

Radial EUS & Linear EUS

Yun Nah Lee, M.D., Ph.D.

Department of Internal Medicine

SoonChunHyang University School of Medicine Bucheon, KOREA

IYEA International
Young
Endoscopist
Awards
2022

The copyrights on VODs belong to
IDEN and **KSGE**,
and unauthorized access or use is prohibited.

Radial Echoendoscopes



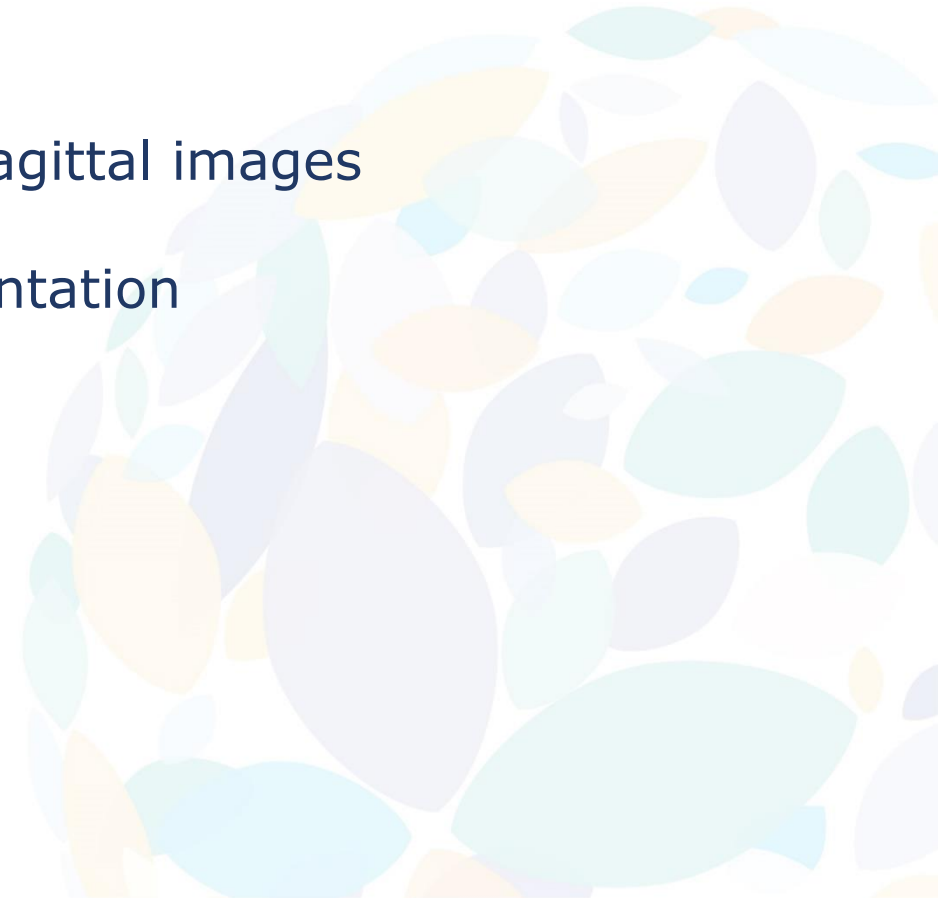
- Radial array transducer
 - Image in a plane perpendicular to the long axis of the echoendoscope
 - Circumferential images
 - More easily interpretable and complete images
 - Similar to transverse US, CT and MRI images



