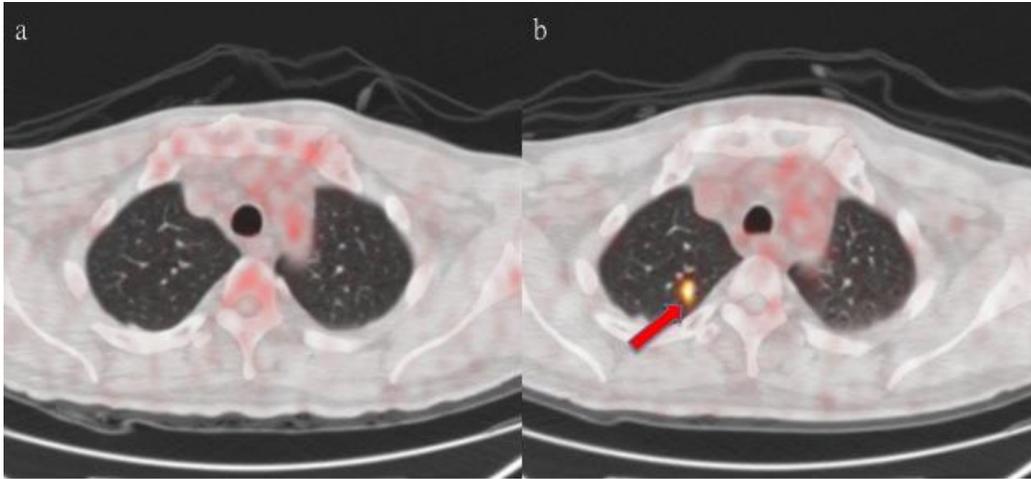


Supplemental Materials

Case No. 1



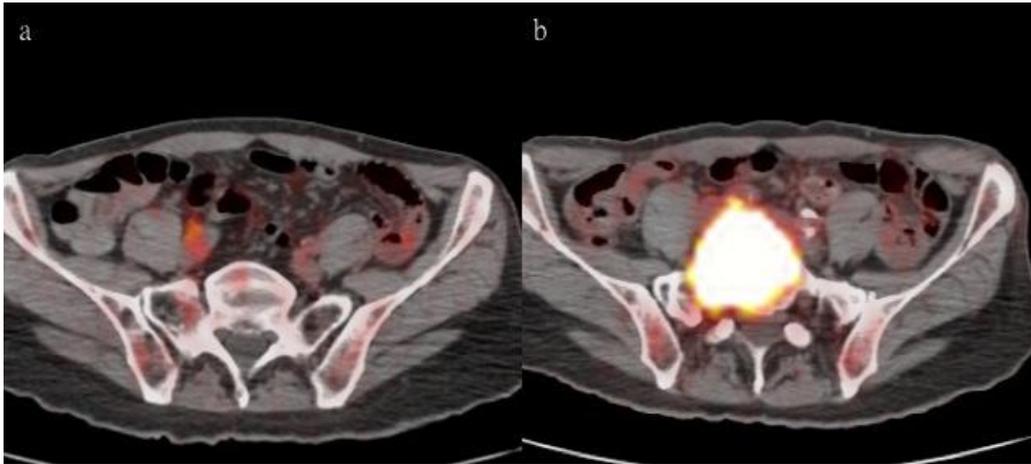
47-year-old male patient with left buccal cancer (pT4aN2bM0)

a) June 30, 2009. Second PET scan one month after surgery: score 0 (distant site)

b) November 13, 2009. Follow-up PET imaging performed at 3 months after CCRT: score 4 (right upper lung)

The right upper lung nodule was proven to be metastatic SCC by means of CT-guided biopsy.

