原文題目：	A possible ovarian carcinoma metastatic in the mandible: diagnostic perspectives. Oral Surg 2013;6:16-21.
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內文：

Abstract

1. A very rare case of metastatic carcinoma to the left mandible of an elderly female.

2. Histopathological examination in conjunction with step-by-step use of immunohistochemistry suggested an ovarian origin.

3. The case highlights problems in the diagnosis of oral metastatic disease.

Case report

[Personal Data]：

1. 61-year-old, Female
2. Alcohol(-), Cigarette(+,daily for the last 40 years)

[Chief Complaint]：

1. A tender swelling in the edentulous 36 area
2. Had been aware of the swelling for approximately 2 months and felt that it was increasing in size and was occasionally painful

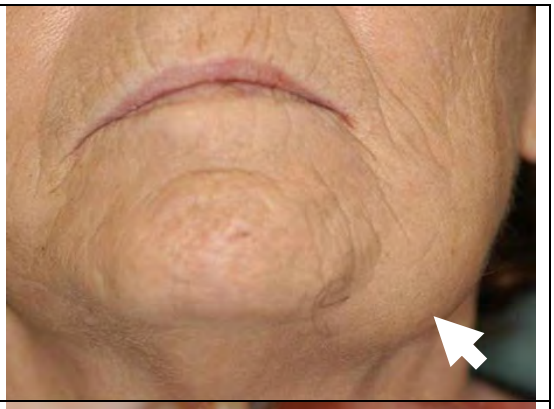
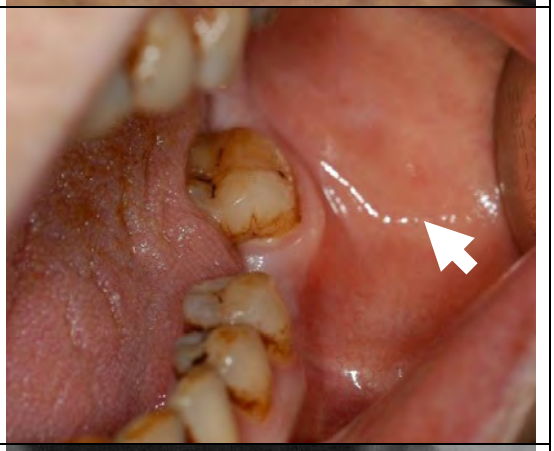
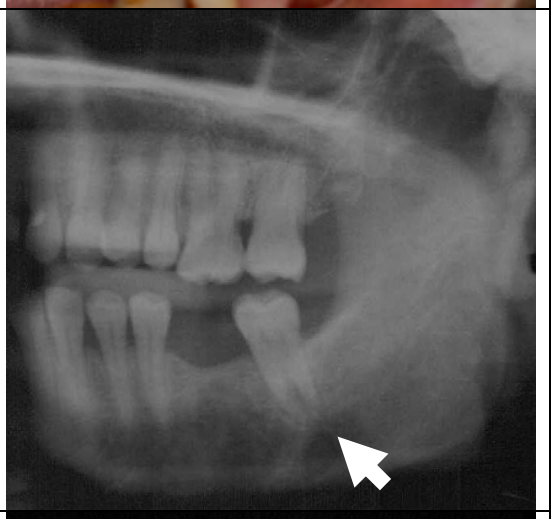
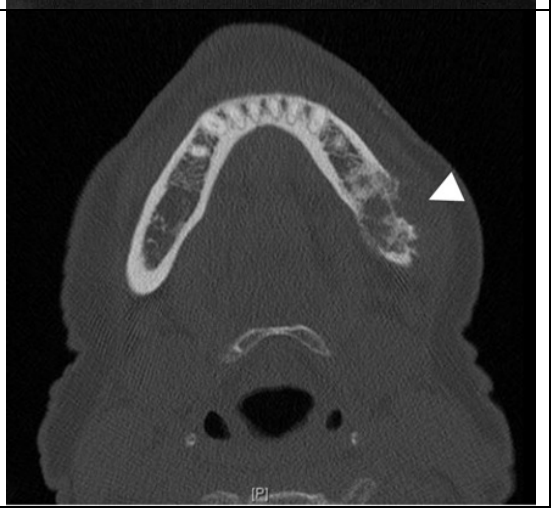
[X-ray Finding]：

1. Periapical radiograph that showed an ill-defined radiolucency between 35 and 37

[Medical & Medication History]：

1. Hypoactive thyroid(甲狀腺機能減退), arthritis(關節炎) and anxiety
2. Propanolol, thyroxine, carbimazole, felodipine, diazepam, vitamins and senna tablets
3. Chest X-ray was normal
4. No symptoms in any other part of the body

[Clinical Examination]：

There was facial asymmetry caused by a tender, hard-fixed swelling of approximately 2 x 3 cm, which was present in the area of the left body of the mandible.	
All teeth present were vital, and none were tender to percussion or mobile. There was a palpable expansion in the left buccal sulcus extending from 37 to 35	
Panoramic radiograph showing a poorly defined radiolucency centred on the left body of the mandible.The occlusal view showed buccal and lingual bony expansion.	
Computerised tomography (CT) scanning of the area showed a permeative lesion affecting the left mandible and variably breaching the cortices at the level of the lower molar teeth but not related to any roots. The lesion measured approximately 3.2 cm in length x 1.7 cm combined with a component of soft tissue swelling adjoining the area.	