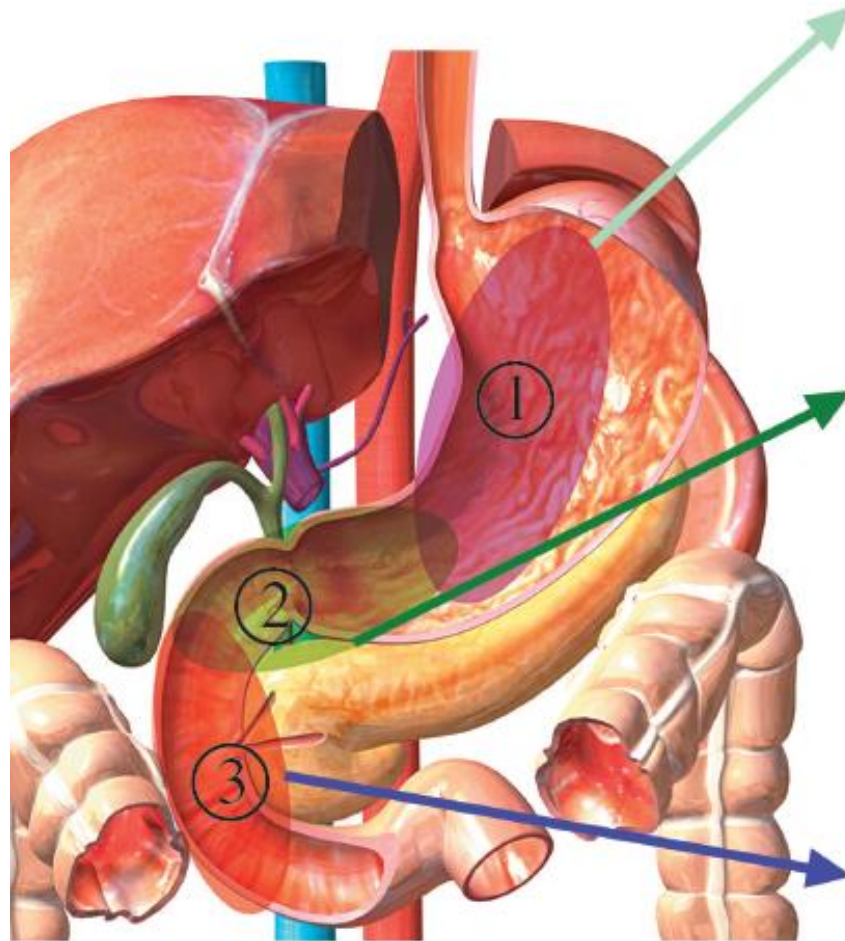
Linear Echoendoscopes



- Linear-array transducer
 - Image a plane parallel to the long axis of the echoendoscope
 - Limited coronal or sagittal images
 - More difficult to orientation
 - Long learning curve

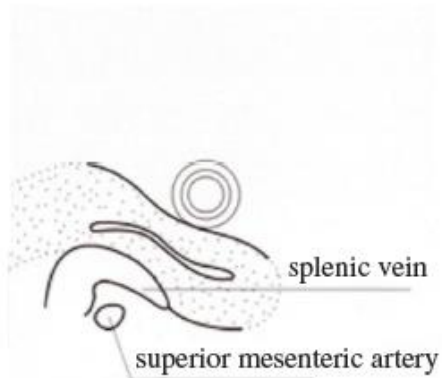
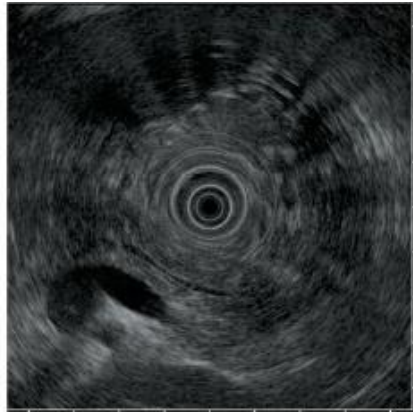


Indices for Orientation and Scanning Technique

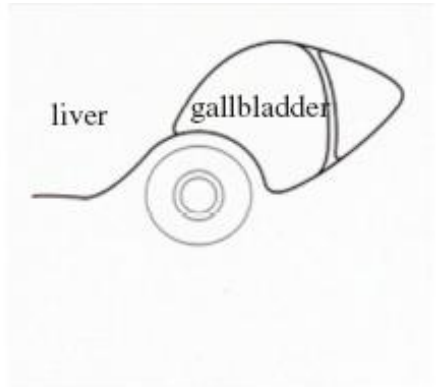
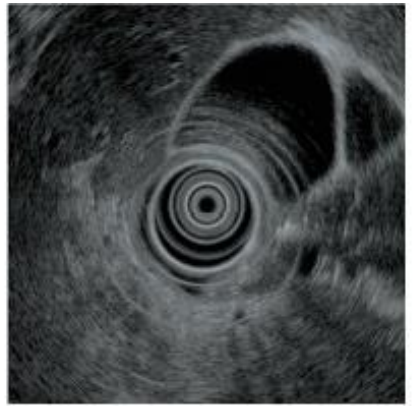


	Scanning position	Visualized regions	Indices
①	Stomach	Pancreatic body Pancreatic tail	Splenic artery/vein Left kidney Spleen Superior mesenteric artery Celiac artery Aorta
②	Duodenal bulb (Gastric antrum) (Descending part of the duodenum)	Pancreatic head Pancreatic body Bile duct Gallbladder	Portal vein Superior mesenteric vein Splenic vein
③	Descending part of the duodenum	Pancreatic head Pancreatic genu major papilla Gallbladder	Aorta Inferior vena cava Superior mesenteric artery/vein portal vein

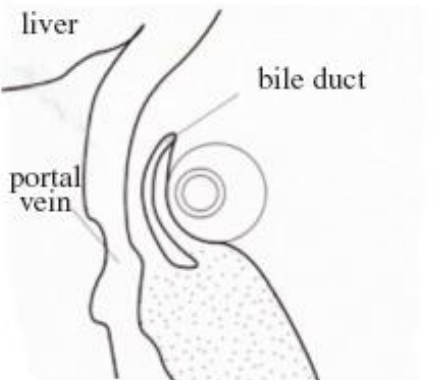
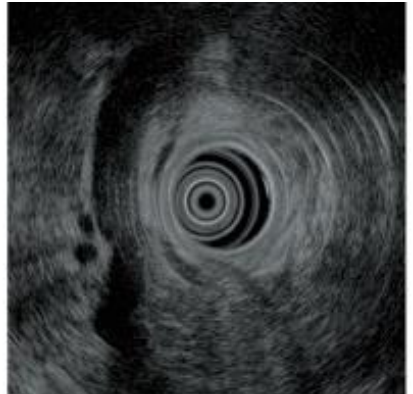
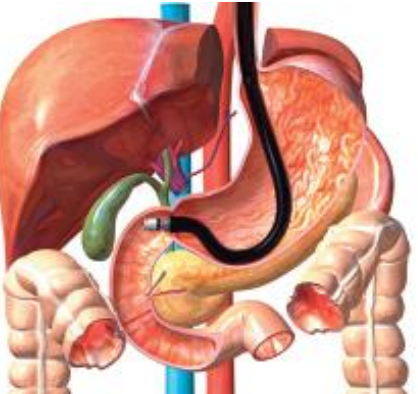
Steps of Radial EUS Scanning



