SYNOPTIC REPORTING FORMATS (Supplementary File)

CT pancreatic protocol with thorax, abdomen, and pelvis dated

Indication:

Tumor markers: Serum CA 19.9 =, Serum CEA =

Technique: Contrast-enhanced scan of the thorax, Abdomen and pelvis has been performed on a MDCT scanner. Additional late arterial phase images of the pancreas have been obtained as well.

Findings:

Pancreas:

Morphologic evaluation

Size:

Location:

Appearance:

Pancreatic duct dilatation:

Biliary dilatation:

Arterial evaluation

Arterial anatomy: Conventional/ Variant (describe variant anatomy; if the variant vessel is involved mention the same)

SMA: Free/ There is =180° soft tissue/hazy attenuation or stranding abutting the SMA/There is >180° soft tissue/hazy attenuation or stranding around the SMA. Focal vessel narrowing or contour irregularity is present /absent. Extension to the first SMA branch is present/absent

Celiac Axis: Celiac trunk is free/ There is =180° soft tissue/ hazy attenuation or stranding abutting the celiac trunk/ There is >180° soft tissue/ hazy attenuation or stranding around the celiac trunk.Focal vessel narrowing or contour irregularity is present /absent.

CHA: Present or absent

Degree of solid soft-tissue contact: =180° or >180°

Degree of increased hazy attenuation/stranding contact: =180° or >180°

Focal vessel narrowing or contour irregularity: present or absent

Extension to celiac axis: present or absent

Extension to bifurcation of right/left hepatic artery: present or absent

Venous evaluation

Main portal vein: Free/ There is =180° soft tissue/ hazy attenuation or stranding abutting the vein/ There is >180° soft tissue/ hazy attenuation or stranding around the vein. Focal vessel narrowing or contour irregularity is present /absent.

SMV: Free/ There is =180° soft tissue/ hazy attenuation or stranding abutting the vein/There is >180° soft tissue/ hazy attenuation or stranding around the vein. Focal vessel narrowing or contour irregularity is present /absent. Extension to first draining vein is present /absent.

If there is partial or complete occlusion/ tumor thrombus, mention the same.

IVC:

ABDOMEN AND PELVIS:

Liver:

Gallbladder:

Spleen:

Adrenals:

Kidneys and Ureters:

Abdominal Lymph Nodes and Retroperitoneum:

Bowel:

Peritoneum:

Free fluid:

Pelvic viscera:

Pelvic side wall:

Abdominal wall:

CHEST:

Lungs:

Pleura:

Thoracic lymph nodes:

Mediastinum and esophagus:

Heart and great vessels:

Chest wall:

Thyroid:

BONES:

Supplementary Table S1 Key imaging features of pancreatic carcinoma in various modalities

Modality	Key imaging feature
Ultrasonography	Hypoechoic hypovascular mass in the pancreas Hypoechoic target appearing liver lesions and hypoechoic abdominal adenopathy
Computed tomography	Plain-hypodense pancreatic mass. Pancreatic parenchymal phase-hypodense hypoenhancing mass. Arterial anatomy and involvement are better appreciated in this phase. Portovenous phase-hypoenhancing pancreatic mass. Portovenous relations are better appreciated in this phase. Hepatic, nodal, and peritoneal metastases are better evaluated in this phase.
Magnetic resonance imaging	T1, T2 hypointense, restricted diffusion, dynamic post-contrast sequence-hypointense mass in arterial and portovenous phase; isointense in the delayed phase. Hepatic, peritoneal, and nodal metastases are better assessed.
MRCP	Modality of choice for ductal system and evaluation of stricture and ducts proximal and distal to the stricture.
FDG PET-CT	Increased FDG avidity in the pancreatic primary. Better for metastatic evaluation and detects even subtle pulmonary, hepatic, peritoneal, and nodal metastases.

Supplementary Table S2 Preferred imaging modality in various settings

Imaging setting	Preferred imaging modality
Screening	First line: ultrasonography Definitive: dual-phase CECT or MRI
Diagnosis: a) Diagnostic b) Intervention	First line: dual-phase CECT Alternative: MRI or FDG PET-CT CT guided biopsy/FNAC or USG guided biopsy/FNAC
Management a) Post-surgery b) Neoadjuvant c) Adjuvant or palliative chemotherapy	Dual-phase CECT First line: dual-phase CECT Alternative: FDG PET-CT First line: CECT Alternative: FDG PET-CT
Follow-up	First line: CECT Alternative: FDG PET-CT or USG

