

A Case of Pancreatic Metastasis of Thigh Leiomyosarcoma

**Jin Myung Park, Woo hyun Paik, Byeong Jun Song, Joo Kyung Park,
Ji Kon Ryu, Yong-Tae Kim and Yong Bum Yoon**

Department of Internal Medicine and Liver Research Institute, Seoul National University College of Medicine, Seoul, Korea

37세 남자가 2개월 전부터 커진 좌측 허벅지의 종괴 및 통증을 주소로 내원하였다. 자기공명영상 검사 결과 연부조직 육종이 의심되었다. 검진으로 시행한 복부 초음파 검사에서 췌장에 이상 소견 보였고, 추가로 시행한 전산화단층촬영 및 자기공명영상 검사 결과 췌장 두부에 전이성 종양이 의심되었다. 내시경초음파 유도하에 췌장 두부 종괴에 대해 세침흡입 및 생검을 시행하였고 병리 검사에서 악성종양으로 나타났으며 악성 간엽 종양(malignant mesenchymal tumor)이 의심되었다. 양전자 단층촬영에서 폐나 간 전이는 없는 것으로 나타났다. 환자는 좌측 허벅지 종괴에 대한 색전술 시행 후 광범위 절제술(wide excision)을 받았고 병리 소견에서 평활근육종(leiomyosarcoma)으로 진단되었다. 수술 후 12일째 췌장 종양에 대해 유문보존췌십이지장절제술(pylorus preserving pancreaticoduodenectomy)을 받았고, 병리 검사 결과 평활근육종의 췌장 전이로 진단되었다. 절제연에 종양 침범은 없었으며, 임파선 전이도 보이지 않았다. 이후 특별한 수술 합병증 없이 퇴원하였고, 향후 전신적 항암화학요법 시행을 고려 중이다.

M/37

C.C.> left thigh painful mass (onset: 2 MA)

P. I.>

1년반 전 left thigh에 mass 발생했고, 2개월 전부터 갑자기 커지면서
통증이 동반됨.

인근 병원 방문하여 MR 촬영 후 본원 방문함.

당시 검진위해 abdominal USG 함께 시행 후 pancreas에 이상 소견 있
어 abdomen CT 촬영

PMHx. & SHx.>

DM/Tb/HTN/chronic liver ds (-/-/-)

'96 intracranial AVM 진단 후 수 차례 방사선 치료

Smoking: 0.4 pack x 20 years

Alcohol: 5회/주, 소주 1병/회

ROS.>

G/W (-) Wt.loss (-) HA/dizz (-/-) F/C (-/-)

C/S/R (-/-/-) chest pain (-) dyspnea (-)

abdominal pain (-) A/N/V/D/C (-/-/-/-) H/M/H (-/-/-)

P/E>

좌측 대퇴부에 10 x 8 cm palpable mass (+)

이외에 특이 소견 없음.

