

Surgical Research in Switzerland

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Müller PC, Haslebacher C, Steinemann DC, Müller-Stich BP, Hackert T, Peterhans M, Eigl B.
Surg Endosc. 2020 Apr

4/5 gastrectomy in patients undergoing pancreaticoduodenectomy reduces delayed gastric emptying
Müller PC, Ruzza C, Kiemmerli C, Steinemann DC, Müller SA, Kessler U, Z'graggen K.
J Surg Res. 2020 May

Diaphragmatic hernia after laparoscopic gastric bypass surgery
Guglielmetti LC, Wyss R, Biraima M, Misirlic M, Peros G.
Obes Surg, 2020

Population-based SEER analysis of survival in colorectal cancer patients with or without resection of lung and liver metastases
Siebenhuner AR, Guller U, Warschkow R.
BMC Cancer, 2020

Impact of intraoperative noise measurement on the surgeon stress and patient outcomes. A prospective, controlled, single-center clinical trial with 664 patients
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Surgery, 2020

Role of lymphadenectomy, adjuvant chemotherapy, and treatment at high-volume centers in patients with resected pancreatic cancer—a distinct view on lymph node yield
Warschkow R, Tsai C, Kohn N, Erdem S, Schmied B, Nussbaum DP, Gloor B, Müller SA, Blazer D, Worni M.
Langenbecks Arch Surg, 2020

The Swiss approach to the COVID-19 outbreak
Moeckli B, Peloso A, Oldani G, Orci LA, Banz V, Dutkowski P, Toso C, Berney T.
Am J Transplant. 2020 Apr

Defining major surgery: a delphi consensus among european surgical association (esa) members
Martin D, Mantziari S, Demartines N, Hübner M; ESA Study Group.
World J Surg. 2020 Mar

Mortality of adult respiratory distress syndrome in trauma patients: a systematic review over a period of four decades
Birkner DR, Halvachizadeh S, Pape HC, Pfeifer R.
World J Surg. 2020 Mar

Treatment of proximal humerus fractures in geriatric patients – can pathological dxa results help to guide the indication for allograft augmentation?
Halvachizadeh S, Berk T, Rauer T, Hierholzer C, Pfeifer R, Pape HC, Allemann F.
PLoS One. 2020 Apr

Challenges in the interpretation and therapeutic manipulation of human ingestive microstructure
Gero D.
Am J Physiol Regul Integr Comp Physiol. 2020 May

How to establish benchmarks for surgical outcomes?: A checklist based on an international expert delphi consensus
Gero D, Müller X, Staiger RD, Gutschow CA, Vonlanthen R, Bueter M, Clavien PA, Puhon MA.
Ann Surg. 2020 May

Evolution of the surgical residency system in Switzerland: an in-depth analysis over 15 years
Moeckli B, Burgermeister LC, Siegrist M, Clavien PA, Käser SA.
World J Surg. 2020 May

Large-scale profiling of signaling pathways reveals a distinct demarcation between normal and extended liver resection
Borger P, Buzdin A, Sorokin M, Kachaylo E, Humar B, Graf R, Clavien PA.
Cells. 2020 May

Auflösung der Frage von S. 13

Images in Surgery

Case Solution:

The correct answer is: **Pancreatic neuroendocrine tumor.**

The diagnosis can be deduced based on positive stainings for chromogranin A & synaptophysin, which are typical for neuroendocrine tumors (NET). Furthermore, serum chromogranin A levels were also highly elevated (7911 µg/l), underlining the diagnosis. 25% percent Ki67 positive cells make this a NET grade 3. Due to the relatively monomorphological histology with regular medium-sized cores, the tumor was not graded as neuroendocrine carcinoma.

Positivity for CDX2 hints towards a tumor of gastrointestinal origin. A NET of the stomach, duodenum or colon was excluded by upper and lower endoscopy. The two remaining possible localizations remain the small intestine (jejunum & ileum) and the pancreas. While 95% of NET of the small intestine express somatostatin receptor 2a (SSTR2), rates for pancreatic NET are slightly lower with approximately 86%. This patient's tumor did not express SSTR2, which has been described as a marker for high-grade pancreatic NET. Due to the negativity for SSTR2, 68Ga-DOTATATE PET/CT was not able to reliably detect tumor manifestations. A subsequent MRI detected a SSTR2-negative lesion of 33x25mm in the pancreatic tail (Fig 2), probably constituting the primary of this NET, which was not recognized on earlier CT scans and was not reliably FDG-positive. The SSTR2-positive area in the uncinate process was inconspicuous on MRI and represents normal pancreatic tissue.

The patient recently started palliative chemotherapy with Capecitabine/Temozolomide, which resulted in thrombopenia and minor bleedings. On first follow-up imaging, the disease was progressing.

