



下顎骨齒源性透明細胞癌
**Clear Cell Odontogenic Carcinoma
of Mandible**



中國醫藥大學附設醫院 口腔顎面外科

報告者—簡杏宜

指導者—陳百立醫師 薛水上醫師



Basic Data

Name : 葉賴XX

Gender : female

Age : 70 y/o

初診日期 : 2009.06.19

Chief complaint

- Referred from another hospital for evaluation of the mandible lesion.

Systemic disease : HTN under medical control



Present Illness

- 2002 Received enucleation surgery for the left mandible lesion at another hospital.
Pathologic report: **Ameloblastoma**
→ **Clear cell odontogenic carcinoma**

Without regular follow up

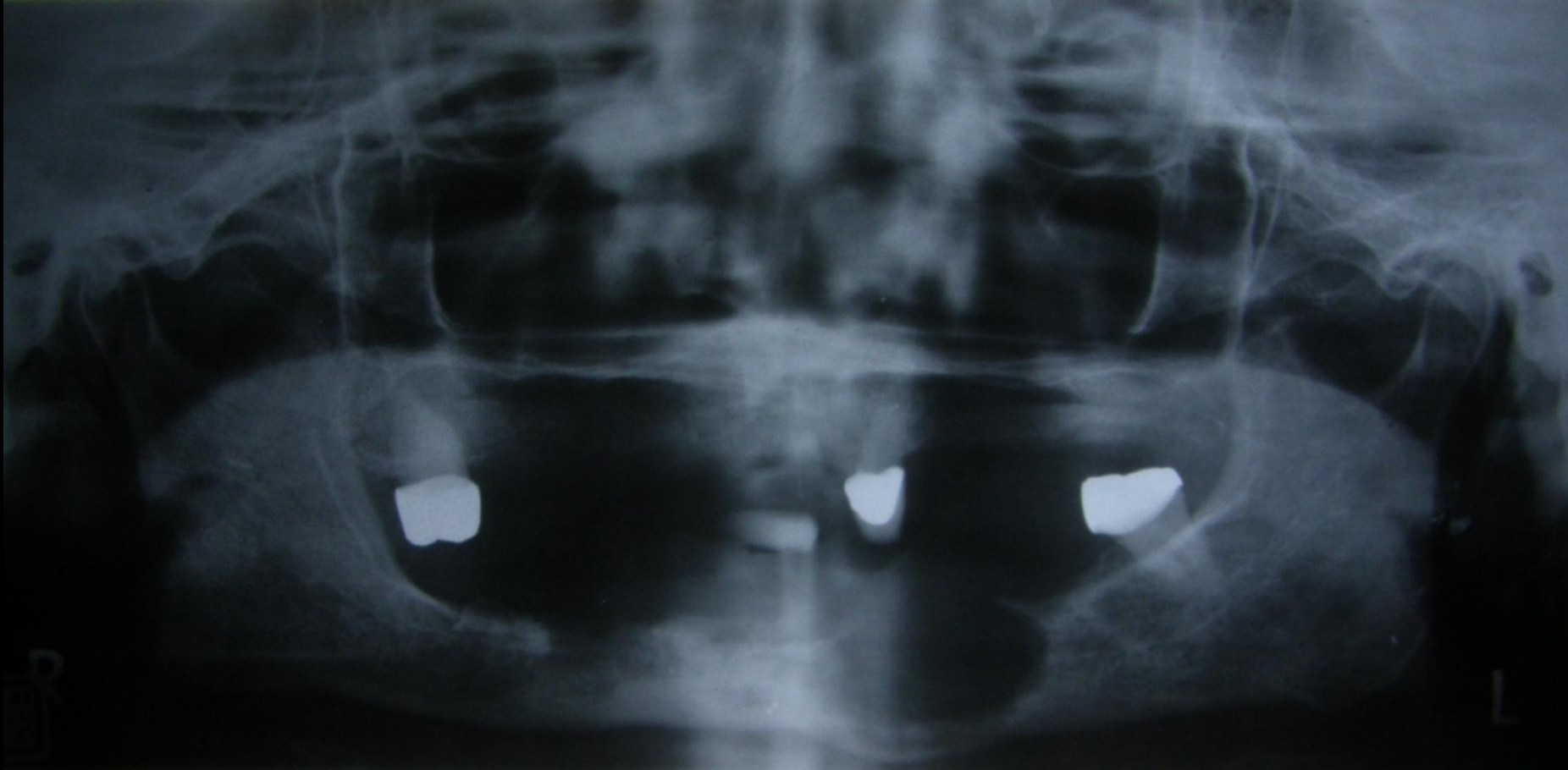
- 2009/05 Swelling at the same area

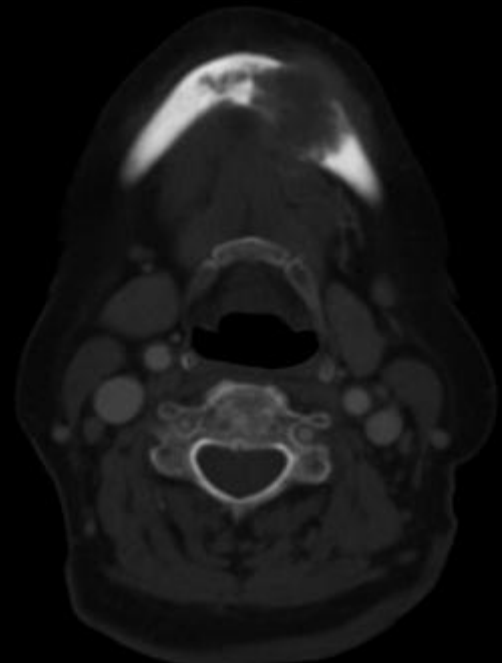
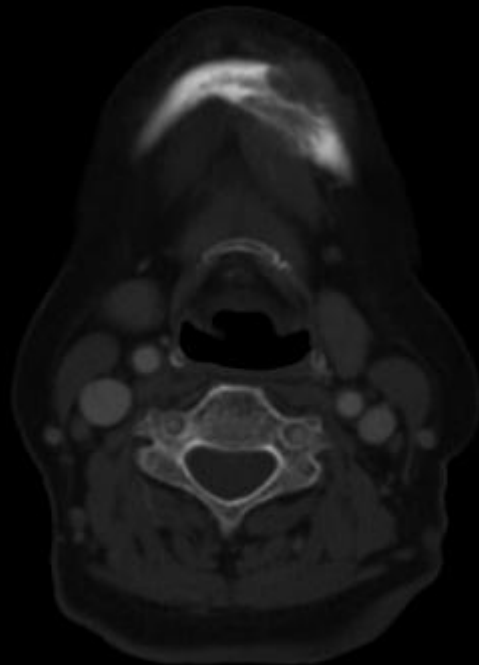
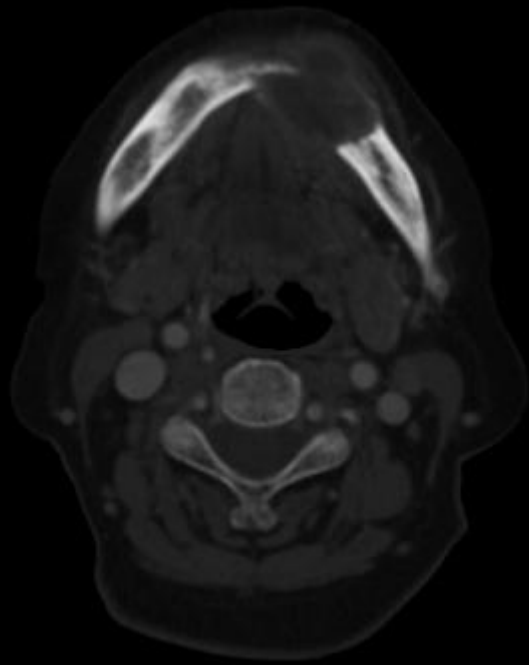
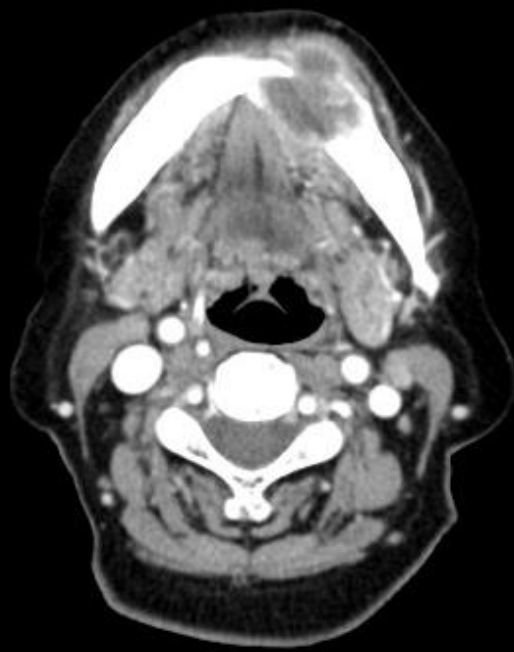
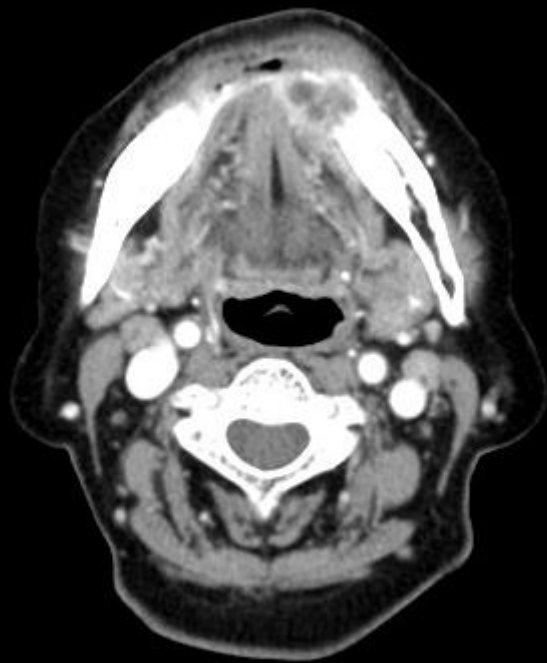
Physical Examination