Scanning from the Stomach – Step 1

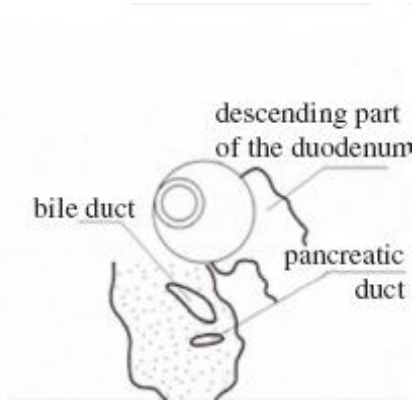
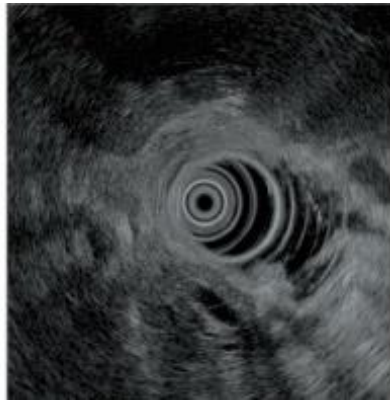
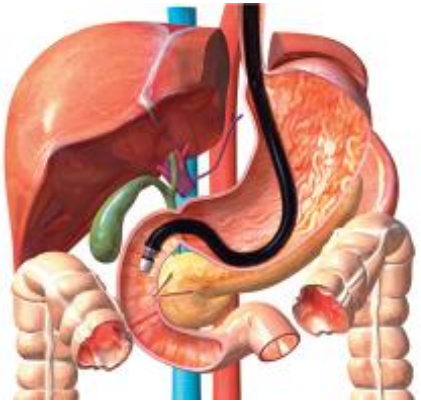


Scanning from the Duodenal Bulb (Push Method) – Step 1

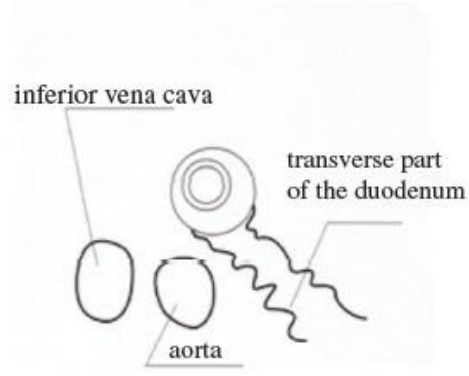
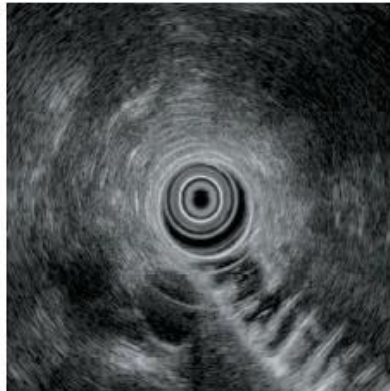
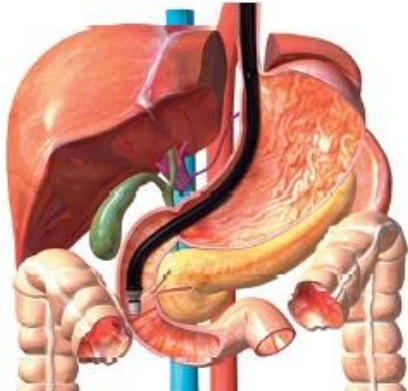


Scanning from the Duodenal Bulb (Push Method) – Step 2

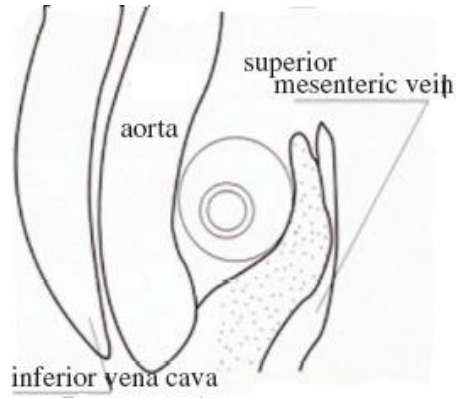
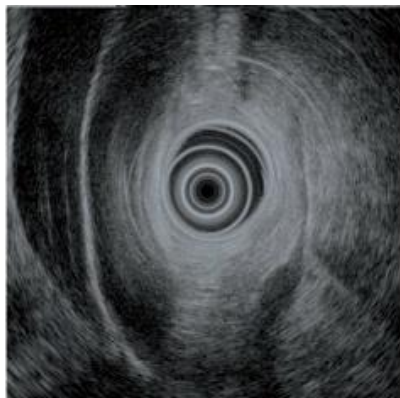
Steps of Radial EUS Scanning