Case No. 2

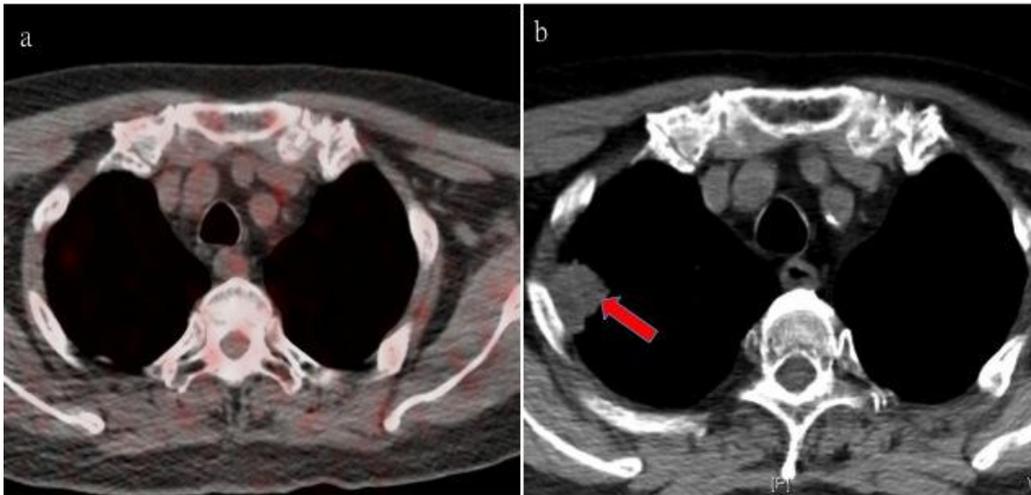


66-year-old male patient with left buccal cancer (pT3N2bM0)

- a) April 26, 2011. 2011/4/26 Second PET scan one month after surgery:
score 0 (distant site)
- b) September 30, 2011. Follow-up PET imaging performed at 3 months after
CCRT: score 4 (L5 spine)

The lesion located at the L5 spine level was proven to be metastatic SCC
by means of excisional biopsy.

Case No. 4

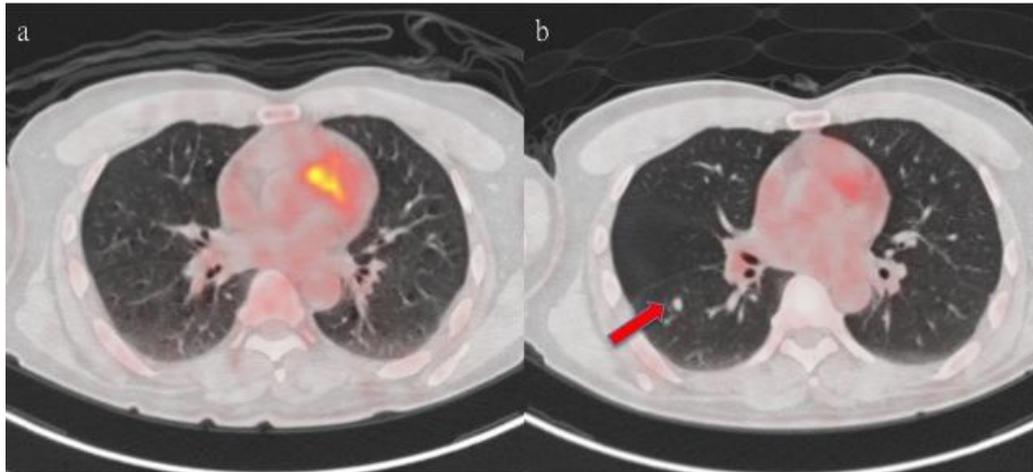


64-year-old male patient with left buccal cancer (pT4aN0M0)

- a) July 8, 2010. Second PET scan one month after surgery: score 0 (distant site)
- b) December 1, 2010. Follow-up CT imaging performed at another hospital at 3 months after CCRT: score 4 (right lung nodule with pleural attachment)

The right lung nodule was proven to be metastatic poorly differentiated carcinoma by means of core needle biopsy.

Case No. 5



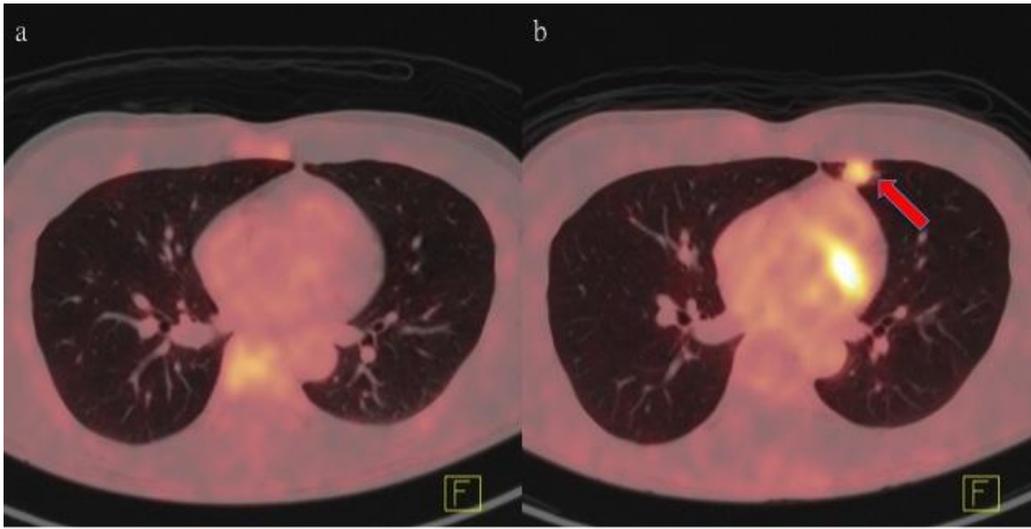
44-year-old male patient with left buccal cancer (pT2N1M0)