2009/06/19

Radiographic Findings

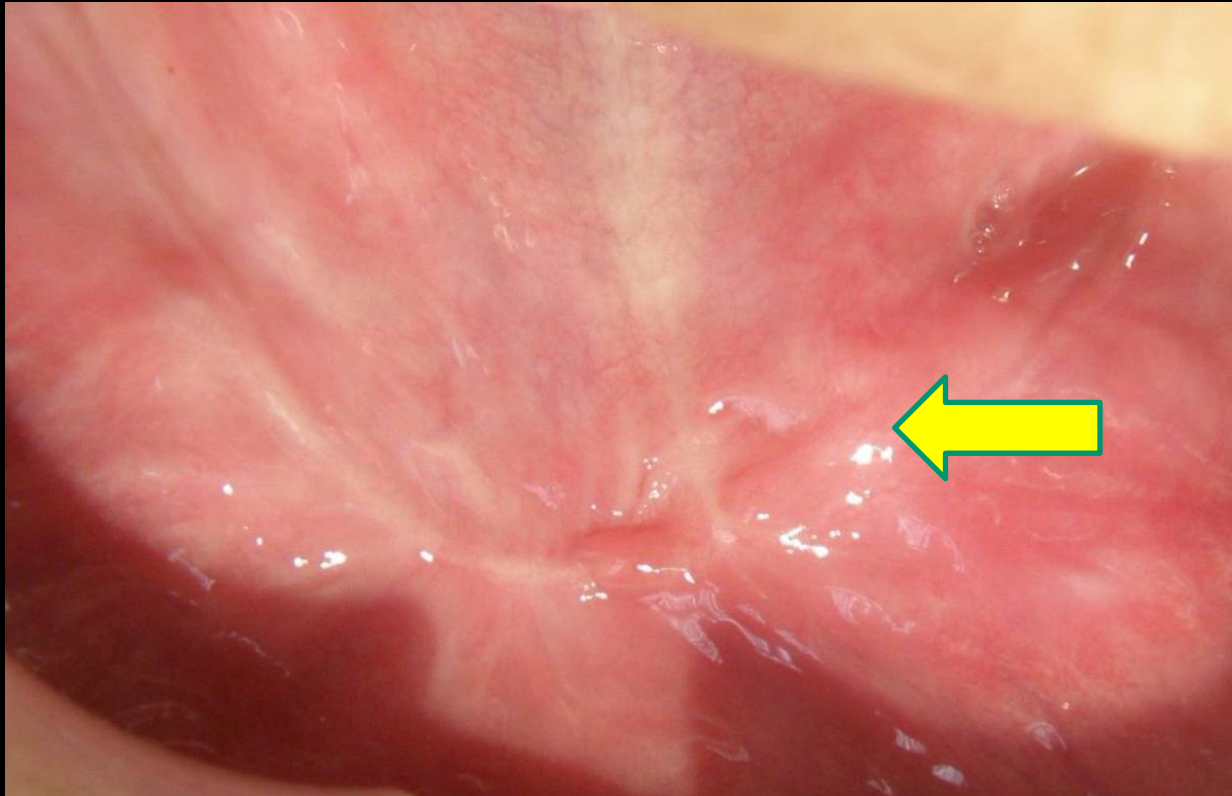




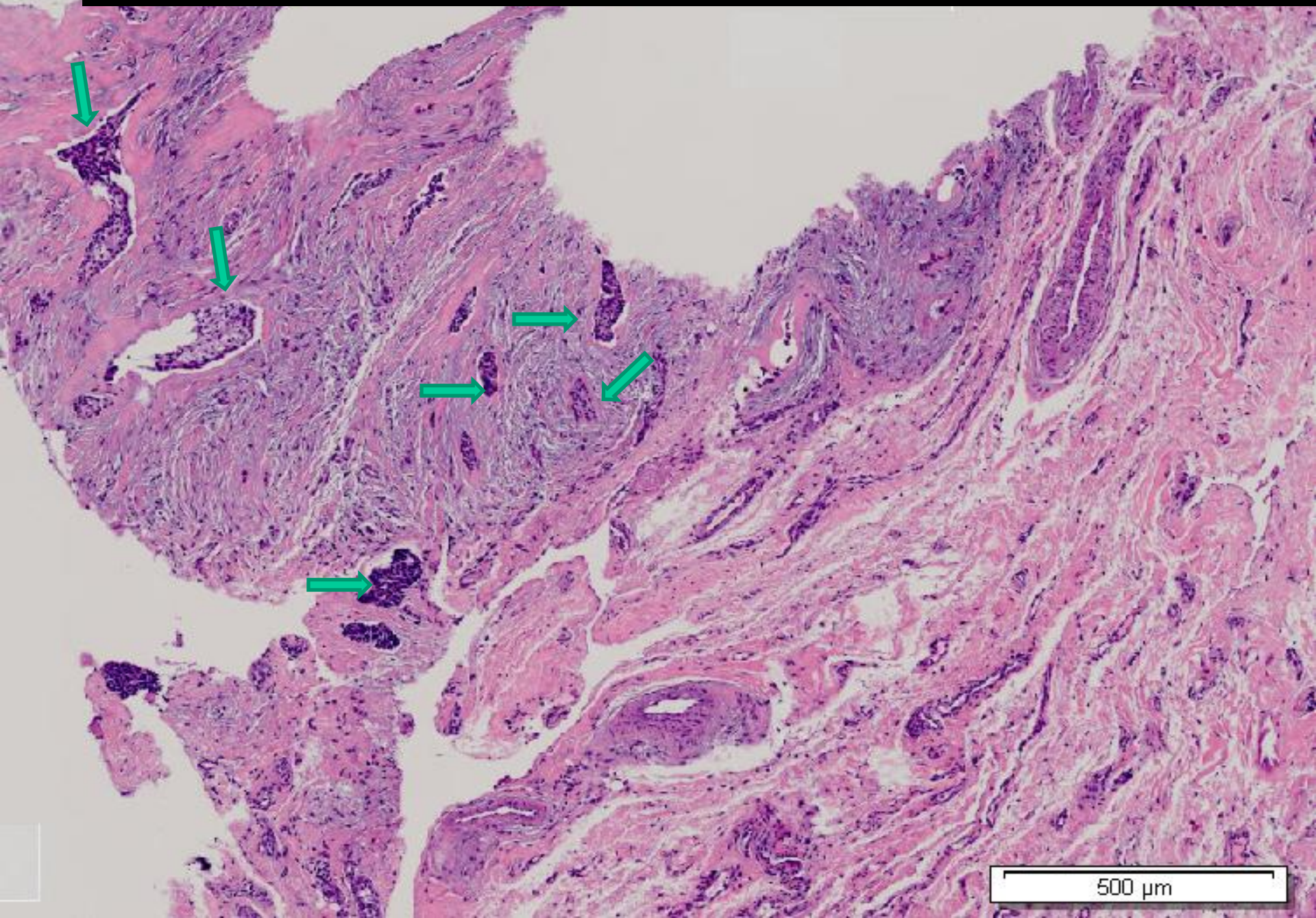




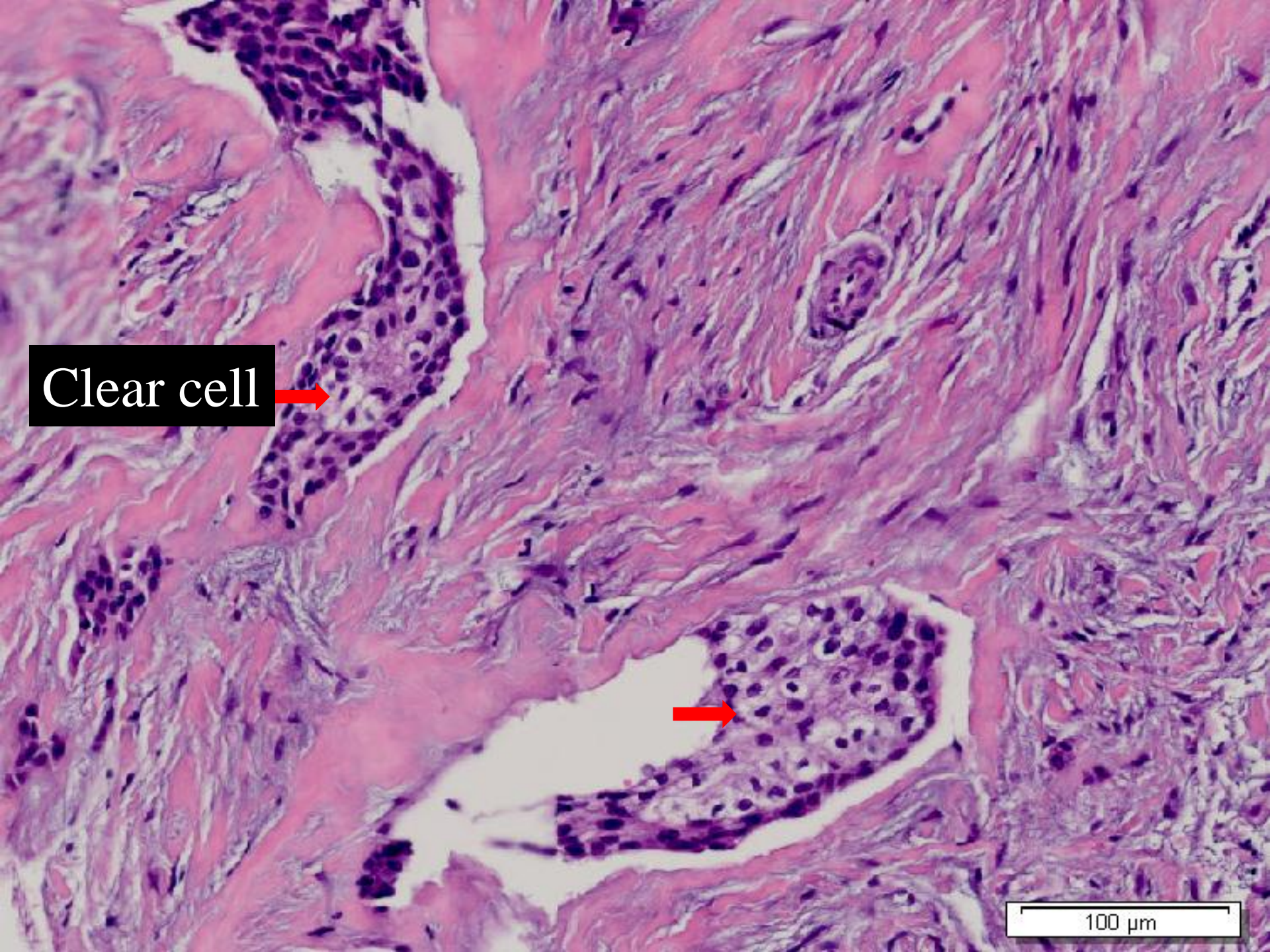
Incision Biopsy



Epitheloid tumor islands in the dense fibrous tissue



500 μ m

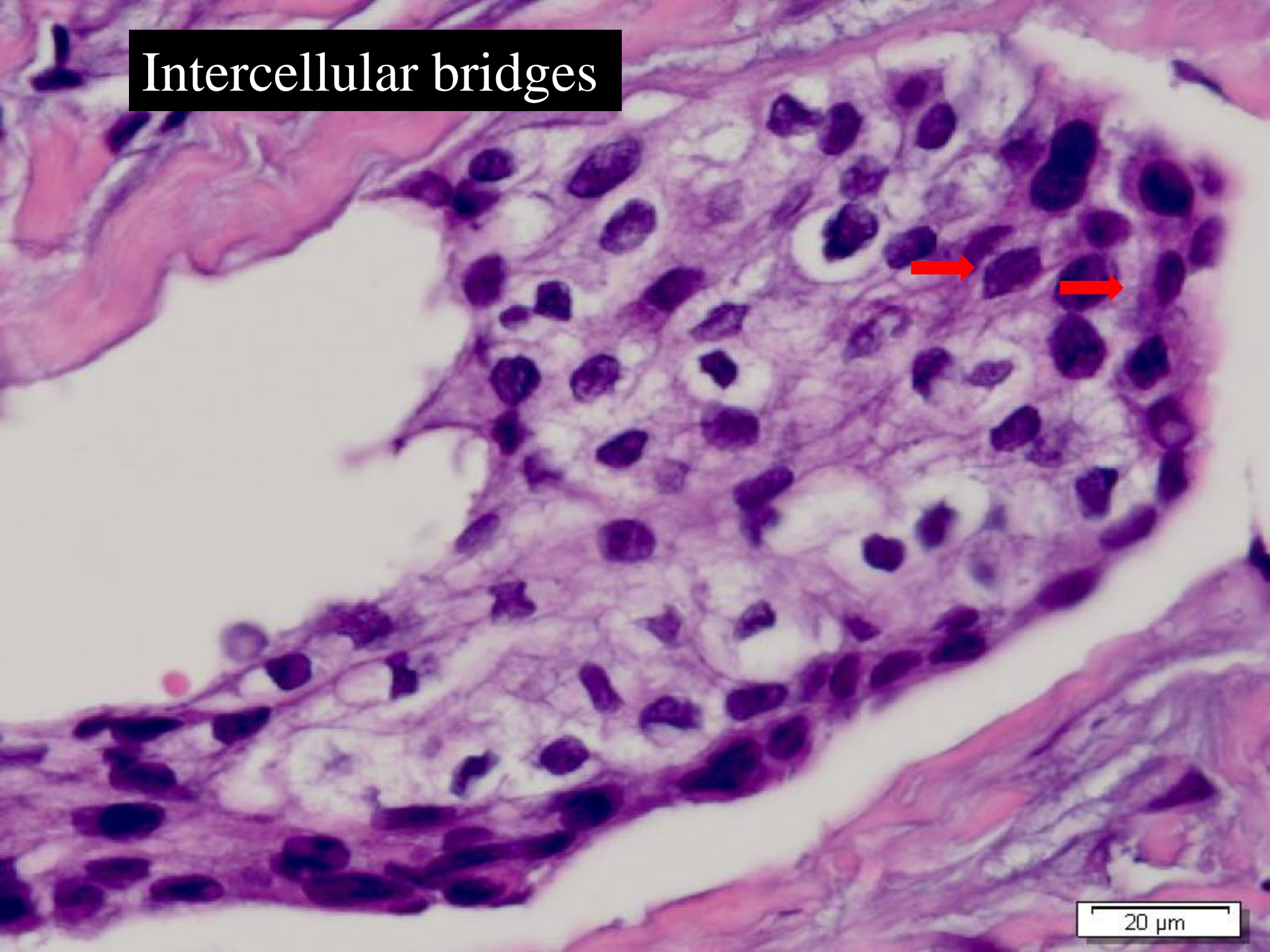


Clear cell

