

: (CT)
 : 22 17:5
 62 (36-83) 15 (7), 2 , ,
 , , 1 . 3
 , 5 14
 . 20 24
 . CT , ,
 : 16 , 6 , 2 , 8
 가 2 가 5 , 1
 가 0.6-6cm . 10
 1 21 . 6
 : 가 ,

11.6% (1).

2-3% (2, 3).

3

22

가

가 가

가1

2

(4).

가5

14

22

CT

가

가

가

가

22

17:5

62 (36-83)

15 (7 ,

8), 2 , ,

1 가 4 , 1-3
 4 , 3 가 12
 가 가 19 , (n = 7), (n = 5),
 (n = 5), (n = 5), (n = 4), (n = 2), 가 16 (72.7 %)
 (n = 2), (n = 1) 가 6 , 2 (Fig. 1), 8 ,
 20 가 (Fig. 2)가 5 (22.7%) . 1 (4.6%)
 . 13 가 2 (Fig. 3)가
 2 가 가 4 3 가 6 , 0.6-6 cm 2.6 cm
 가 (Fig. 3)가
 CT GE HiSpeed
 (GE medical systems, Milwaukee, U.S.A.)
 600 - 900mL (2.5%-Gastrografin, 10
 Schering, Germany) , 100-120mL (Fig. 1, 4), 가 6
 (Iopromide, Schering AG, Germany) 3mL
 70
 7 mm, 7 mm
 CT
 , Abrams (1)
 1000 , 11.6%

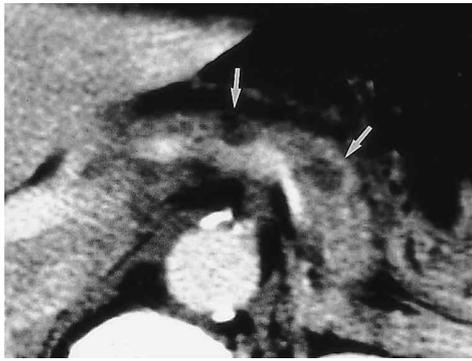
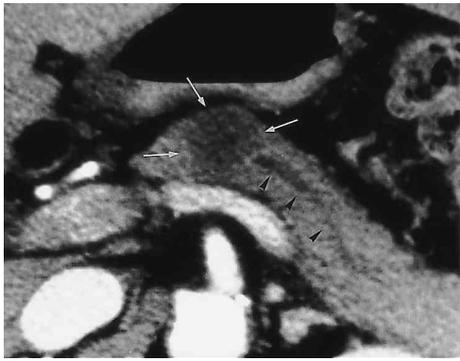


Fig. 1. Metastasis to the body of the pancreas from non-small cell carcinoma of lung. Helical CT scan shows low attenuated mass (white arrows) with the dilated upstream duct in the body (arrowheads).
 Fig. 2. Metastases to the pancreas from extragonadal choriocarcinoma of the mediastinum. CT scan shows two small low attenuated masses (white arrows) in the body.

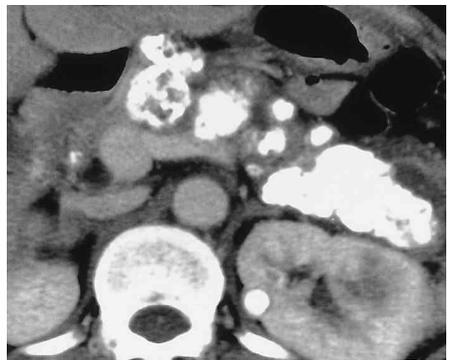
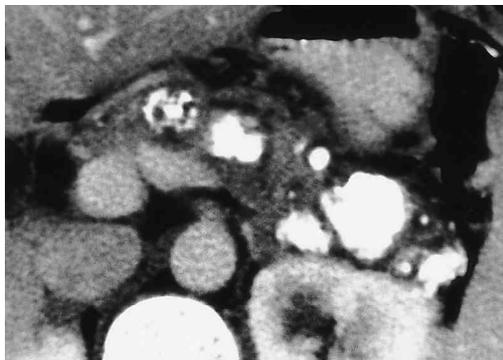
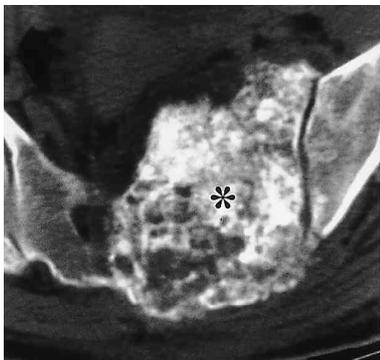


Fig. 3. A. Helical CT scan of the pelvis shows dense calcified mass (starlet) in the sacrum confirmed as chondrosarcoma. B. CT scan of the pancreas obtained one month later shows multiple nodular masses with dense calcification in entire pancreas. C. Eighteen months later, CT shows increase size and number of the metastatic masses through the pancreas.