Scanning from the Duodenal Bulb (Push Method) – Step 3

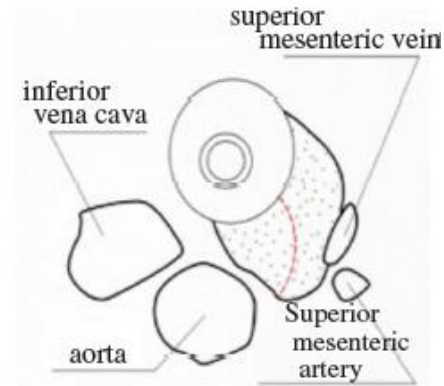
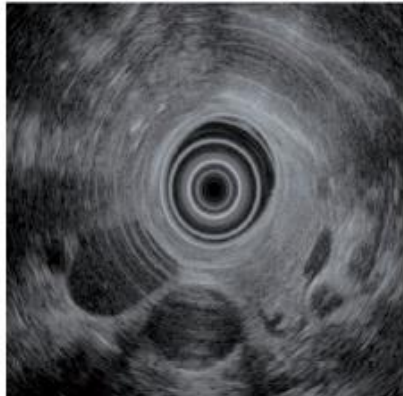
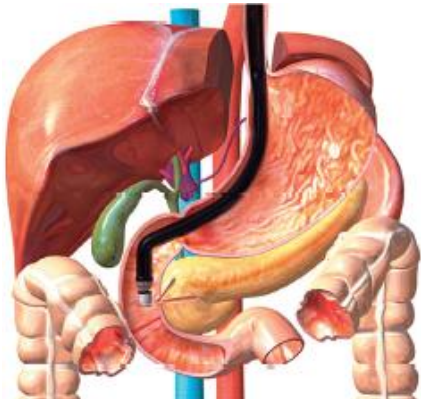


Scanning from the Descending Part of the Duodenum (Pull Method) – Step 1

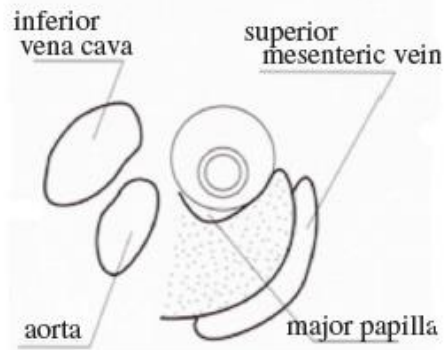
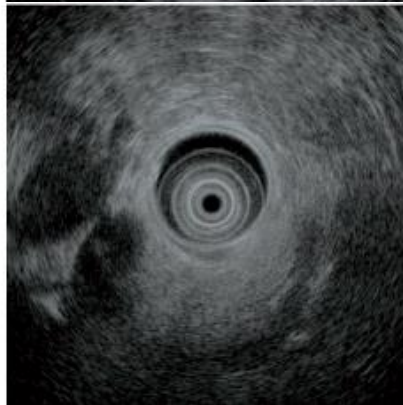
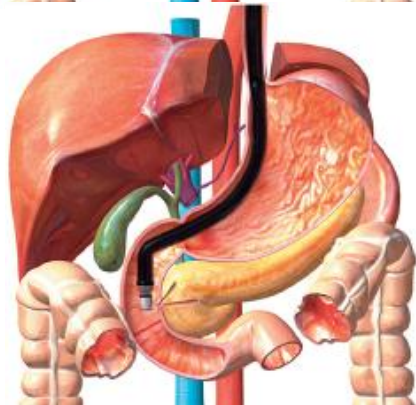


Scanning from the Descending Part of the Duodenum (Pull Method) – Step 2

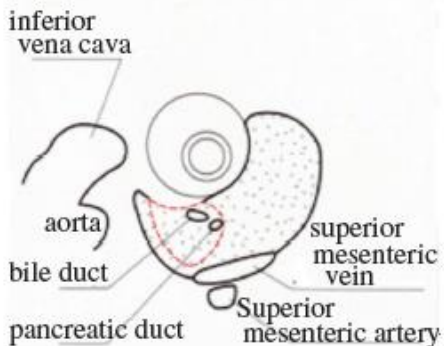
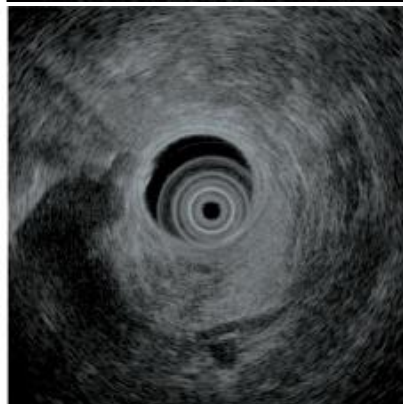
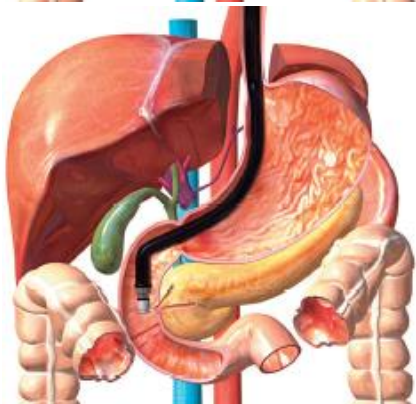
Steps of Radial EUS Scanning