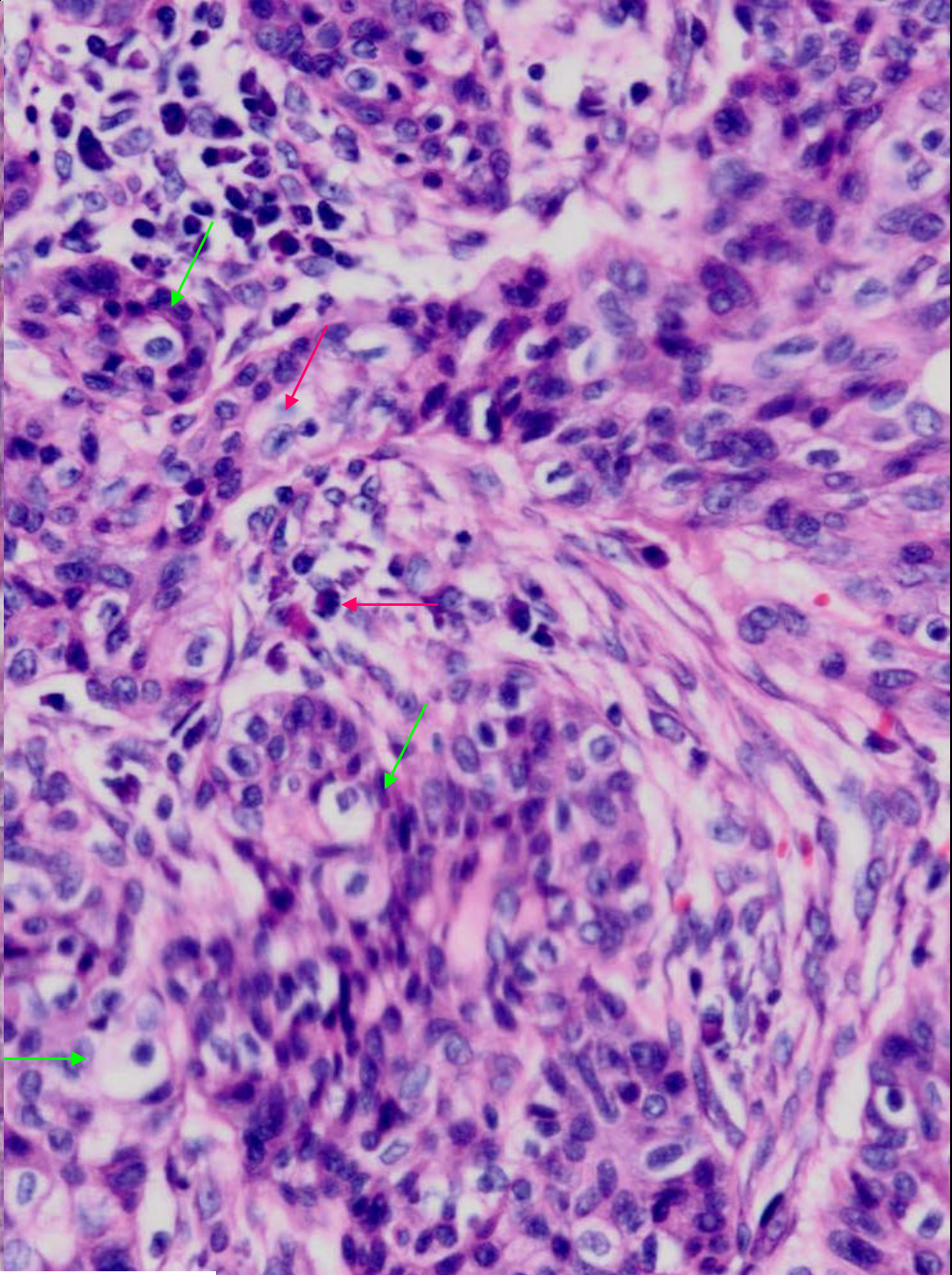
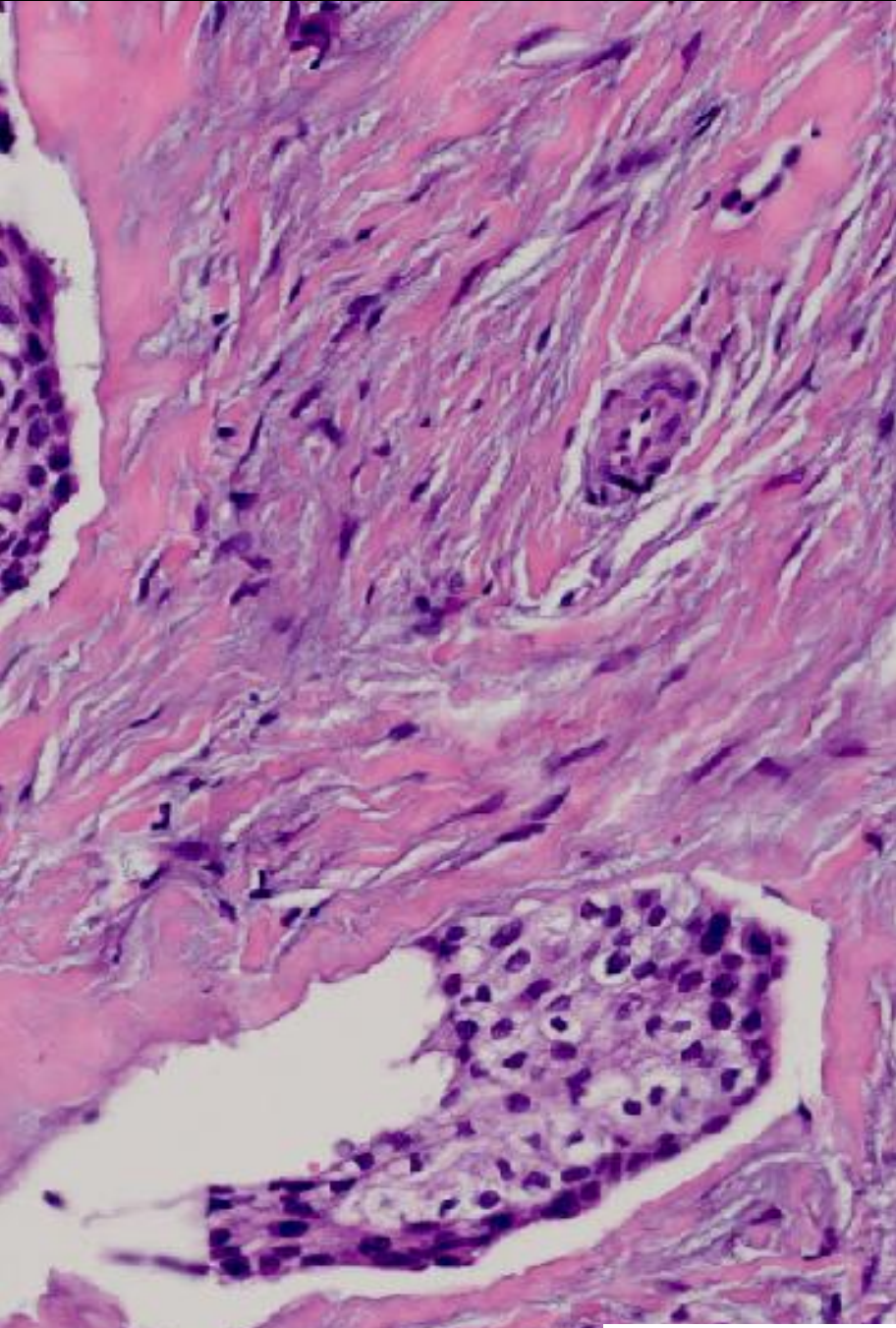


100 μ m

Intercellular bridges



20 μ m



2009 vs 2002

Workspace

YLYG
21103441

WB BONE
6/26/2009

MILLENNIUM MG

CHINA MEDICAL COLLEGE

F
71Y
20090626
140128

164cm



WHOLE BODY_E
14-10:17.0



WHOLE BODY_F
14-10:17.0



FACE L/R_E
14-21:32.0



FACE L/R_F
14-21:32.0

L:128 / W:236
Zoom:100 %

2009/06/26



Clinical impression: clear cell odontogenic carcinoma

- Treatment Plan

- Segmental mandibulectomy
(from left angle to right angle area)
- L't Neck dissection (SOHND)
- Reconstruction with ALT flap and reconstruction plate.