a) December 20, 2010. Second PET scan one month after surgery: score 0
(distant site)

b) April 28, 2011. Follow-up PET imaging performed at 3 months after RT:
score 3 (right lower lung small nodule)

The right lower lung nodule was proven to be metastatic SCC by means of
wedge resection.

Case No. 6

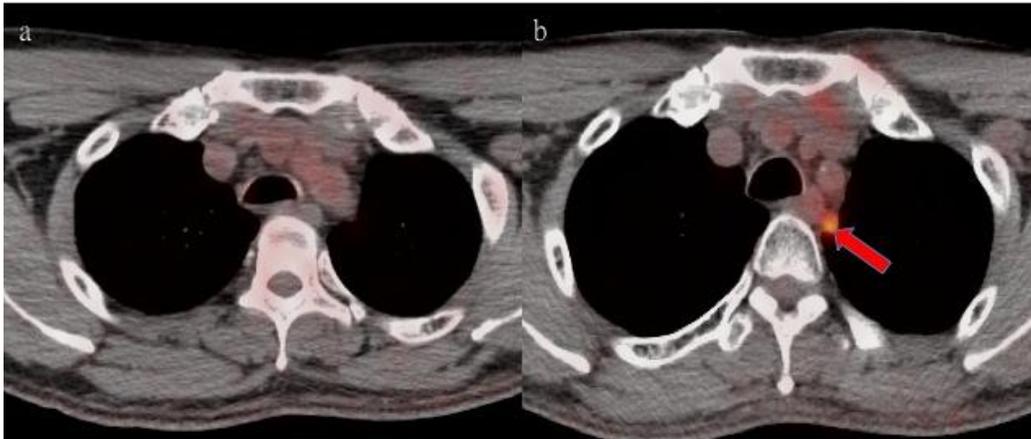


35-year-old male patient with right tongue cancer (pT2N2cM0)

- a) February 14, 2011. Second PET scan one month after surgery: score 0 (distant site)
- b) October 7, 2011. Follow-up PET imaging performed at 6 months after radiotherapy: score 4 (left lingual lung nodule)

The left lingual lung nodule was proven to be metastatic SCC by means of wedge resection.

Case No.7

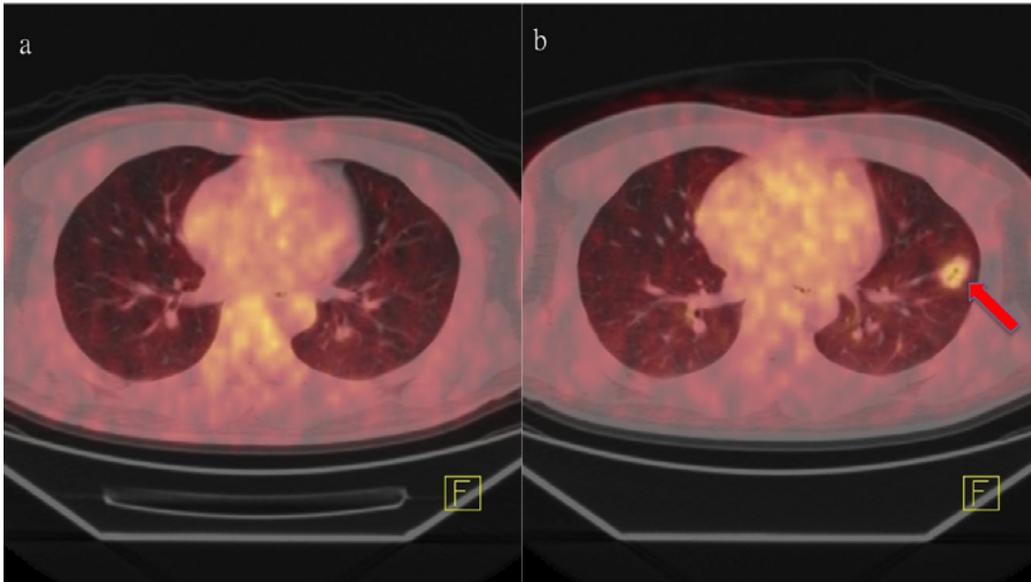


48-year-old male patient with left tongue cancer (pT2N2bM0)