Scanning from the Descending Part of the Duodenum (Pull Method) – Step 3



Scanning from the Descending Part of the Duodenum (Pull Method) – Step 4

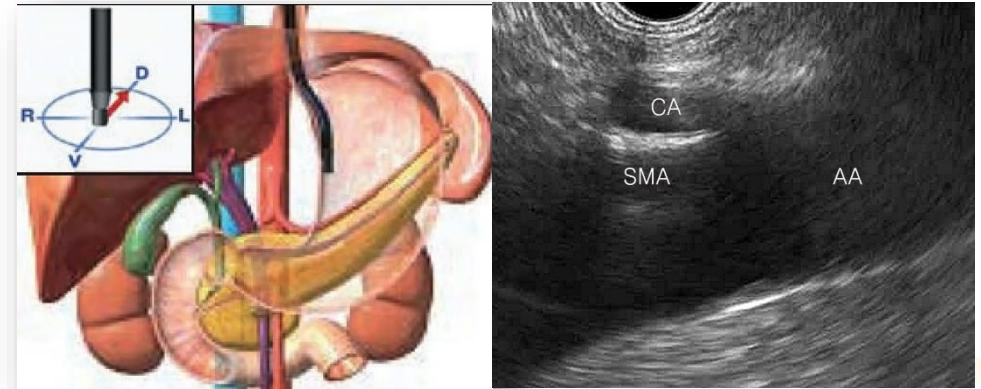


Scanning from the Descending Part of the Duodenum (Pull Method) – Step 5

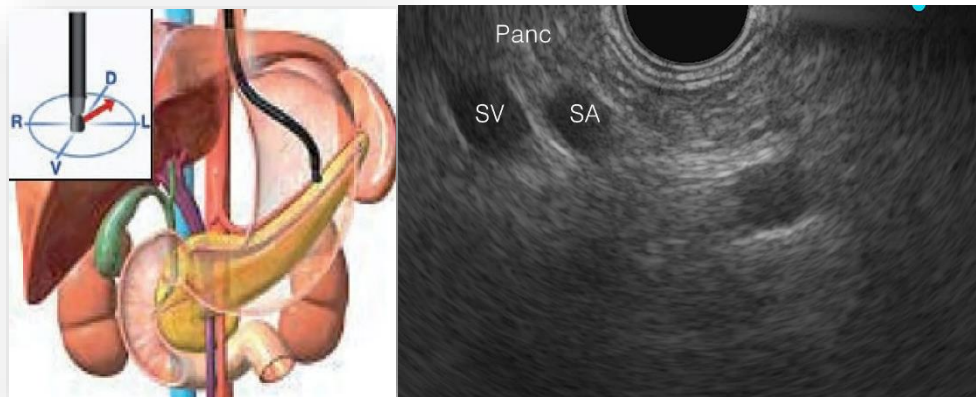
Steps of Linear EUS Scanning