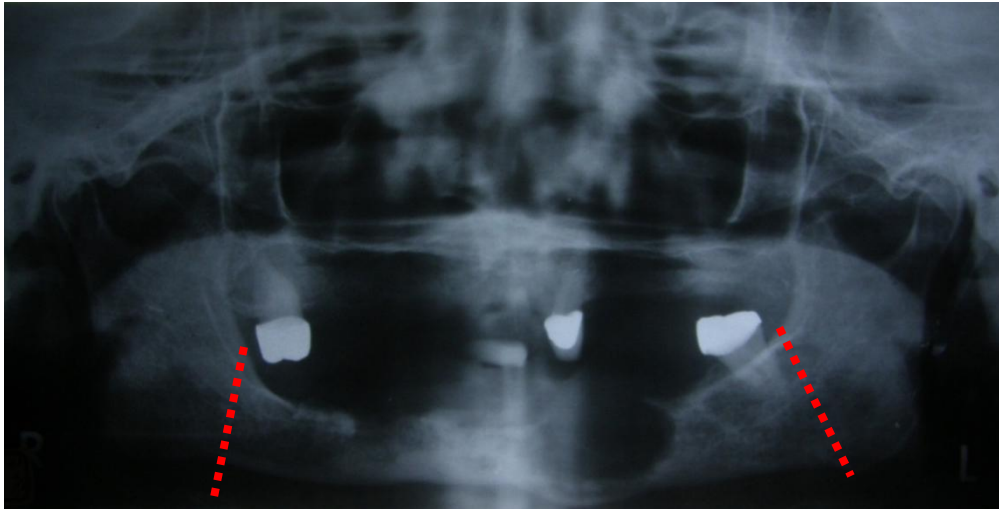
Surgical Procedure

Left neck supraomohyoid dissection

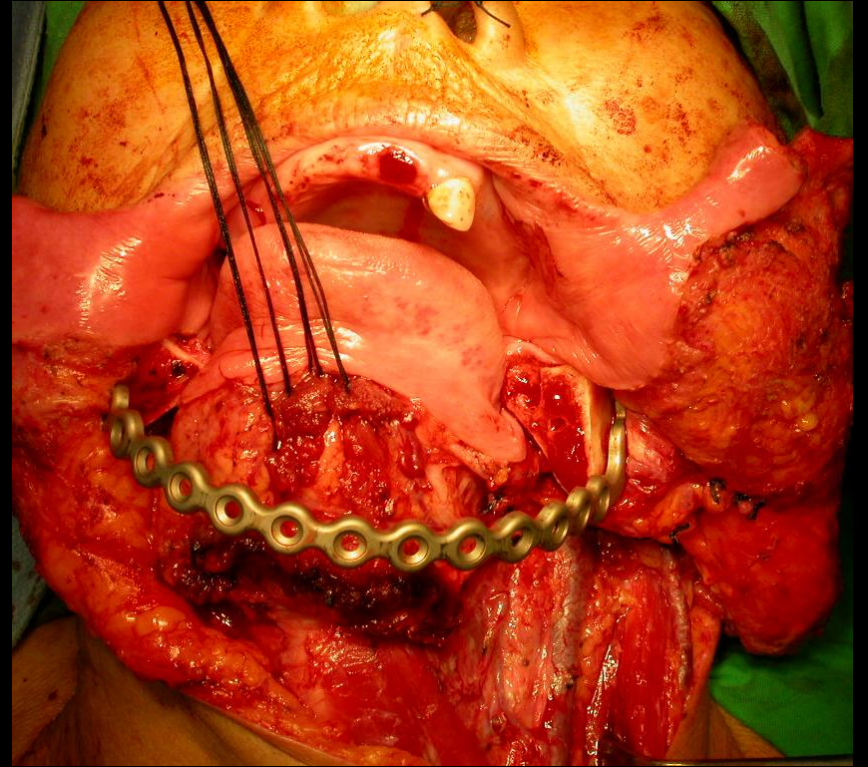
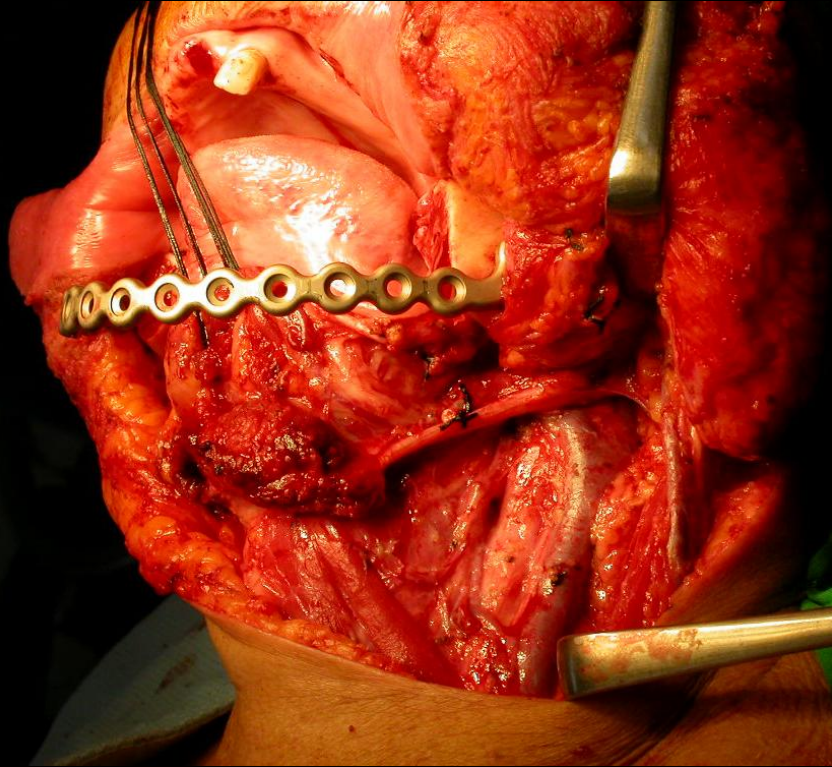


