DOI: 10.1111/1759-7714.13951

### IMAGING IN THORACIC CANCER

## WILEY

# Lung cancer metastasis to the pancreas mimicking autoimmune pancreatitis

Naruhiko Ichiyama	Hiromichi Yamane 🗅	Nobuaki Ochi	Nozomu Nakagawa
Yasunari Nagasaki	Tatsuyuki Kawahara	Masataka Taoka	Ayaka Mimura
Hidekazu Nakanishi	Nagio Takigawa		

Department of General Internal Medicine 4, Kawasaki Medical School, Okayama, Japan

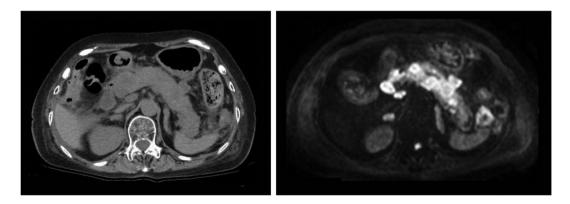
#### Correspondence

Hiromichi Yamane, Department of General Internal Medicine 4, Kawasaki Medical School, 2-1-80, Nakasange, Kita-ku, Okayama 700-8505, Japan. Email: hiromichi.ya@gmail.com

KEYWORDS: autoimmune pancreatitis, lung cancer, metastasis to pancreas

A 76-year-old woman presented to our emergency room with severe epigastric pain with muscular guarding. An abdominal computed-tomography (CT) scan revealed diffuse swelling of the pancreas with panniculitis in the surrounding adipose tissue, and her serum amylase level was elevated to 755 U/l (Figure 1(a)). Although the sausage-like appearance of the pancreas evoked autoimmune pancreatitis,<sup>1</sup> standard medical treatment for acute pancreatitis was initiated. Four days later, magnetic resonance imaging (MRI) scan for further examination was performed. Diffusion weighted MRI revealed multiple nodular lesions in her swollen pancreas (Figure 1(b)). Although she did not reveal her medical history with contrariness, her family declared that she had been diagnosed with primary lung cancer at another hospital five months previously. Therefore, with her permission, we obtained the results of the radiological examination.

Fluorodeoxyglucose (FDG) positron emission tomography (PET)-CT at initial diagnosis showed high uptake of FDG in the primary site of the right upper lobe. Although FDG high uptake was also observed in the lymph nodes in the mediastinum and supraclavicular fossa, there was no



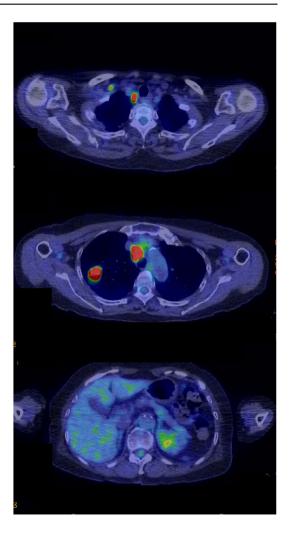
**FIGURE 1** (a) Abdominal computed-tomography revealed diffuse swelling of the pancreas with panniculitis in the surrounding adipose tissue. (b) Diffusion weighted magnetic resonance imaging (MRI) revealed multiple nodular lesions in her swollen pancreas

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made. © 2021 The Authors. *Thoracic Cancer* published by China Lung Oncology Group and John Wiley & Sons Australia, Ltd.

## HAR WILEY-

**FIGURE 2** Although high uptake of fluorodeoxyglucose (FDG) was observed in the primary site of the right upper lobe, lymph nodes in the mediastinum, and supraclavicular fossa, there was no abnormal findings in the pancreas





abnormal findings in the pancreas (Figure 2). We determined that her pancreatitis was caused by diffuse metastasis to the pancreas.

The incidence of cancer metastasis to the pancreas has previously been reported to be 15% in autopsy cases of all malignant tumors. The most common primary tumor site was the stomach, followed by the lung and extra hepatic bile duct.<sup>2</sup> However, to the best of our knowledge, a manifestation mimicking autoimmune pancreatitis has not previously been reported. Physicians should therefore be aware of the unique clinical course because lung cancer is the most frequent malignancy worldwide and the second main cause of metastatic pancreatic tumor.

## **CONFLICT OF INTEREST**

All authors have no conflict of interest.

## ORCID

Hiromichi Yamane https://orcid.org/0000-0002-7550-5607

#### REFERENCES

- Kamisawa T, Egawa N, Nakajima H, Tsuruta K, Okamoto A, Kamata N, et al. Comparison of radiological and histological findings in autoimmune pancreatitis. Hepatogastroenterology. 2006;53:953–6.
- Nakamura E, Shimizu M, Itoh T, Manabe T. Secondary tumors of the pancreas: clinicopathological study of 103 autopsy cases of Japanese patients. Pathol Int. 2001;51:686–90.

How to cite this article: Ichiyama N, Yamane H, Ochi N, et al. Lung cancer metastasis to the pancreas mimicking autoimmune pancreatitis. *Thorac Cancer*. 2021;12:1467–1468. <u>https://doi.org/10.1111/1759-7714</u>. 13951