- a) September 29, 2011. Second PET scan one month after surgery: score 0 (distant site)
- b) May 18, 2012. Follow-up PET imaging performed at 6 months after CCRT: score 4 (mediastinal lymph node)

The mediastinal lymph node was proven to be metastatic SCC by means of endoscopic ultrasound-guided fine-needle aspiration.

Case No. 8



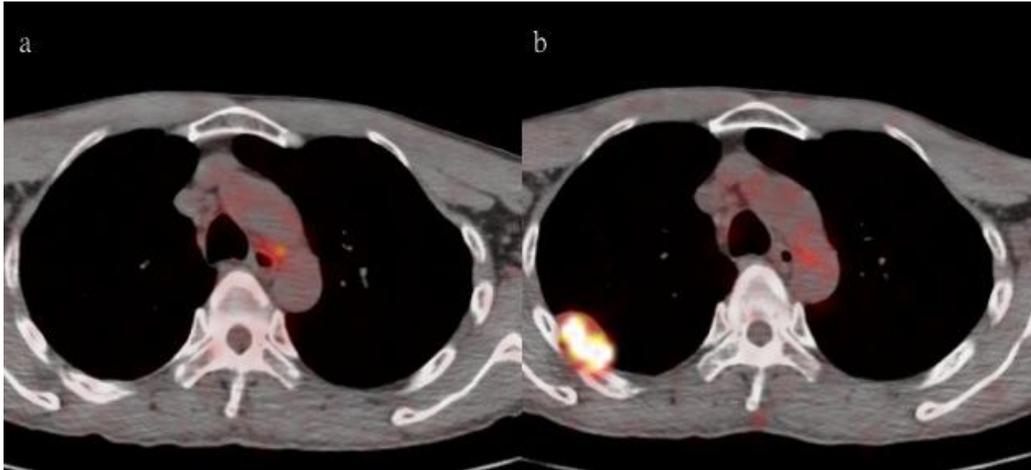
44-year-old male patient with right tongue cancer (pT1N1M0)

a) March 22, 2010. Second PET scan one month after surgery: score 0 (distant site)

b) August 9, 2010. Follow-up PET imaging performed at 3 months after CCRT: score 4 (left lung lobe cavitation)

The left lung lobe cavitation was proven to be metastatic SCC by means of CT-guided biopsy.

Case No. 10



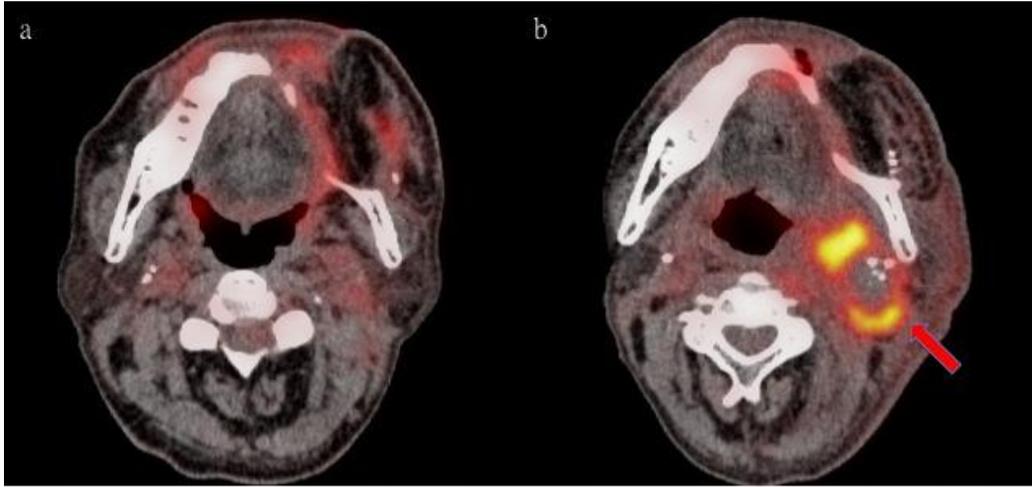
51-year-old male patient with right tongue cancer (pT2N2bM0)

a) August 9, 2011. Second PET scan one month after surgery: score 0 (distant site)

b) December 23, 2011. Follow-up PET imaging performed at 3 months after CCRT: score 4 (right upper lung pleural mass)

The right upper lung pleural mass was proven to be metastatic SCC by means of video-assisted thoracic surgery.