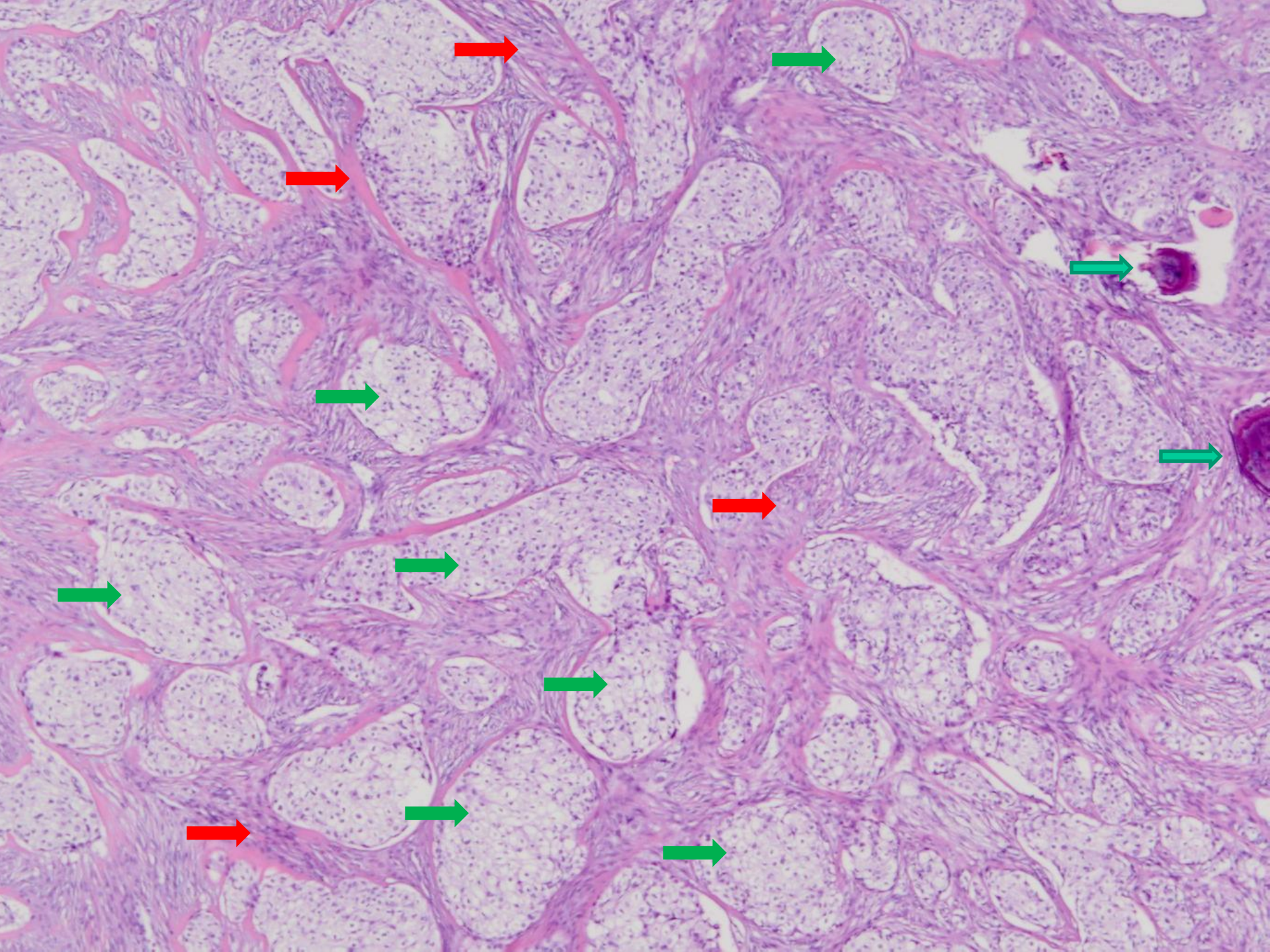
Through lip splitting approach

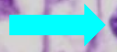
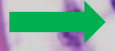
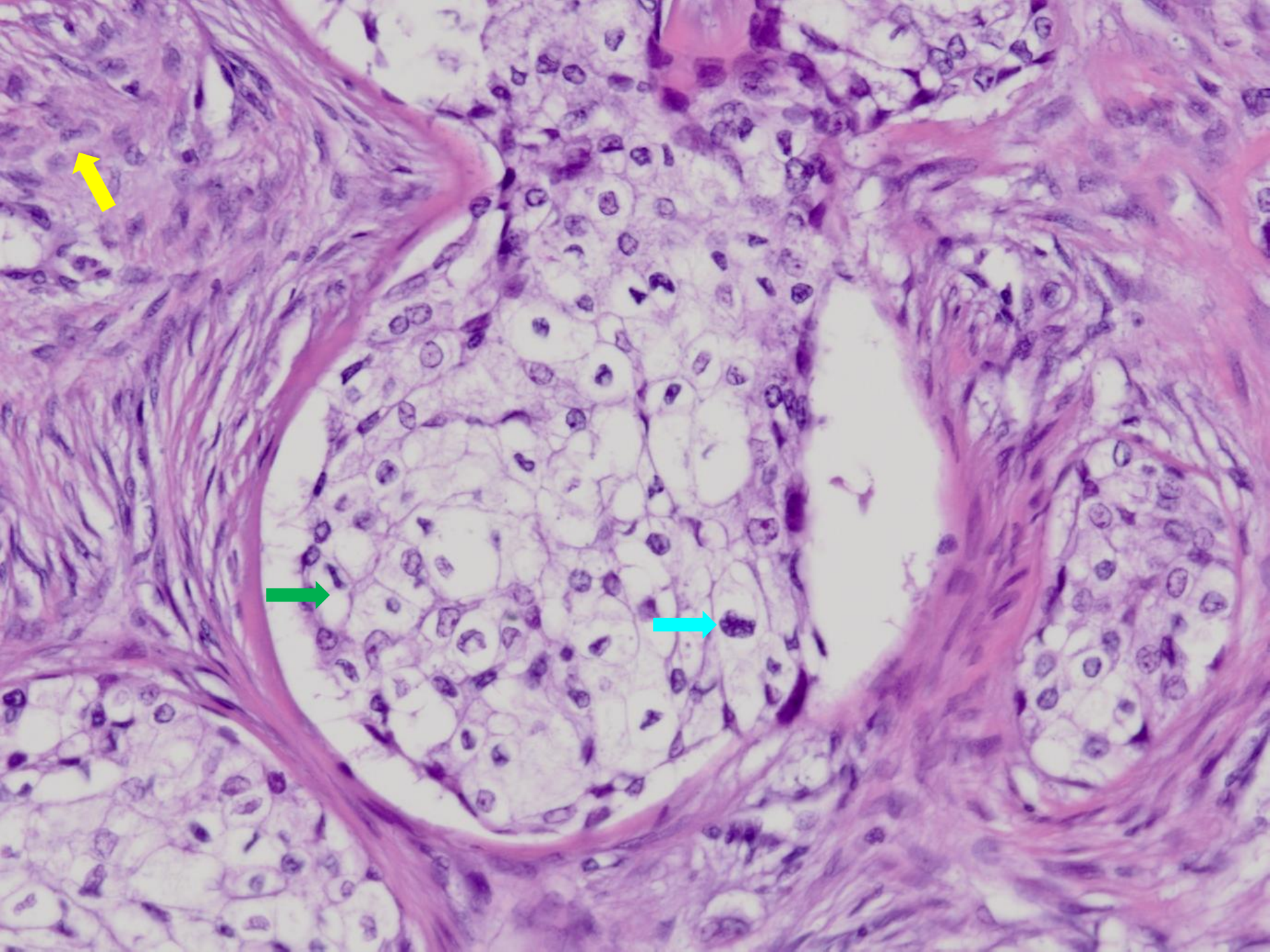
Composite resection of the main tumor with neck lymph adipose tissue in one piece.











Surgical Pathology

- ◆ Main tumor:
 - **Clear cell odontogenic carcinoma (CCOC)**
 - No definite lymphovascular permeation nor perineural invasion

- Surgical margin:
 1. soft tissue, peri-mandibular, left, wide excision, invaded by clear cell odontogenic carcinoma.
 2. **Mandible bone**, bilateral, wide excision, **free of tumor invasion.**



Surgical Pathology

- ◆ Neck lymph node:
 - Level I – negative for malignancy (0/5).
 - Level II – negative for malignancy (0/14).
 - Level III – negative for malignancy (0/2).

- ◆ Major salivary gland, submandibular, left, free of tumor invasion.



Treatment Course

2009/07/14 Admission

2009/07/15 Surgery

2009/07/15 ~ 2009/07/23 ICU care

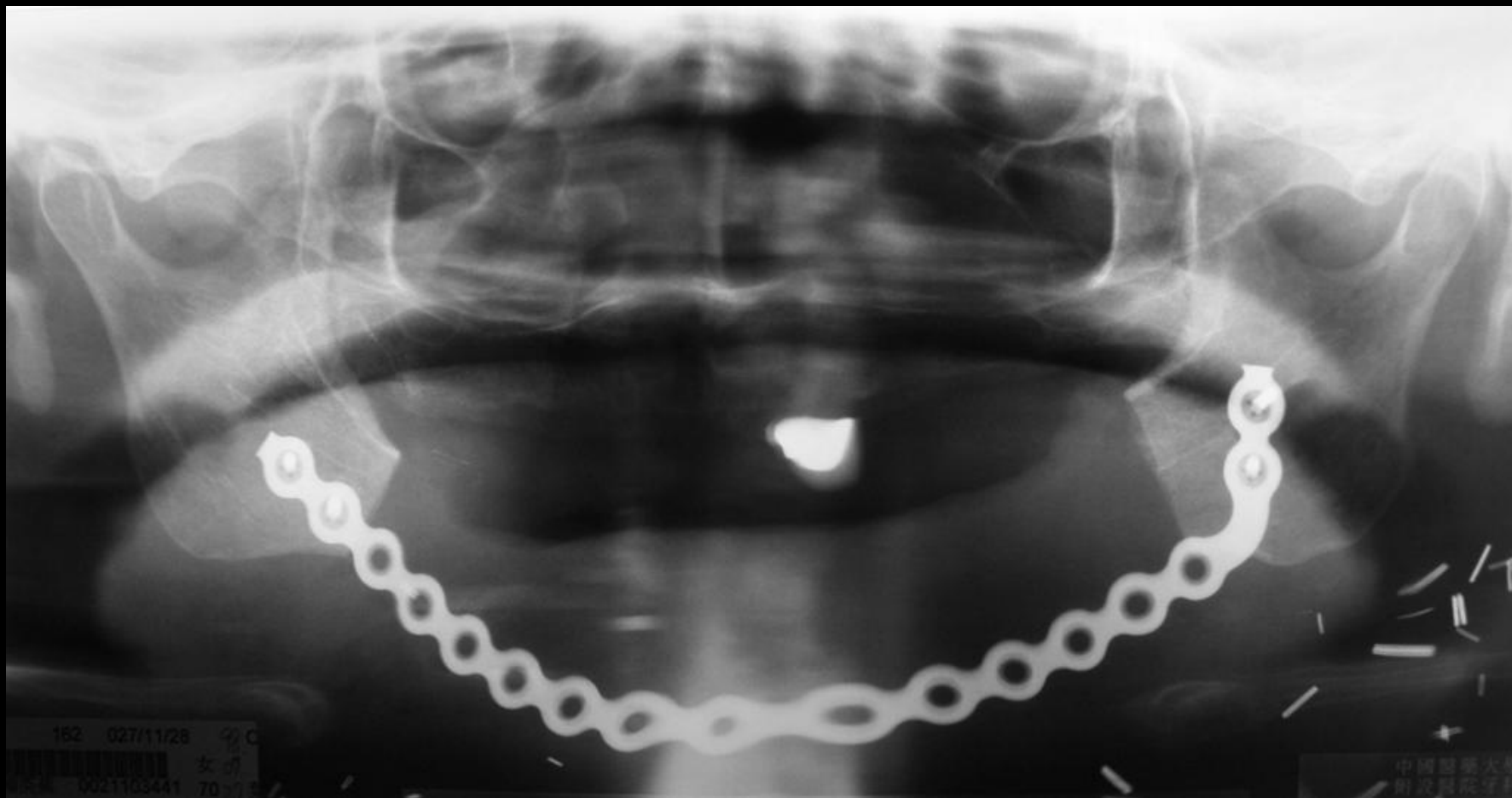
2009/07/29 Discharge

2009/08/28 ~ 2009/10/13

Started adjuvant radiotherapy

6 MV X-ray with IMRT technique

(TD:5940 cGy/33 fr)