Lab>

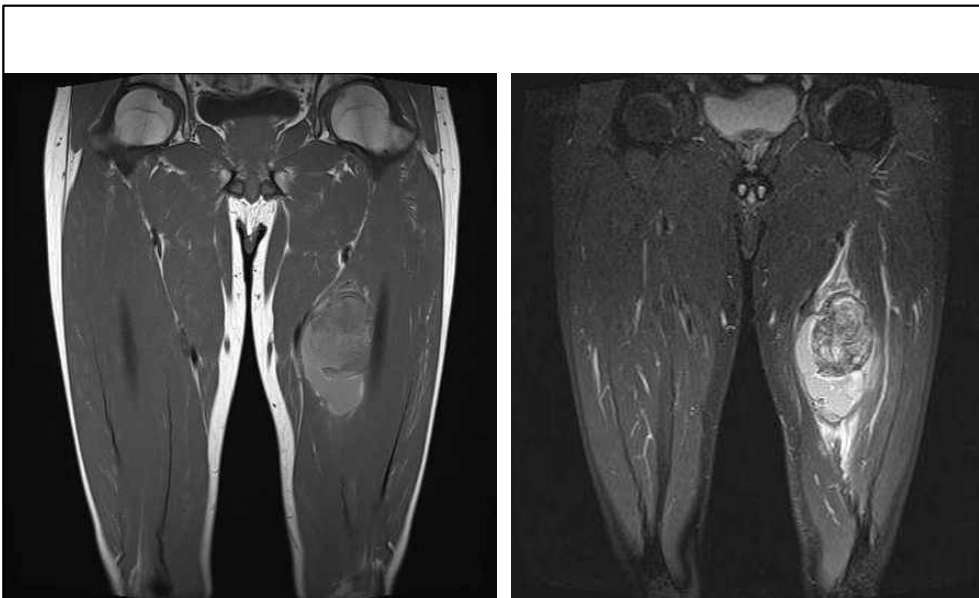
CBC 9200 – **12.2** – 194k PT INR 1.13

total bil 1.1 total prot/alb 7.4/4.2

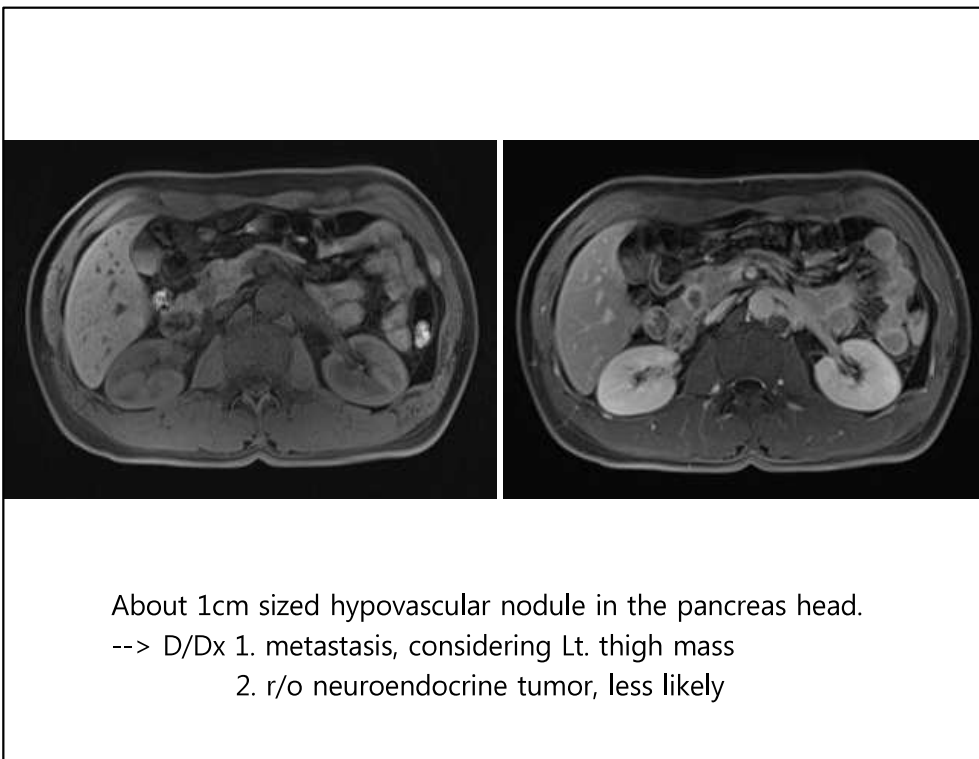
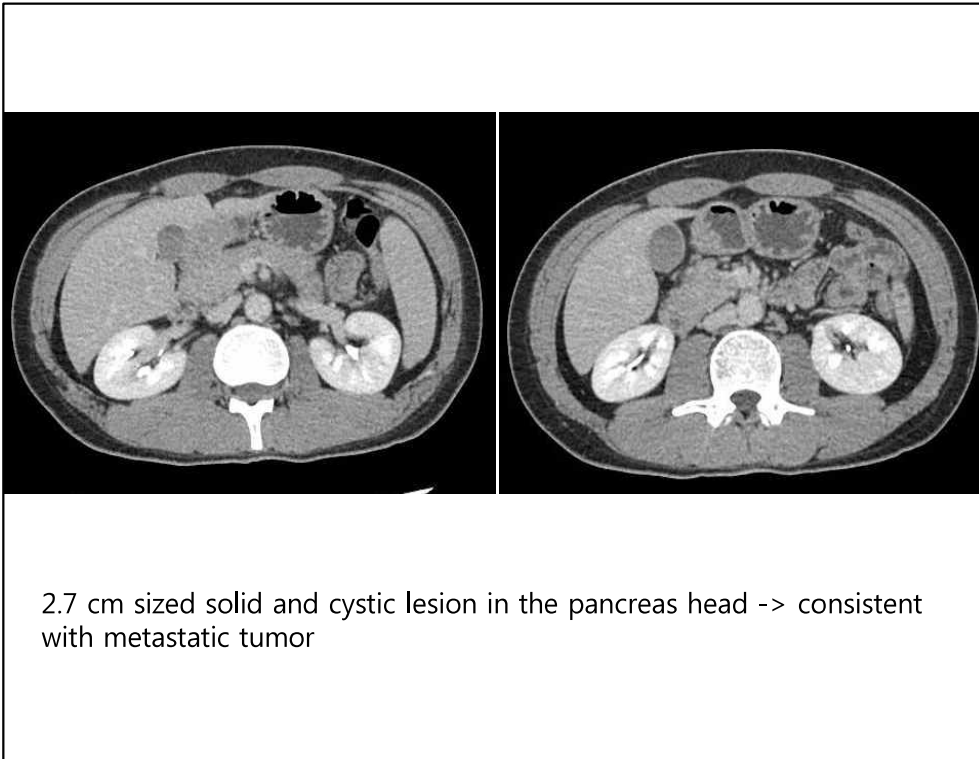
AST/ALT 15/12 ALP 86 GGT 28