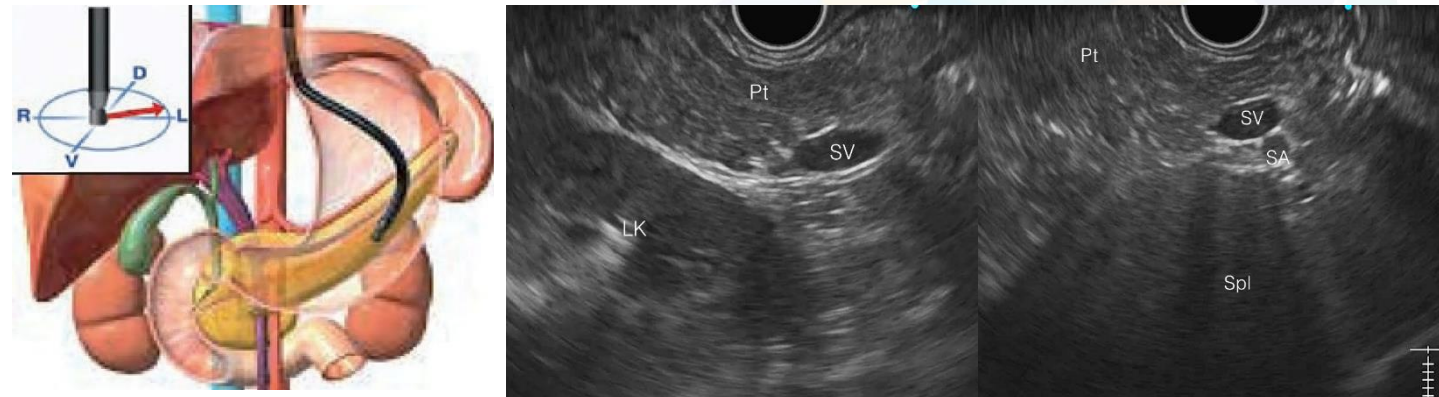
Scanning From Stomach-Step 1



Scanning From Stomach-Step 2

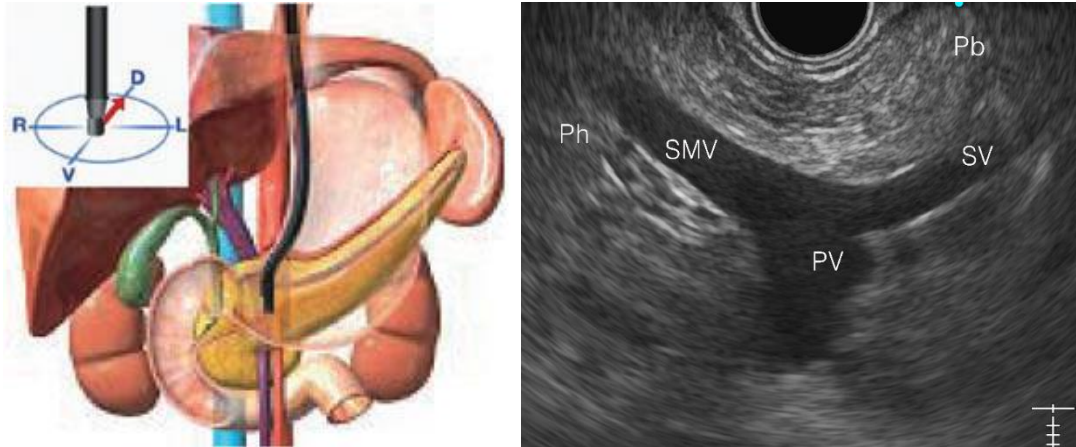


Scanning From Stomach-Step 3

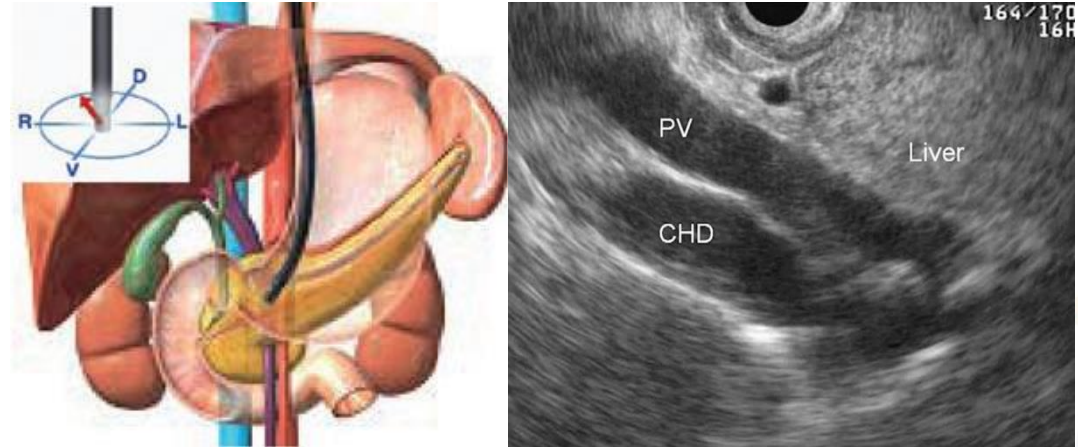


Scanning From Stomach-Step 4

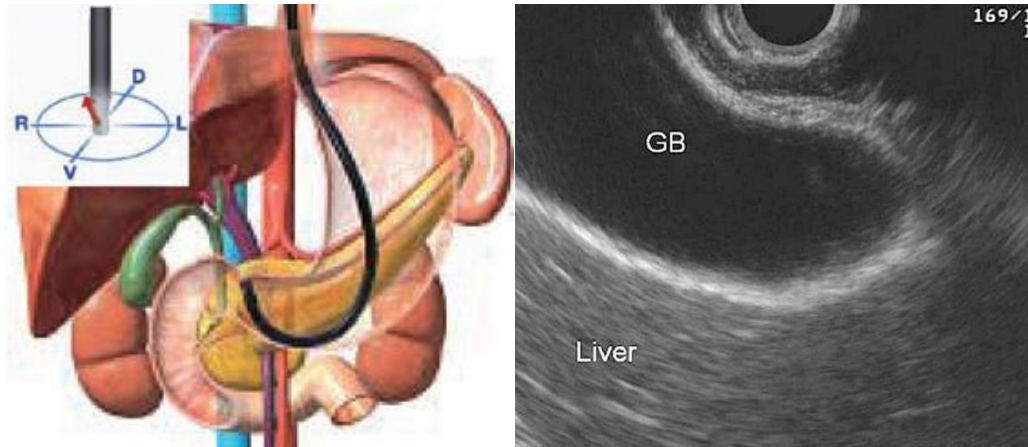
Steps of Linear EUS Scanning



Scanning From Stomach-Step 5