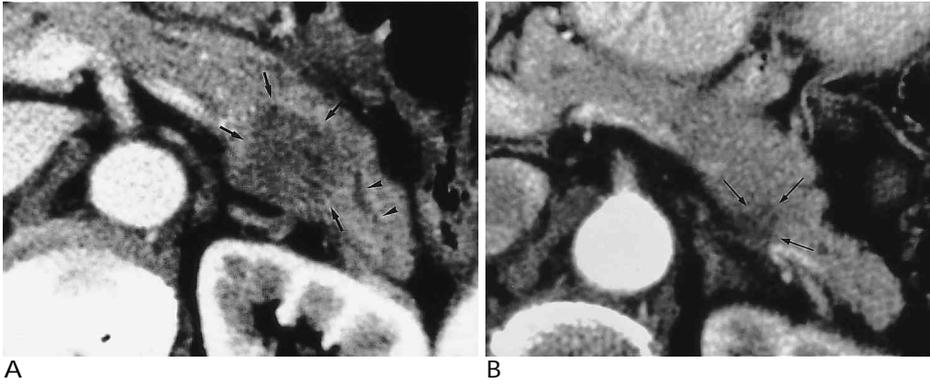


Fig. 4. Metastasis to the pancreas from small cell carcinoma of the lung.
 A. Initial CT scan shows low attenuated mass with contour bulging (arrows) and dilatation of upstream duct (arrowheads).
 B. CT scan at the same level obtained twenty months later, after chemotherapy, shows markedly decrease size of the mass (arrows).

가 가 22.8%, 가 35.4% (7-10). 가 35.4%,
 (13).
 2-3% (2, 3). (6/22, 27.3%) (16/22, 72.7%)
 (1, 3, 5-10). 7.3%, 4 2.8% (19.5%) (4.5%) (76%),
 가 (4). 가 가
 15 (68%) 가 가
 가 가 (5, 7, 8, 10, 11).
 가 가 (4, 7-10, 12). 가 가 (7, 8, 12),
 2 가 가 (7).
 가 가 (5, 6, 8, 11, 12). 가
 가 (10). Whitlington (13). 가
 12 20-30 가 CT
 가 (5, 7-10). 가
 가 12 5 가
 (6). 가 가
 9 7 가 가
 가 가 가
 가 가 66 가 2 가
 가 가 가 가
 (5, 6). 가 가 (13). 가
 가 가 가 가
 (5, 8-10). 가 2 (5, 7-12). 가
 가 1 , 1 가 가
 가 가 가
 (Fig. 4). 가 10 가 6
 (16.7%) (5-7, 9, 10). (78.8%) 가 가
 가 가 가 가 가
 가 (5-7, 9, 10). 가 가 가 가

(2, 5).

가

가

가

가

(3-6).

Roland

27

20

1

가 26

가

8

가 (4, 5, 13).

가

(3, 5, 6).

, 20

8

13

2

2

CT

가

가 6

(Fig. 3),

가 4

(Fig. 4),

가 3

가

가

CT

가

가

가

가

가

(5-8, 10).

3

가 5

14

가

가

가

가

가

가

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Metastatic Tumor of the Pancreas: Helical CT Findings¹

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Purpose: To analyze the helical computed tomographic (CT) findings of distant metastatic tumors to the pancreas and to determine the differential points between these and primary pancreatic carcinomas.

Materials and Methods: We surveyed 22 patients with metastatic tumor of the pancreas, proven on the basis of clinical and pathological findings. Seventeen patients were men, and five and five were women, and their ages ranged between 36 and 83 years. Their primary conditions were lung cancer (n= 15), rectal cancer (n= 2), melanoma of the foot, chondrosarcoma of the sacrum, cervical cancer, leiomyosarcoma of the uterus, and extragonadal choriocarcinoma of the mediastinum. We retrospectively reviewed the abdominal helical CT findings, analysing the number, location, size and attenuation of masses, as well as secondary change, which included dilatation of the pancreatic and biliary ducts and invasion of peripancreatic tissue or vessels. We also evaluated the differential findings of primary pancreatic cancer.

Results: Sixteen patients had a solitary focal mass, while in five, two masses were present. Among the 22 patients, low-density nodular masses were present in 21; in the other, in whom multiple metastasis from chondrosarcoma had occurred, there was dense calcification. The size of metastatic masses varied, ranging from 0.6 to 6 cm in diameter. The pancreatic duct proximal to the mass was dilated in ten cases, while the bile duct was dilated in six. The metastatic masses demonstrated no peripancreatic or vascular invasion, though they showed a discrete margin and contour bulging.

Conclusion: Single metastasis to the pancreas was most common, and metastatic masses had a discrete margin, with contour bulging. There was no peripancreatic or vascular invasion. If the metastasis involved a single low-attenuated mass, however, with pancreatic or biliary dilatation, it was difficult to differentiate this from primary pancreatic cancer.

Index words : Pancreas, neoplasms
Pancreas, CT

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4th Asian Pacific Congress of Cardiovascular & Interventional Radiology (APCCVIR)

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Deadline for written pre-registration	1 July 2000

4. .