Case No. 11



63-year-old male patient with left tongue cancer (pT2N2bM0)

a) December 26, 2011. Second PET scan one month after surgery: score 1 (local lesion)

b) May 14, 2012. Follow-up PET imaging performed at 3 months after RT: score 4 (left level-II lymph node with central necrosis)

The patient refused both treatment and further examinations; he died on June 8, 2012.

SUPPLEMENTAL TABLE 1

Clinicopathologic Characteristics and Clinical Outcomes of the 15 OSCC Patients Experiencing Disease-Free Survival Events and who Showed Negative Findings on Pre-RT/CCRT PET/CT Imaging

| Case No. | Primary cancer site | Primary staging | Pre-RT/CCRT PET/CT score* | Events | Time to events (months) | Treatment modality for recurrent disease | Outcomes | Follow-up (months) |
|----------|---------------------|-----------------|---------------------------|-------------------------------------|-------------------------|---|----------|--------------------|
| 1 | Left bucca | pT4aN2bM0 | 1 (Local) | Lung (RUL) | 7 | Palliative CT | DOD | 13 |
| 2 | Left bucca | pT3N2bM0 | 1 (Local) | Bone (L5) | 7 | Palliative CT | DOD | 10 |
| 3 | left tongue | pT2N0M0 | 1 (Local) | LN (Left, level II, III) | 37 | Curative CCRT | NED | 38 |
| 4 | Left bucca | pT4aN0M0 | 1 (Local) | Lung (RUL) | 7 | Palliation | DOD | 7 |
| 5 | Left bucca | pT2N1M0 | 1 (Local) | Lung (RLL) | 6 | Palliative CT | DOD | 13 |
| 6 | Right tongue | pT2N2cM0 | 1 (Local) | Lung (LLL) | 9 | Palliative CT | DOD | 16 |
| 7 | left tongue | pT2N2bM0 | 1 (Local) | Mediastinum | 10 | Palliative CT | DOD | 19 |
| 8 | Right tongue | pT1N1M0 | 1 (Local) | Lung (LLL) | 6 | Palliative CT | DOD | 10 |
| 9 | Left bucca | pT4aN2bM0 | 1 (Local) | Lung (LUL) | 13 | Salvage surgery with lung wedge excision | NED | 41 |
| 10 | Right tongue | pT2N2bM0 | 1 (Local) | Right pleural | 6 | Palliative CT | DOD | 10 |
| 11 | Left tongue | pT2N2bM0 | 1 (Left, LN) | LN (Left, level II) | 6 | Patient refuse to treat | DOD | 7 |
| 12 | Left alveolar ridge | pT4aN0M0 | 1 (Local) | LN (Left, level I) | 12 | Curative CCRT | DOD | 21 |
| 13 | Left alveolar ridge | pT4aN0M0 | 1 (Local) | Local, LN (Left, level II) | 30 | Salvage surgery followed by adjuvant CCRT | NED | 43 |
| 14 | Right | pT4aN0M0 | 1 (Local) | 2 nd and 3 rd | 16 | Salvage surgery alone | DOD | 26 |

| retromolar trigone | | primary cancer** | | | (patient refuse adjuvant treatment) | | | |
|--------------------|-------------|------------------|-----------|-------|-------------------------------------|---|-----|----|
| 15 | Left tongue | pT1N0M0 | 1 (Local) | Local | 24 | Salvage surgery followed by adjuvant RT | NED | 27 |

*PET/CT visual score

**Died because of second and third primary cancers (left tongue and right tongue, synchronous tumor)

LN = lymph node; CT = chemotherapy; RT = radiotherapy; CCRT = concurrent chemoradiotherapy; NED = no evidence of disease; DOD = died of disease; RUL = right upper lobe; RLL = right lower lobe; LLL = left lower lobe; LUL = left upper lobe.