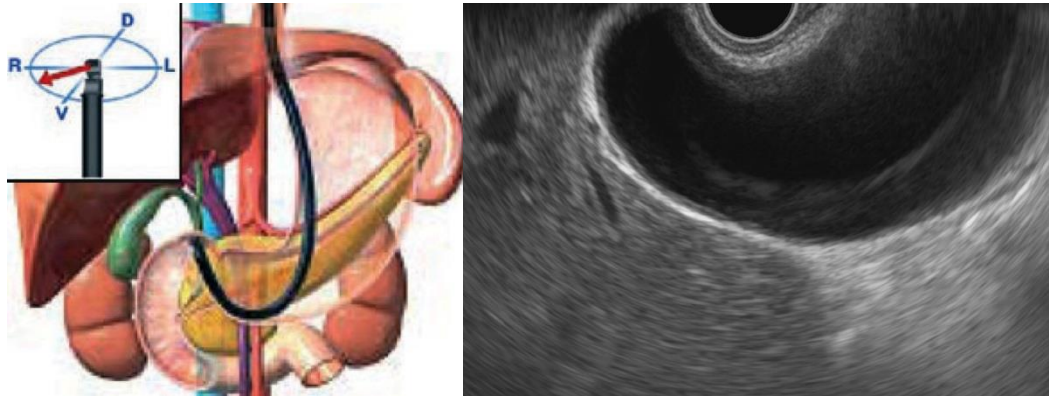


Scanning From Stomach-Step 6

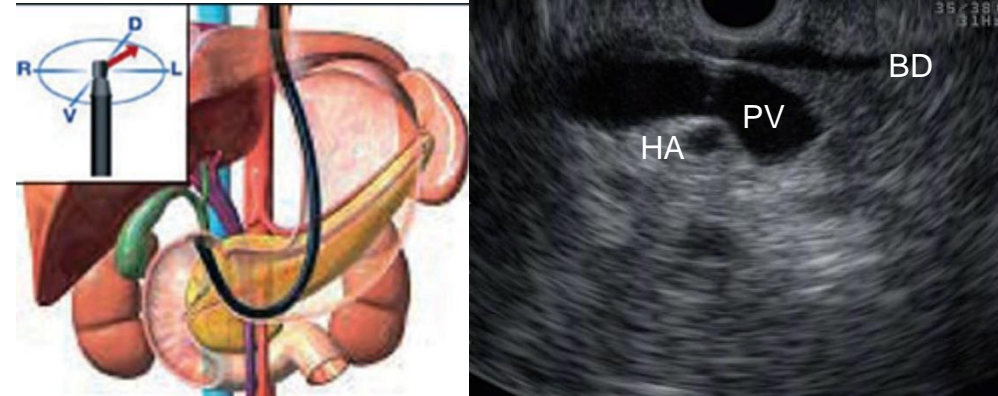


Scanning From Stomach-Step 7

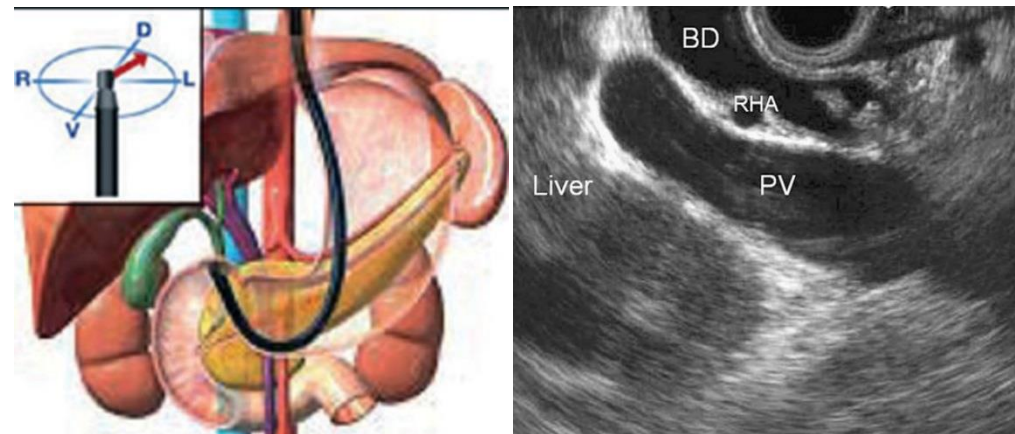
Steps of Linear EUS Scanning



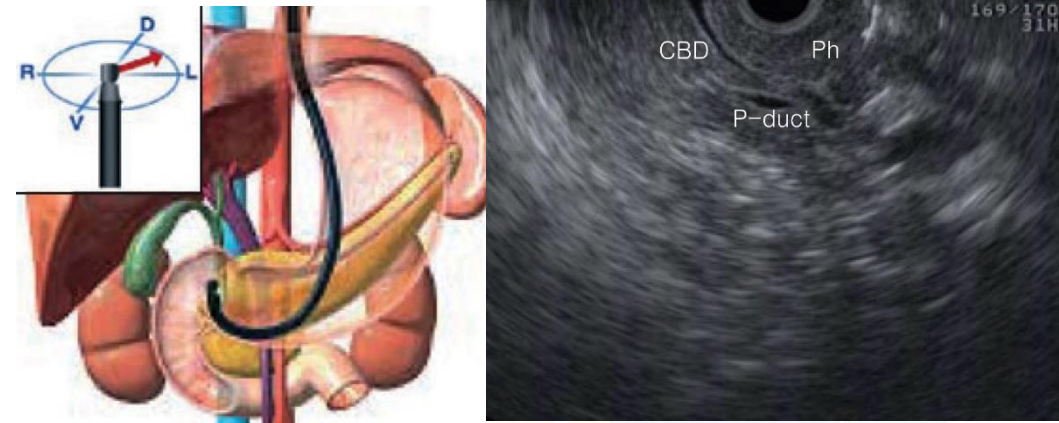
Scanning From Duodenal Bulb-Step 1



Scanning From Duodenal Bulb-Step 2-1