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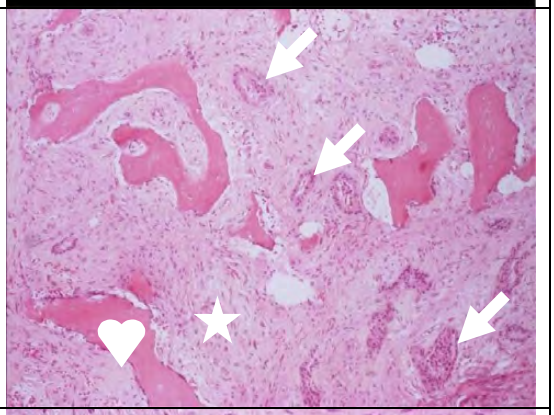
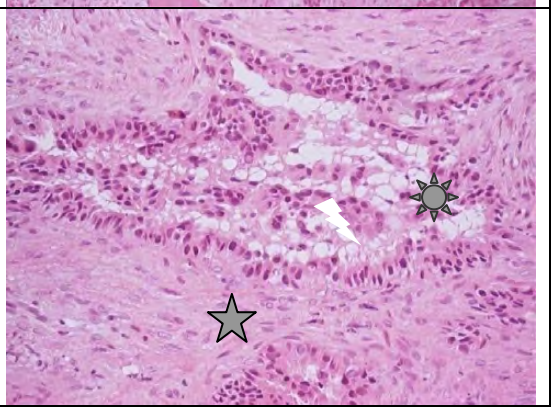
<tr><td rowspan="2">Obtained sections showed trabecular bone with foci of neo-ossification, which was variously invaded/destroyed by a non-enacapsulated tumour. The tumour showed epithelial cords and non-rigid tubules set in variously cellular/fibrous stroma. The tubules showed variable microcystic change, intraluminal tufts/micropapillary projections and occasionally contained amorphous eosinophilic material. The tumour cells were cuboidal or polygonal with indistinct boundaries, eosinophilic cytoplasm and densely or lightly staining nuclei. Production of mucin was not obvious. There was moderate cellular pleomorphism/ atypia; mitotic activity was inconspicuous, and necrosis was not seen</td><td>  </td></tr>
<tr><td>  </td></tr>
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The histological appearances indicated metastatic papillary carcinoma. A step-by-step immunohistochemical investigation (Table 1) was undertaken in an attempt to establish the site of the primary. The results summarised in Table 2 and illustrated in Figures 2C-2I suggested a diagnosis of metastatic ovarian carcinoma.

Table 1 Description of antibodies

Antibody clone	Specificity	Pretreatment	Dilution	Source
1D5	Oestrogen receptor α	Heat-induced epitope retrieval, high pH, EDTA buffer at pH 9.0	1:200	Dako†
PgR 636	Progesterone receptor	»	1:200	Dako
LL002	Cytokeratin (CK) 14	»	1:100	Leica‡
OV-TL 12/30	CK7	»	1:500	Dako
Ks20.8	CK20	»	1:100	Dako
Polyclonal	Carcinoembryonic antigen	»	1:5000	Dako
8G7G3/1	Thyroid transcription factor 1)	»	1:100	Dako
M11	CA-125	»	1:100	Dako
DO-7	p53	»	1:200	Dako
6F-H2	Wilms' tumour 1 Protein	»	1:50	Dako

Table 2 Immunoreactivities of tumour cells

Marker	Tumour cells
Oestrogen receptor	–
Progesterone receptor	–
CK14	–
CK7	+
CK20	–
CEA	+/–
TTF-1	–
CA-125	+/–
p53	<20%
WT-1	–/+