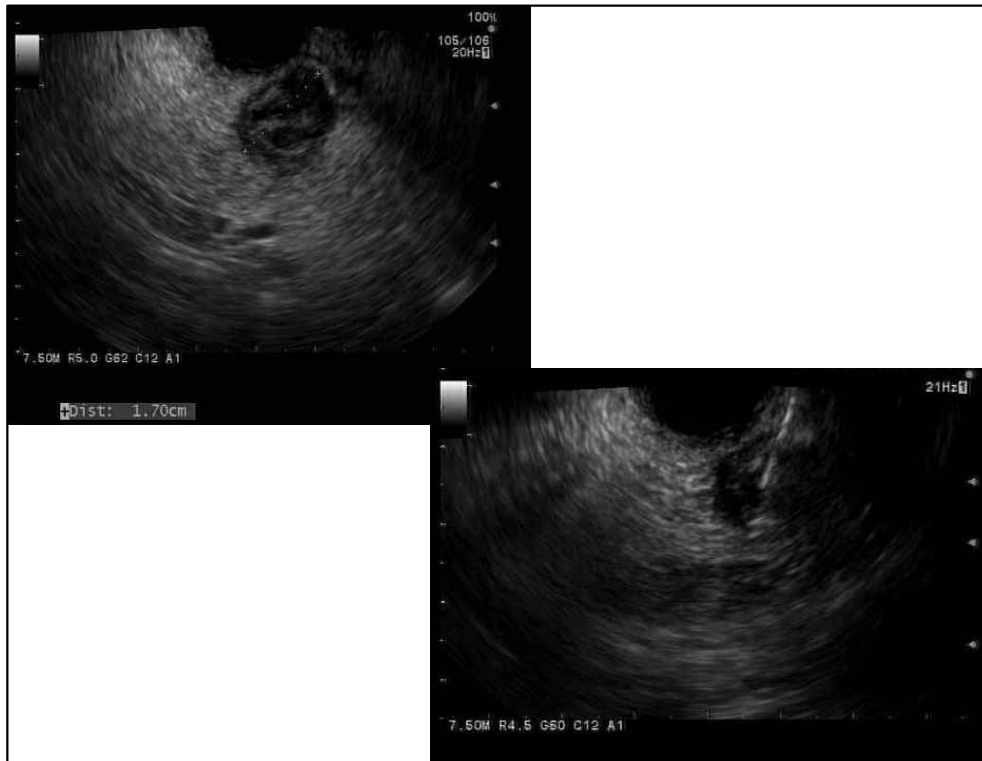
BUN/Cr 11/0.81 e 140 – 4.3 – 103 – 25

CA 19-9/CEA 2.1/0.5



Well margined huge mass in left mid-thigh vastus compartment -> More likely soft tissue sarcoma





Pancreas, head, needle biopsy:

Malignant tumor,
favor malignant mesenchymal tumor

Pancreas, head, aspiration cytology:

Positive for malignant cells

Assessment)