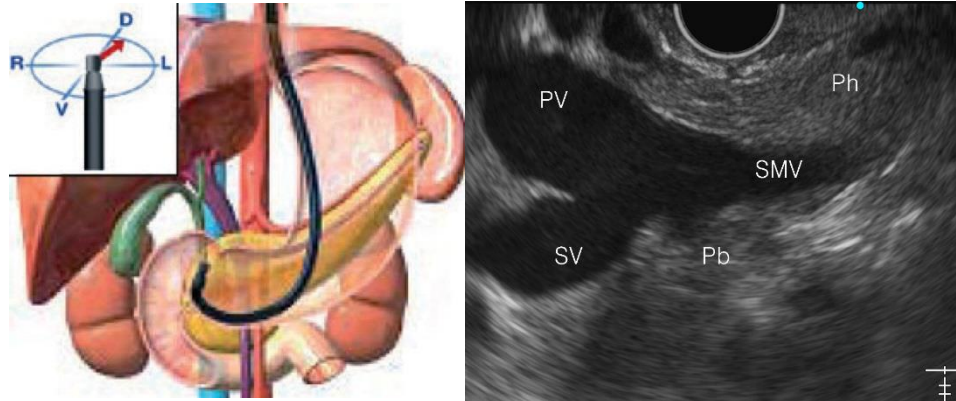


Scanning From Duodenal Bulb-Step 2-2

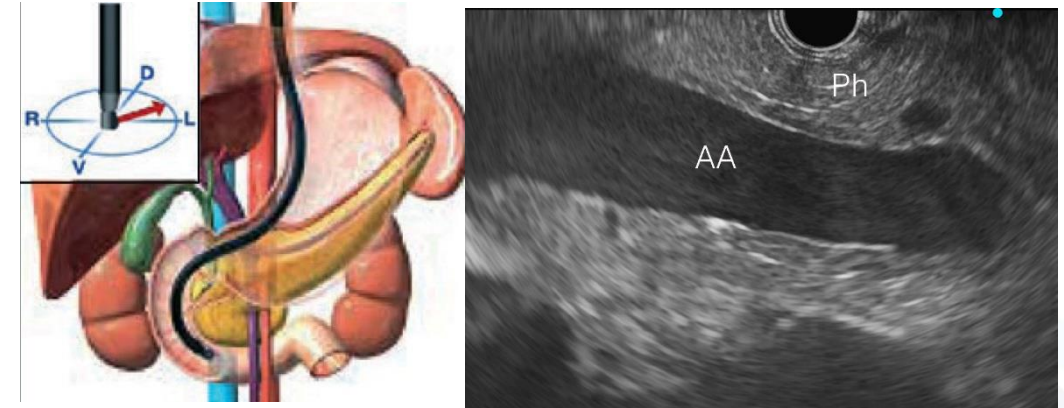


Scanning From Duodenal Bulb-Step 3

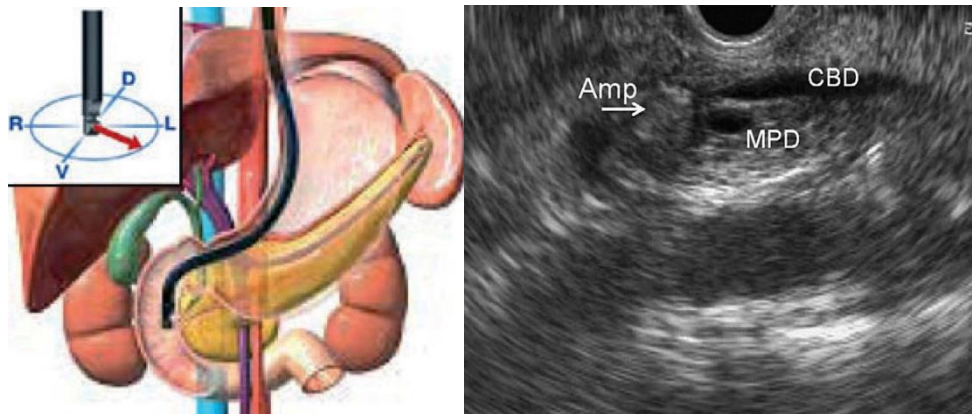
Steps of Linear EUS Scanning



Scanning From Duodenal Bulb-Step 4



Scanning From Second Duodenum-Step 1



Scanning From Second Duodenum-Step 2