Supplementary Table S3 CT pancreatic protocol

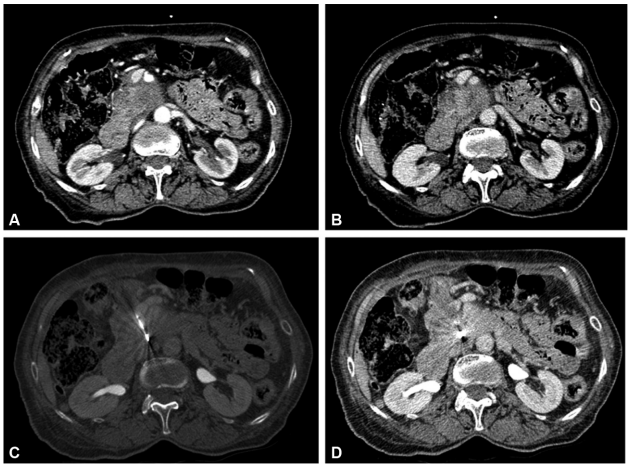
Parameters	Characteristics
Scanner type	Helical scanner
Slice thickness	1–1.5 mm
Oral contrast	Positive oral contrast is not preferred as it deteriorates the quality of 3D or multiplanar reconstructed (MPR) images. Neutral or negative oral contrast is preferred.
Intravenous contrast	Iodine-based contrast agent at 3–5 mL/sec flow rate.
Acquisition time	Pancreatic parenchymal phase at 35–50 sec and Portovenous phase at 60–70 sec
Reconstruction	Multiplanar reconstruction in the coronal plane or 3D volumetric reconstruction for vascular evaluation.
Anatomical coverage a) Diagnostic purpose b) Screening c) CT-guided sampling d) Management and follow-up	Parenchymal phase-abdomen and pelvis (lung base to Ischial tuberosity) Portovenous phase-thorax, abdomen, and pelvis (root of neck to ischial tuberosity) Parenchymal and portovenous phase-abdomen and pelvis (lung base to ischial tuberosity) Acquire the parenchymal and portovenous phase of the abdomen in pre and post-biopsy scans. Portovenous phase-abdomen and pelvis (lung base to Ischial tuberosity) CT thorax for pulmonary metastasis workup

Note: Adapted from NCCN criteria[30]

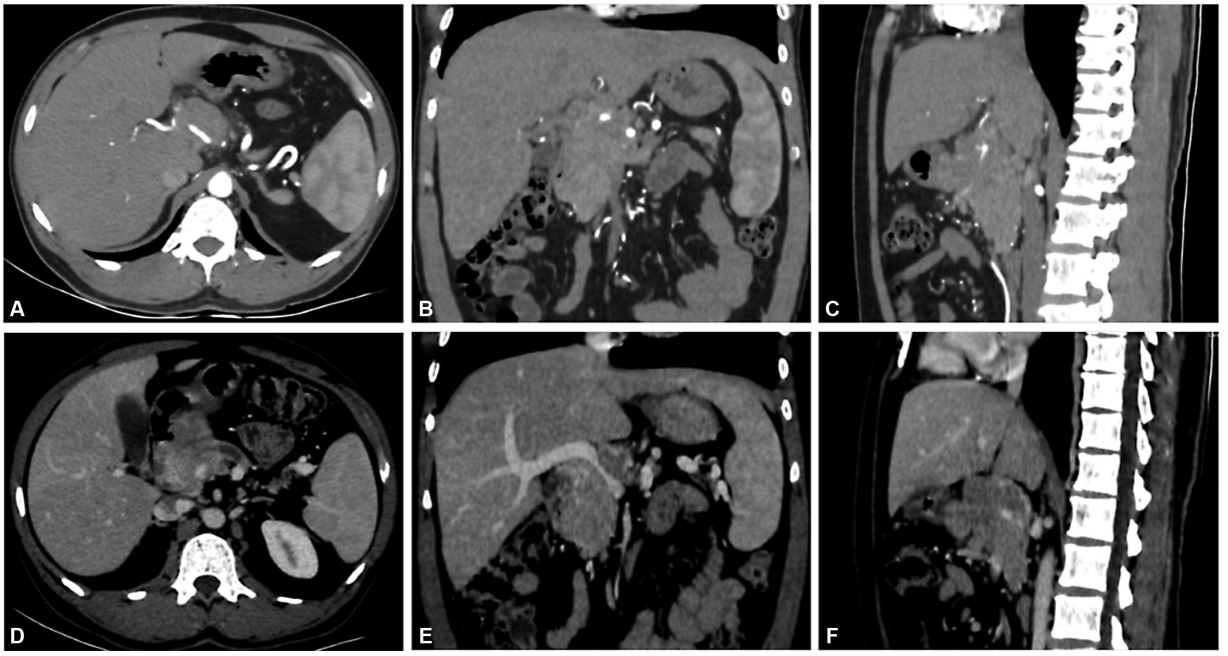
Supplementary Table S4 MRI pancreatic protocol