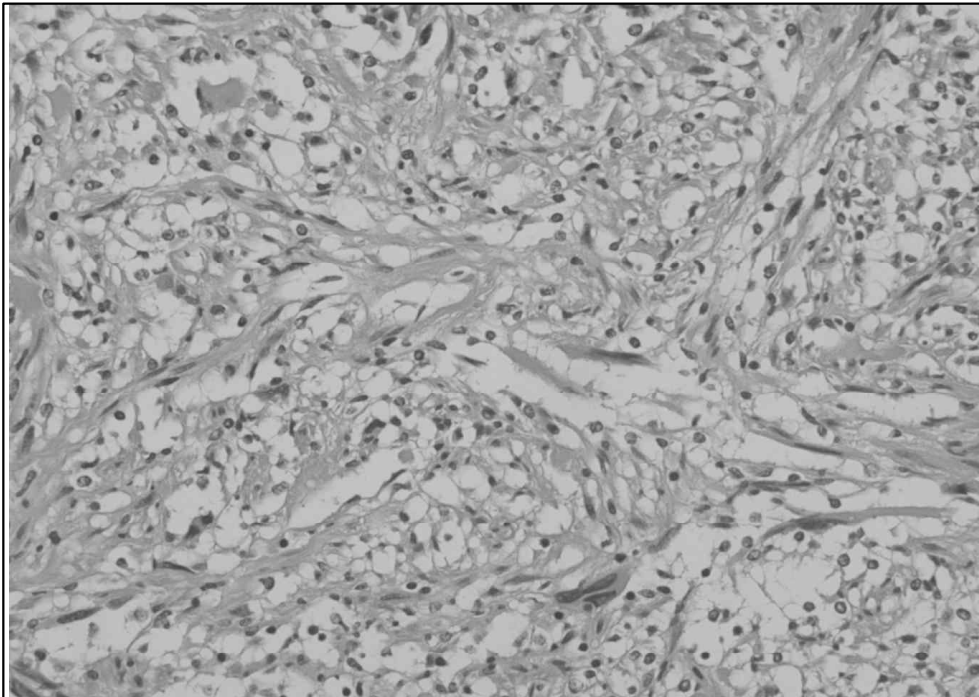
Lt. thigh mass -> r/o sarcoma

pancreas head mass -> r/o metastasis

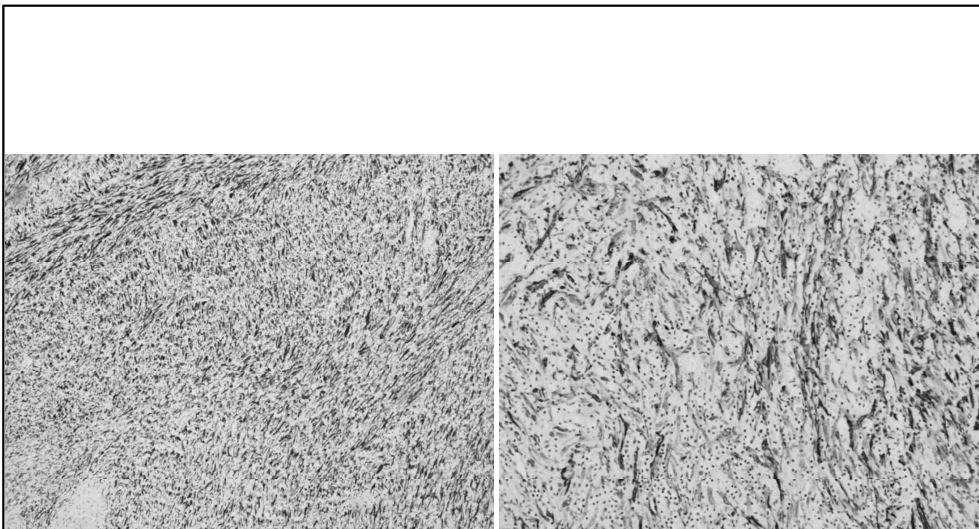
Plan)

Thigh mass wide excision

PPPD