Post-op 1 week

2009/07/27

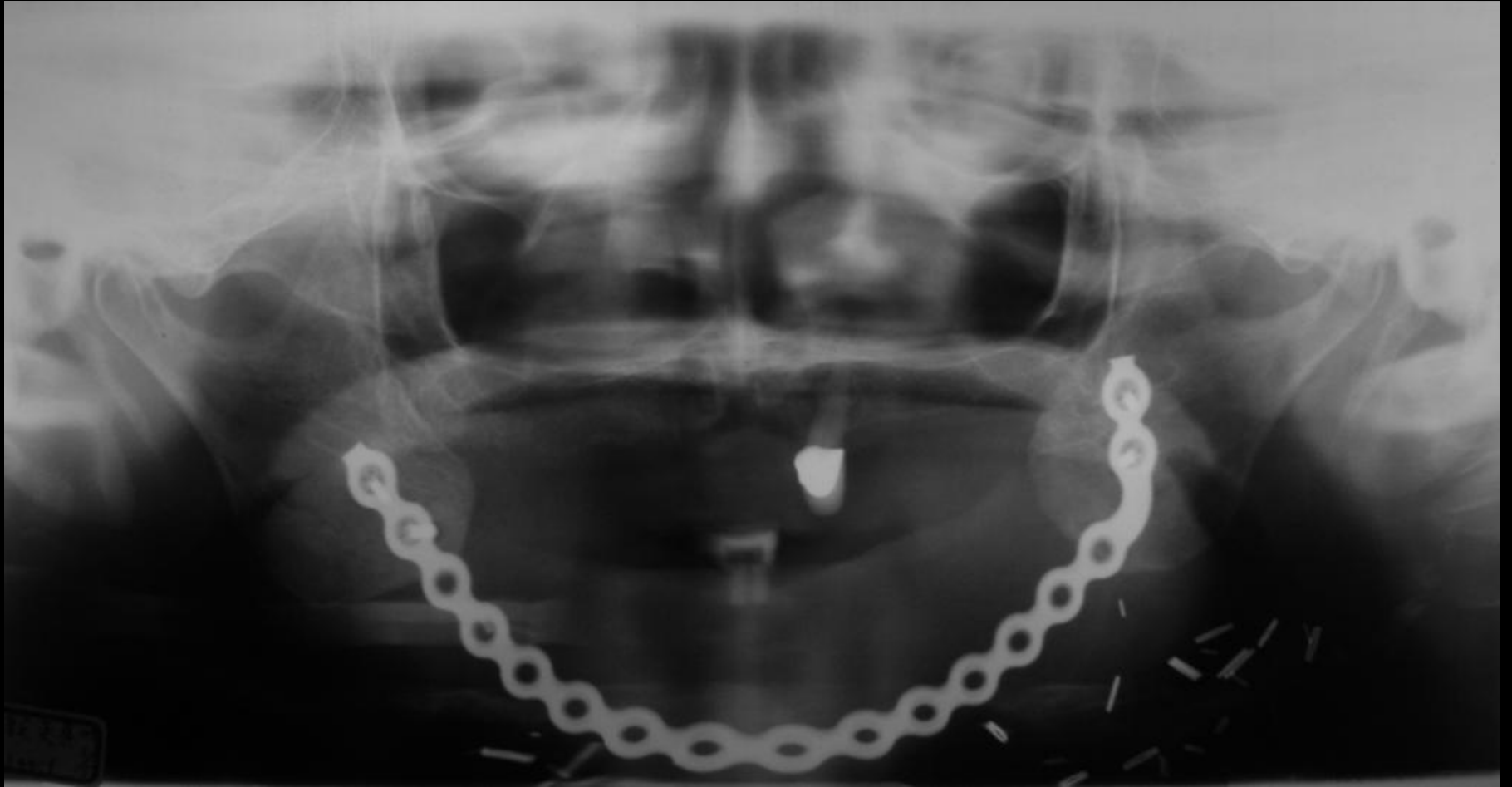


Post-op 2 months
2009/09/11



Post-op 2 months

2009/09/11



Post-op 8 months

2010/03/05



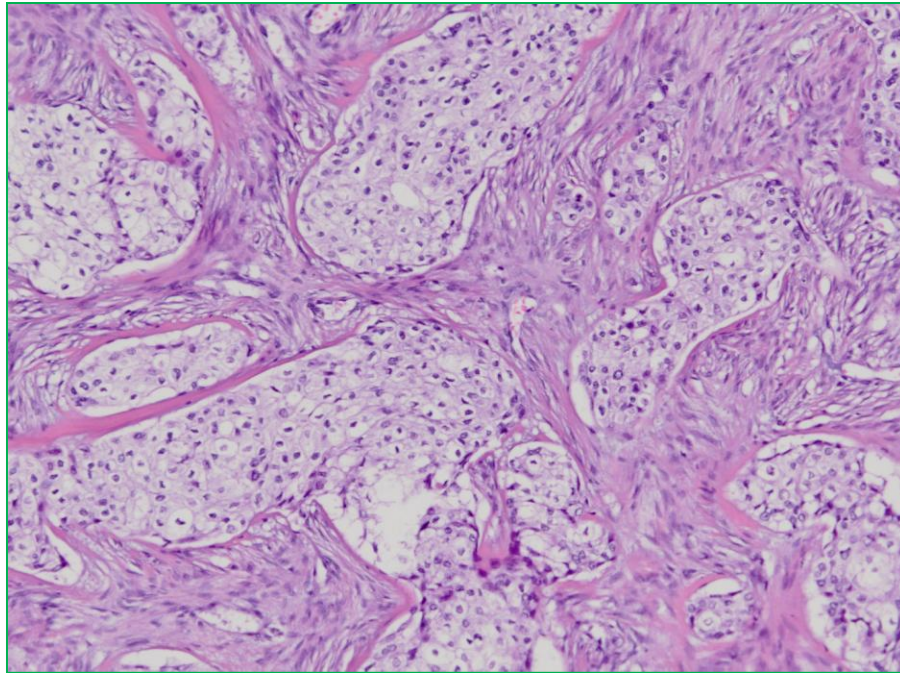
DISCUSSION 1

Clinical and Pathologic Characteristics

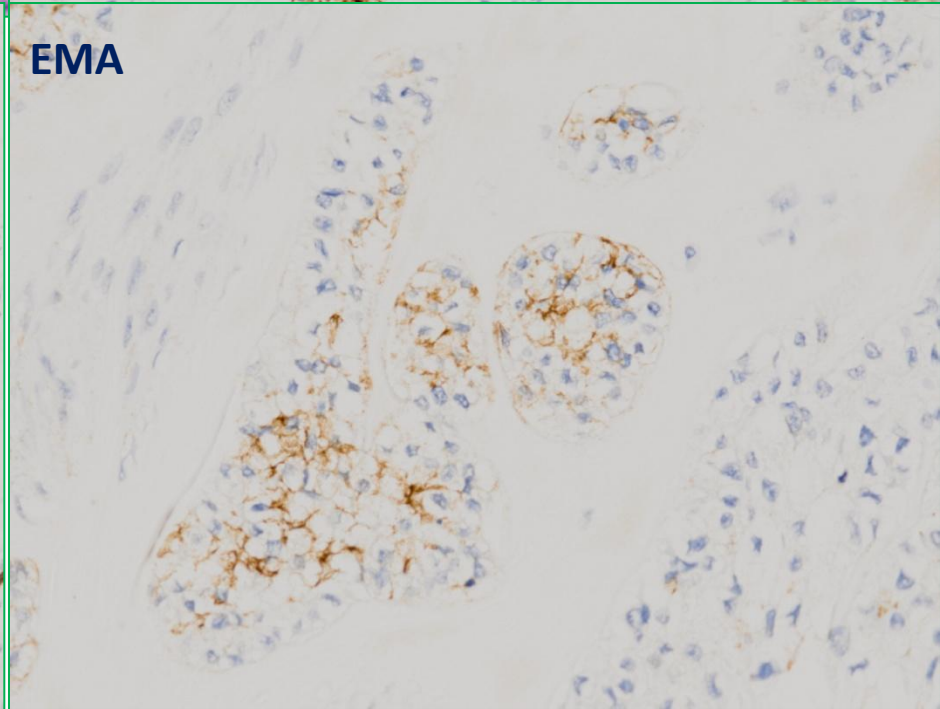
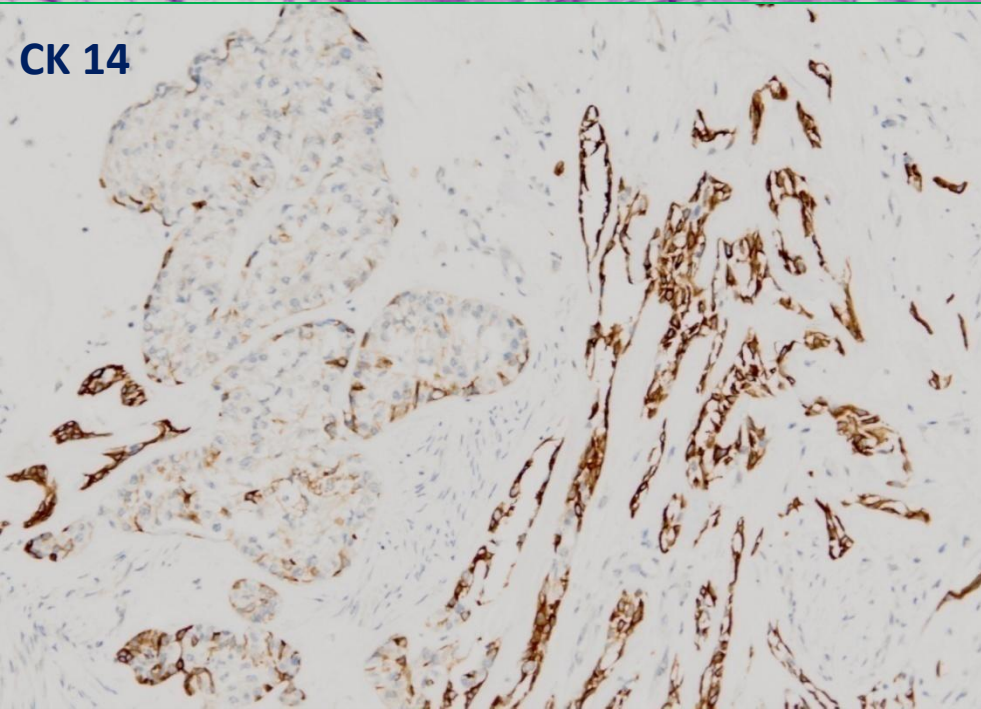
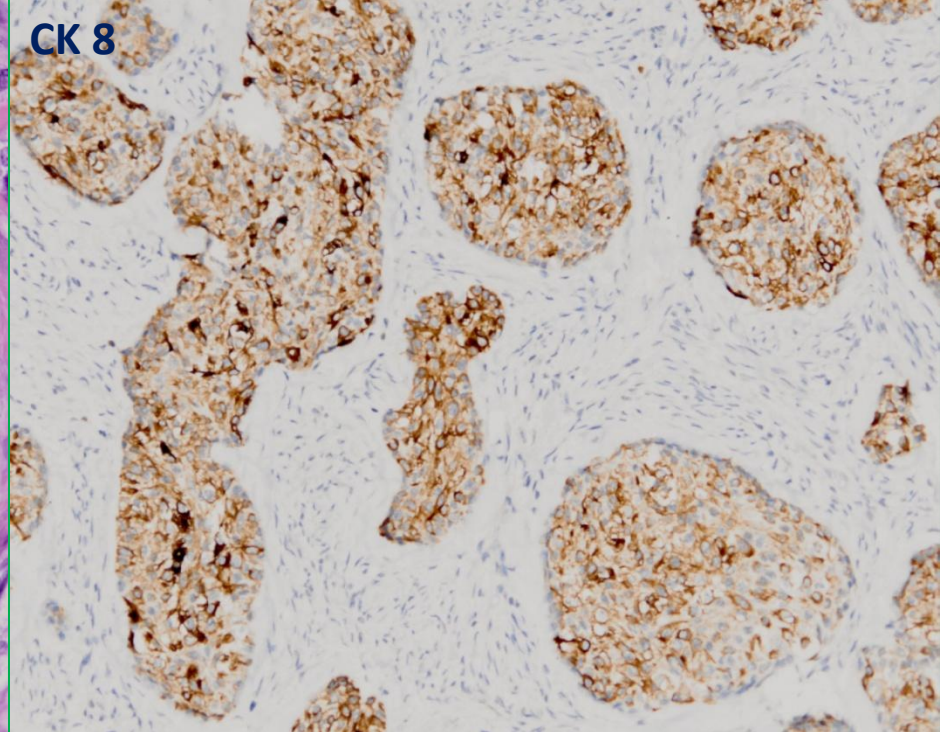
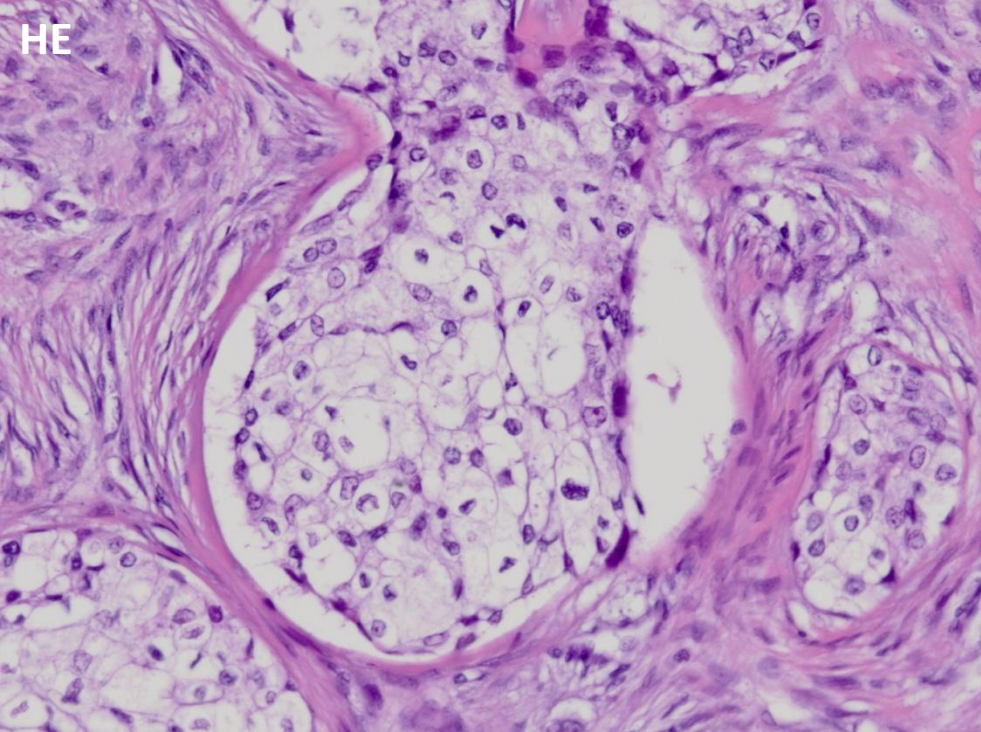
Clinical Characteristics

Characteristics	No. of patients (%)
Sex ratio	3:1 (Female)
Mean age	57.8
Site of lesion	
Mandible	36/43 (84)
Maxilla	7/43 (16)
Erosion of bone	40/40 (100)
Soft tissue involvement	15/25 (60)

Pathologic Pattern



- ✓ Composed of irregular sheets of neoplastic epithelial islands immersed in a richly cellular, collagenous stroma
- ✓ Tumor nests are almost entirely composed of clear cells



Findings	Cellular types involved	WHO classification of CCOC	Our Case
Cytokeratin	CK8: clear cells CK 14: eosinophilic cells	+	+
EMA	Clear, eosinophilic, duct-like structures	+	+
S-100	Dendritic cells	-	-
Vimentin	Stromal components	-	-
Mucin	Salivary gland tumors	-	-