乳癌

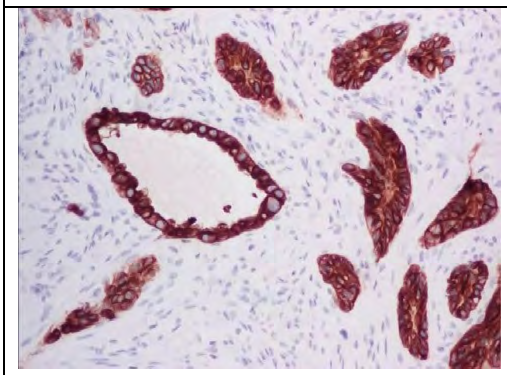
卵巢癌

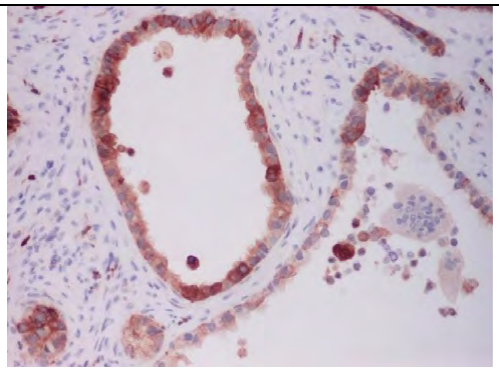
大腸癌

黏液性卵巢癌、子宮頸癌

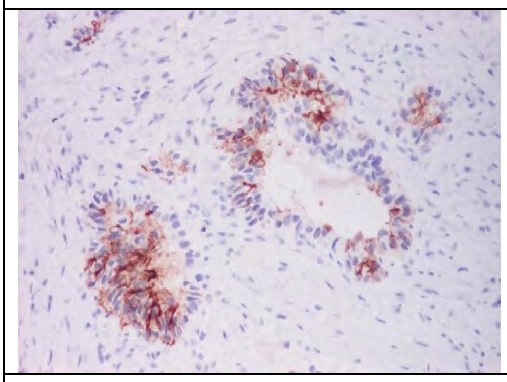
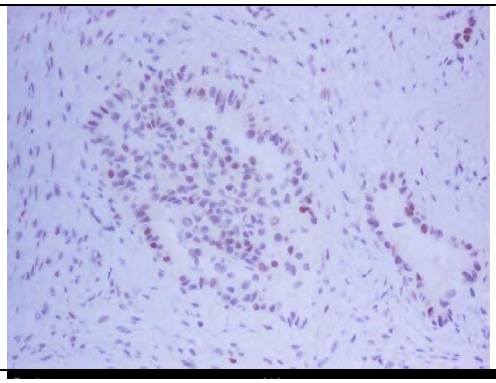
卵巢癌

-/+ The tumour cells are occasionally/focally positive.





cytokeratin 7 is strongly expressed in

the cytoplasm of the tumour cells	
	
There is omental caking anteriorly in the abdomen as well as enhancement of the peritoneum and moderate ascites in the upper abdomen. In the left side of the pelvis there is enhancing soft tissue anterior to the uterus which measures 4 x 4 cm in cross section (image 106). I think this is likely to represent a gynae malignancy and is probably the site of the primary tumour.With the ascites and omental caking I think this is likely to be an ovarian primary	**CT** 

[Histological Diagnosis]：

Stage IV ovarian carcinoma

[Treatment]：

Palliative care(安寧治療)

Discussion

1. The step-by-step immunohistochemical approach applied narrowed down the possible sites.
2. Breast, which for women heads the list of malignancies that metastasize to jaws, was first considered and excluded on the basis of absence of hormone receptors and cytokeratin (CK) 14.
3. The lack of thyroid transcription factor 1 immunoreactivity did not support a thyroid or lung primary
4. CK7 and CK20 profile inconsistent with colorectal carcinoma.
5. Serous ovarian carcinomas are regarded as usually CEA negative and diffusely WT-1 positive, which contrasts with our findings
6. WT-1 expression appears therefore a distinctive feature of our case, supporting the suggested diagnosis of ovarian carcinoma.
7. The location of the present lesion in the molar area of the mandible corresponds to

the preferential site of metastases to the jaw bones. Such preference may reflect a microenvironment of increased vascularity attributable to healing extraction sockets, focal subclinical chronic inflammation, which may occur with increased frequency in the jaws, and areas of preserved haemopoietic marrow.

8. For women with jaw metastases, apart from breast, common sites of the primary growth are the adrenal glands and genital tract, followed by colon/rectum, thyroid and kidney.

9. When the individual organs of the female genital tract are separately considered, it becomes obvious that jaw metastases of ovarian cancer are rare. Only 17 cases of jaw metastases from the female genital tract have been reported up to 2006, ovarian carcinoma accounting for two of them.

10. The presented case is considered atypical because of the rarity, hidden primary growth and particular histological/immunohistochemical features. It illustrates approaches related to diagnosis and management of oral metastasis, and re-emphasises the need for collaboration between clinicians and pathologists.

題號	題目
1	Which one is true? (A) Less than one half of breast carcinomas spread to one or more bones. (B) The prognosis for metastatic carcinoma of the jaws is well. (C) Metastatic carcinoma is the most common form of cancer involving bone. (D) More than 80% of metastases to the jaws have occurred in the maxilla.
答案(C)	出處：Oral and Maxillofacial PATHOLOGY 3rd Edition p.669~670

題號	題目
2	Which one is false? (A) Metastatic involvement of the jaws exhibits a wide variety of symptoms. (B) Osseous metastasis automatically places the patient in stage IV disease. (C) Most patients with metastatic carcinoma are children. (D) Metastatic deposits in the jaws usually appears as radiolucent defects.
答案(C)	出處：Oral and Maxillofacial PATHOLOGY 3rd Edition p.669~670