Lung consolidation <ul style="list-style-type: none"> – Pneumonia/ pneumonitis – Pulmonary fibrosis • Pulmonary interstitial and inflammatory disorders (Ex. ILD, COPD) • Acute respiratory distress syndrome
Cardiac and hemodynamic assessment (Adult/ Pediatrics*)	<ul style="list-style-type: none"> • Heart (atria, ventricles, valves) including pericardium <ul style="list-style-type: none"> – Subcostal view • Inter-atrial and interventricular septum • Pulmonary arteries/ veins • IVC 	<ul style="list-style-type: none"> • Pericardial fluid • LV and RV size and function • Valvular regurgitations/ stenosis • Volume status and responsiveness <ul style="list-style-type: none"> – IVC size – Respiratory variation
Musculoskeletal (Conventional) (Adult/ Pediatrics)	<ul style="list-style-type: none"> • Hip/knee/ Shoulder joints • Femur • Humerus/elbow • Tibia/fibula • Radius/ulna • Muscles • Ligaments • Tendons • Nerves 	<ul style="list-style-type: none"> • Fluid • Cyst/mass • Long bone fractures • Ligament and joint integrity • Tendon injuries (tendonitis, rupture/tear) • Muscle tears • Peripheral nerve blocks
Procedure guidance (Adult/ Pediatrics)	<ul style="list-style-type: none"> • Heart • Lung • Uterus • Abdomen • Thorax • Bladder • Nerve plexus • Hip/knee /Shoulder joints 	<ul style="list-style-type: none"> • Fluid detection: Pericardial, Pleural, Peritoneal, Amniotic, Joints • Procedures: Thoracentesis, Paracentesis, Pericardiocentesis, Amniocentesis, Arthrocentesis • Foreign body visualization/ localizations • Bladder catheterization • Nerve blocks • Biopsy • Placement and monitor position of tubes and catheters
Protocols	<ul style="list-style-type: none"> • Heart • IVC • Lungs • Abdomen 	<ul style="list-style-type: none"> • FAST • eFAST • BLUE • FASH • FASE



Shallow Scanning Transducer (Linear Array)

Complete both shallow and deep exams with a simple flip of the 2-sided probe.

The linear array transducer on Vscan Air CL supports Black/white (B-mode), Color (Color doppler) and Harmonic imaging modes. Vscan Air is indicated for ultrasound imaging, measurement, and analysis of the human body in clinical applications that include the following.

CLINICAL APPLICATION	ANATOMY	EVALUATION
Peripheral Vascular (Adult/ Pediatrics)	<ul style="list-style-type: none"> • Arteries including Carotid, vertebral, subclavian, axillary, brachial, iliac, saphenous, popliteal, femoral • Veins including Jugular, subclavian, cephalic, basilic, saphenous, femoral, popliteal, tibial 	<ul style="list-style-type: none"> • Deep vein thrombosis • Atherosclerosis- Intima media thickness, plaques, vessel occlusion/ stenosis • Subclavian Steel syndromes
Lung/ Thoracic (Adult/ Pediatrics)	<ul style="list-style-type: none"> • A, B, E lines • Pleura • Lung tissue • Lung sliding • Lung point 	<ul style="list-style-type: none"> • Pneumothorax and hemothorax • Pleural Effusion • Lung consolidation <ul style="list-style-type: none"> – Pneumonia/ pneumonitis – Pulmonary fibrosis • Pulmonary interstitial and inflammatory disorders (Ex. ILD, COPD) • Acute respiratory distress syndrome
Small organs (Adult/ Pediatrics)	<ul style="list-style-type: none"> • Testes • Scrotum • Thyroid • Breast • Bowel • Abdominal wall • Skin • Subcutaneous tissue • Fascia • Lymph nodes 	<ul style="list-style-type: none"> • Testicular torsion (size, echo-texture and vascularity) • Epididymo-orchitis • Fluid collection in scrotal sac • Hematomas, hernias • Breast nodules, mass, cyst • Abdominal wall masses, hernias • Thyroid nodules/cyst/mass/ diffuse enlargement • Bowel pathology (ex. appendicitis, diverticulitis, intestinal obstruction) • Pyloric stenosis/ Intussusception for pediatric patients) • Soft tissue infection (cellulitis, abscess, bed sore) • Foreign body visualization/ localization) • Cutaneous mass
Musculoskeletal – (Superficial and conventional) (Adult/ Pediatrics)	<ul style="list-style-type: none"> • Tendons • Muscles • Ligaments • Nerves • Long bones (ex. Humerus, Radius, Ulna, Femur, Tibia, Fibula) • Joints (ex. Ankel, Shoulder, Knee, Elbow, Wrist) • Joint space/ bursae 	<ul style="list-style-type: none"> • Tendon injuries (tendonitis, rupture/ tear) • Muscle tears • Long bone fractures • Carpal Tunnel syndrome • Fluid collection in joint space, muscles, bursae • Joint and ligaments integrity • Cyst/ mass • Hip joint evaluation for neonates and infants)
Nerves (Adult/ Pediatrics)	<ul style="list-style-type: none"> • Peripheral nerves including examples as Interscalene, supraclavicular, infraclavicular, axillary plexus, Median N, Radial N, Ulnar, Femoral, Popliteal, Tibial, Peroneal, Saphenous N 	<ul style="list-style-type: none"> • Peripheral nerve blocks



Shallow Scanning Transducer (Linear Array) Cont.

CLINICAL APPLICATION	ANATOMY	EVALUATION
Neck and airway (Adult/ Pediatrics)	<ul style="list-style-type: none"> • Cervical Lymph nodes • Trachea • Epiglottis, cricoid cartilage, cricothyroid membrane • Esophagus • Vocal folds 	<ul style="list-style-type: none"> • Neck massess • Airway assessment • Vocal cord dysfunction
Procedural guidance (Adult/ Pediatrics)	<ul style="list-style-type: none"> • Thorax • Veins (including Jugular/ Subclavian/ Axillary/ Femoral / Brachial/ Basilic/ Cephalic) • Arteries (including femoral, radial, brachial, axillary, dorsalis pedis) • Peripheral nerves • Joints • Vertebral spaces • Skin and subcutaneous tissue • Trachea and surrounding structures 	<ul style="list-style-type: none"> • Fluid detection and removal support: thoracentesis • Peripheral venous access • Central venous catheterization • Arterial access • Assessment and support of dialysis access • Nerve blocks • Joint aspiration and injections • Cyst aspiration • Biopsy • Abscess drainage • Foreign body visualization/ localization • Lumbar Puncture • Endotracheal tubes placement and confirmation • Support placement and monitor position of tubes and catheters
Ophthalmic**	<ul style="list-style-type: none"> • Optic nerve sheath • Retina • Globe • Lens 	<ul style="list-style-type: none"> • Retinal detachment • Vitreous hemorrhage • Intra-ocular foreign body visualization • Globe rupture • Optic Nerve sheath diameter • Lens dislocation
Cephalic (Neonatal)	<ul style="list-style-type: none"> • Fontanelle • Superficial and mid-superficial cranial structures 	<ul style="list-style-type: none"> • Gyral-sulcal anatomy • Superior sagittal sinus thrombosis • Cerebral edema • Extra-axial fluid collections
Protocols	<ul style="list-style-type: none"> • Lungs 	<ul style="list-style-type: none"> • eFAST • BLUE

*Pediatric population for Cardiac application defined as minimum body weight 40 Kg and above.

**Ophthalmic not available in Japan and China

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