PAS	Intracytoplasmic glycogen	+	-

Modified from: Werle et al. Clear-Cell Odontogenic Carcinoma. J Oral Maxillofac Surg 2009 ; Calo et al. CCOC:case report with immunohistochemical findings OSurgOMedO PathORadiolEndod 2008



DISCUSSION 2

Prognosis



Metastasis	No. of patients (%)
Overall	10/40 (25)
Distant	6/40 (15)
Outcomes	
Alive with no disease	26/36 (72)
Alive with disease	2/36 (6)
Dead of disease	6/36 (17)
Recurrent disease	21/38 (55)
Local only	12/38 (32)
Local and LNM	7/38 (18)
LNM	2/38 (5)

Initial treatment	Recurrence Rate	
Curettage/enucleation alone	8/10	(80)
Resection alone	11/23	(43)
Resection with LND	0/2	(0)
Resection with XRT	1/3	(33)
Resection, LND, and XRT	0/1	(0)
Chemotherapy alone	_____	

Treatment strategies

1. Surgical control of CCOC with **an en bloc resection** of bone and any soft tissue involvement decreases the risk of recurrence
 - The importance of free surgical margin
2. A **regional lymph node dissection** can be performed for staging and treatment of regional disease
3. With **adjuvant radiation therapy**
4. Long term surveillance



Thank you for your attention