Thigh: Spindle cell neoplasm, poorly differentiation

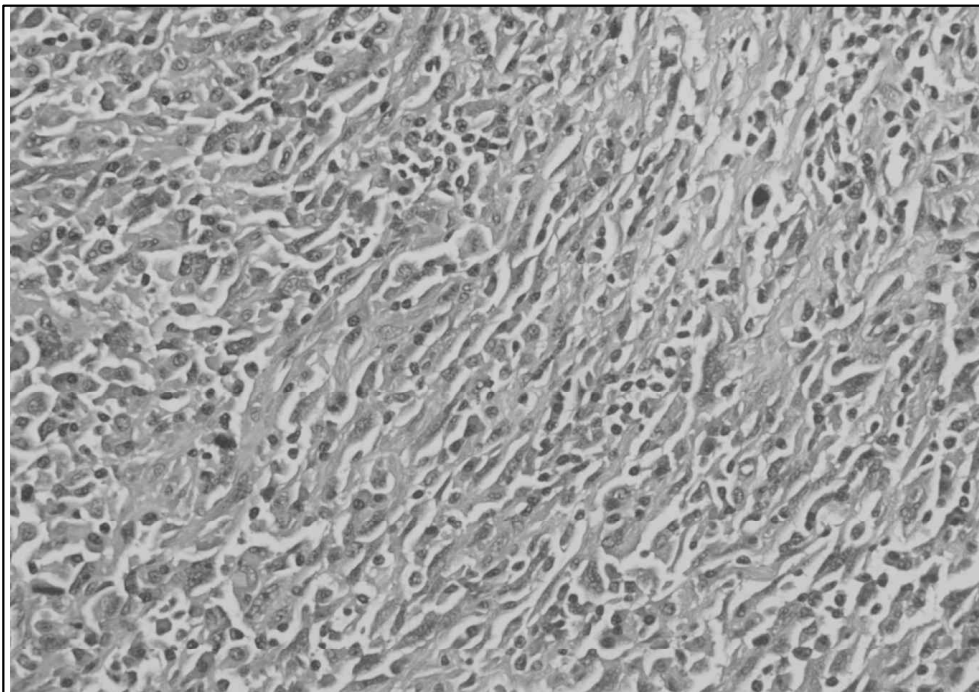


Smooth muscle actin and desmin: Focal positive → Leiomyosarcoma

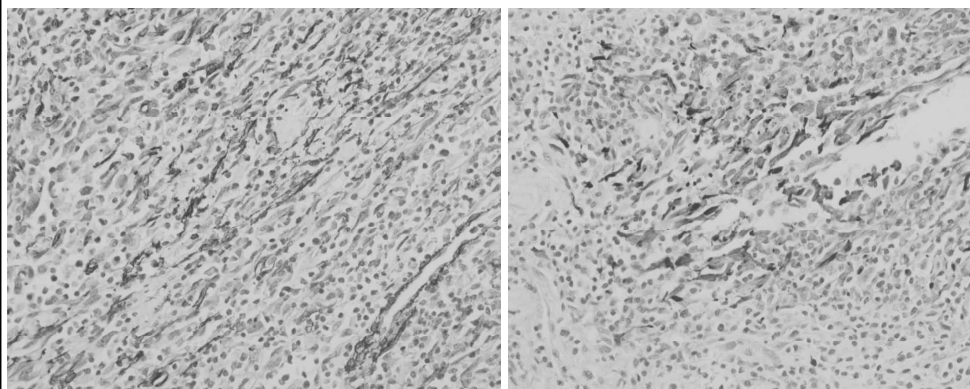
Soft tissue, thigh, left, wide excision:

Leiomyosarcoma

- FNCLCC grade 3 tumor
differentiation: (score 3)
mitosis count: 45/10 HPF (score 3)
tumor necrosis: 70% (score 2)
- Location: deep
- Size of tumor: 6.7 x 6.5 x 6.3cm
- Cellular morphology: spindle cell, pleomorphic
- Tumor border: expansile
- Surgical margin: free from tumor
- Lymph node: cannot be assessed (pNX)



pancreas: atypical spindle cell proliferation with frequent mitosis



SMA and desmin: focal positive in spindle cell

Pancreas, PPPD:

Metastatic leiomyosarcoma from left thigh with

- 1) tumor size: 1.0 x 1.0 x 0.7 cm
- 2) confined to pancreas
- 3) vascular invasion: absent
- 4) lymphatic invasion: absent
- 5) clear radial (safety margin: 1.0 cm), retroperitoneal (safety margin: 0.3 cm) common bile duct (safety margin: 3.0 cm) resection margins
- 6) clear proximal (safety margin: 3.0 cm) and distal duodenal (safety margin: 19.3 cm) resection margins
- 7) no metastasis in three lymph nodes (peritumoral LN, 0/1; "LN", 0/1, LN #13 (Fro #1), 0/1; omentum, 0/0)

limb leiomyosarcoma

-> wide excision

Pancreatic metastasis of leiomyosarcoma

-> PPPD

Adjuvant chemoTx:

doxorubicin + ifosfamide 예정

Leiomyosarcoma

Cancer of smooth muscle

10-20% of soft tissue sarcomas

Skin, deep soft tissues of the extremities, retroperitoneum

Pathologic finding:

malignant spindle cells with cigar-shaped nuclei arranged in interweaving fascicles.

Immunohistochemistry:

smooth muscle actin, desmin (+)

Lung: primary metastatic site for most sarcomas

Extremity sarcoma:

 About 20% will have isolated lung metastasis.

Locoregional LN metastasis: rare ($\leq 5\%$)

Metastatic soft tissue sarcoma: incurable, palliative systemic treatment

Metastatectomy in isolated pulmonary meta:

 long-term disease free survival and potential cure in selected patients

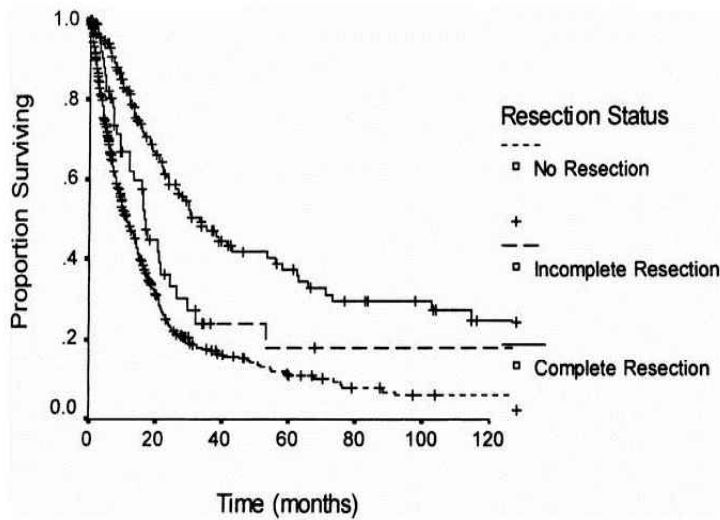


Figure 2. Kaplan-Meier plot of disease-specific survival for patients with pulmonary metastases, by treatment. Patients treated with complete resection ($n = 161$) had a median survival of 33 months. For patients who did not undergo resection ($n = 473$), the median survival was 11 months. For patients who underwent incomplete resection ($n = 52$), the median survival was 16 months ($p < 0.001$, complete resection vs. no resection or incomplete resection.)