Sequence	Plane of acquisition	Slice thickness	Interval
T1w in and out phases	Axial	5 mm	1 mm
T2w SS-FSE	Axial and coronal	5 mm	1 mm
T2w FS-FSE	Axial	5 mm	1 mm
DWI (fat-saturated)	Axial	5 mm	1 mm
T2w MRCP 2D 3D	Coronal and Oblique	2D–20 mm 3D < 3 mm	-
Dynamic post-contrast 3D T1w fat-saturated GRE (Pre-contrast, arterial, portovenous, and delayed)	Axial	1–2 mm	0

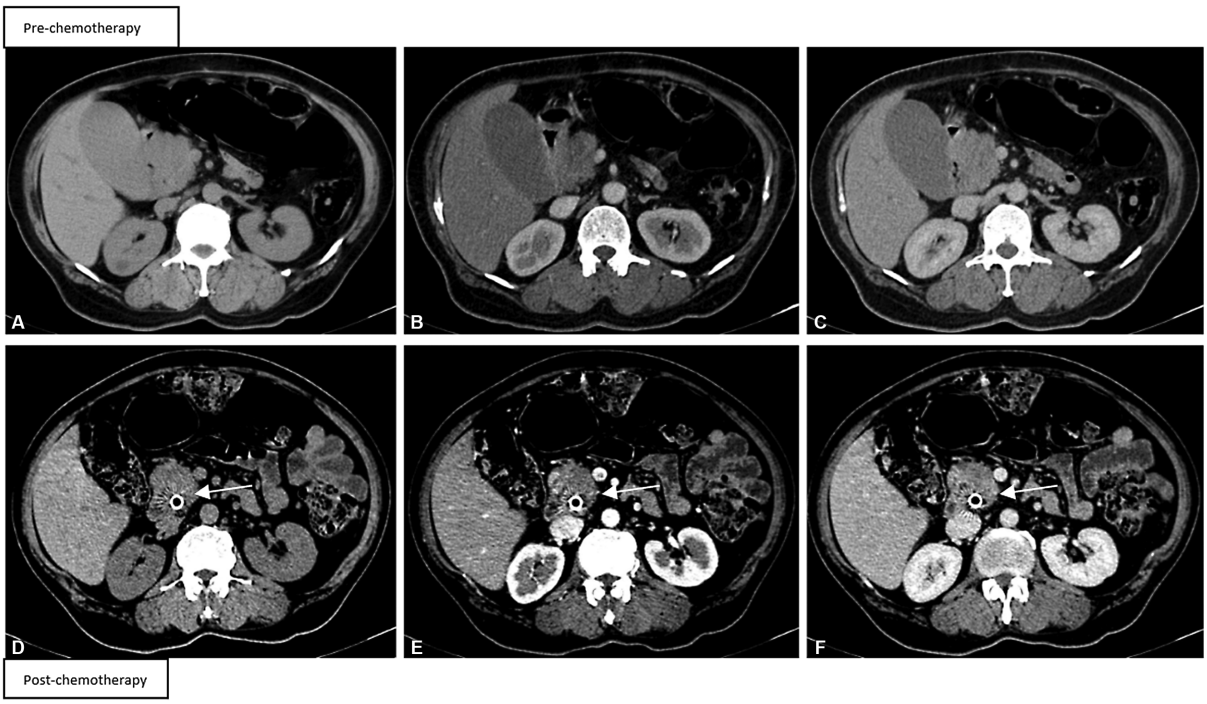
Note: Adapted from NCCN criteria[30]



Supplementary Fig. S1 Axial CT (A)-pancreatic parenchymal, (B)-portovenous phase images show a predominantly hypoenhancing lesion involving the head of the pancreas with encasement of the gastroduodenal artery. Axial CT images (C) and (D) in the bone and soft tissue window show the biopsy needle placement within the lesion for CT-guided biopsy.



Supplementary Fig. S2 Axial CT pancreatic parenchymal phase images (A-axial, B-coronal, and C-sagittal) showing encasement of the hepatic artery without luminal narrowing in all three planes. Portovenous phase images (D-axial, E-coronal, and F-sagittal) depict portal vein encasement and luminal narrowing.



Supplementary Fig. S3 Axial CT images (A)-plain, (B)-pancreatic parenchymal, and (C)-portovenous phase shows hypoenhancing mass in the region of the head of the pancreas. Post neoadjuvant chemotherapy assessment study shows a decrease in the mass size as shown in corresponding axial images (D–F). Also, note the presence of metallic stent within the common bile duct (white arrow).