Ann Surg. 1999 May; 229(5): 602.

Favorable prognostic indicator:

disease free interval ↑, histologic grade ↓

Adjuvant chemotherapy:

no randomized controlled trials

conflicting retrospective studies(doxorubicin, ifosfamidie combination)

Leiomyosarcoma pancreatic metastasis: extreamly rare

Only case reports and series

Table 1 Clinical findings of patients with pancreatic metastases of leiomyosarcoma

Case no.	First author	Year	Age	Sex	Primary site	Others localisations	Interval between primary tumor and metastases	Symptoms	Pancreatic site
1	Wemecke	1986	66	F	Colon	Liver	ND	Asymptomatic	Tail
2	Wemecke	1986	70	M	Spermatic cord	Lung, bones, skin	ND	Asymptomatic	Multiples
3	Muranaka	1989	ND	ND	ND	ND	ND	ND	ND
4	Akata	1999	65	F	ND	Thyroid, bones, salivary gland	Synchronous	ND	Head and body
5	Falconi	2000	56	F	Uterus	Liver, pelvis	4 years	Asymptomatic	Head
6	Le borgne	2000	52	F	Vein	No	5 years	ND	ND
7	Ishigure	2000	39	M	Subcutaneous tissue	Lung, abdominal wall	2 years	ND	ND
8	Nasu	2000	73	F	Ovary	Liver, lung, stomach, skin, muscle	Autopsy	ND	Multiples
9	Nakamura	2001	ND		Retroperitoneum	ND	Autopsy	ND	ND
10	Nakamura	2001	ND		Soft tissue	ND	Autopsy	ND	ND
11	Awai	2002	58	F	Left tibia	ND	8 years	ND	ND
12	Sperti	2003	48	M	Duodenum	Colon	5 years	Abdominal pain	Head
13	Nakajima	2004	59	M	Left leg	Lung, stomach	2 years	Asymptomatic	Head
14	Iwamoto	2004	46	F	Uterus	Lung	2 years	Asymptomatic	Body
15	Adsay	2004	ND		Retroperitoneum	ND	ND	ND	ND
16	Koh	2005	66	F	Right thigh	No	post operative	Abdominal pain	Head
17	Crippa	2006	79	M	Jejunum	Liver	35 months	Jaundice	Head
18	Our case	2009	65	F	Left thigh	Rib	4 years	Asymptomatic	Tail

M male, F female, ND not described

J Gastrointest Canc (2012) 43:40–43

Case	Chirurgical treatment	Adjuvant	Follow-up (months)
1	ND	ND	ND
2	ND	ND	ND
3	ND	ND	ND
4	ND	ND	ND
5	Pylorus preserving pancreaticoduodenectomy	No	Alive 56 months after surgery
6	Yes	ND	Death 40 months after surgery
7	Yes	ND	Alive 36 months after surgery
8	ND	ND	ND
9	ND	ND	ND
10	ND	ND	ND
11	ND	ND	ND
12	Pylorus preserving pancreaticoduodenectomy	No	Death 42 months after surgery
13	No	Supportive care	ND
14	Distal pancreatectomy and splenectomy	Refused by patient	Alive 8 months after surgery
15	ND	ND	ND
16	Whipple pancreaticoduodenectomy	Refused by patient	Recurrence 9 months after surgery
17	Biliary and gastric by-pass	No	Death 7 months after surgery
18	Distal pancreatectomy	Radio chemotherapy	Alive 10 months after surgery

ND not described

J Gastrointest Canc (2012) 43:40–43