

Radiology Report  
05/15/2007

Two View Chest

Clinical Indication: Hypertension. Nicotine dependent. Dyspnea.

PA and lateral views of the chest are obtained. Lungs are hyperinflated consistent with COPD. Heart size is normal. Lungs are hyperinflated but free of confluent infiltrate. Strandy density at both lung bases suggests atelectasis/scarring.

Impression: COPD. No convincing evidence of acute pulmonary process.

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Radiology Report  
05/15/2007

CT Neck Soft Tissue

Clinical Indication: Soft tissue mass

Multiple helical images are obtained from the skull base to the thoracic inlet with the administration of 100 ccs of Omnipaque 300. There is a lobulated mixed density mass involving a large portion of the superficial portion of the parotid gland. This measures 4.2 x 3.2 cm in size and appears lateral to the parotid vessels. Differential considerations would include infection/abscess. There are several tiny calcific densities in what appears to be a slightly dilated Stensen's duct. Primary neoplasm would also be a consideration including a pleomorphic adenoma and a Wharton's gland tumor. Given the asymmetry, this would be an unusual presentation for mumps. Overall, I would favor sialadenitis with associated abscess. No evidence of adenopathy. Lung apices are clear. The remainder of the salivary glands are unremarkable.

Impression: 3.2 x 4.2 cm mixed density lesion associated with a superficial portion of the parotid gland with sialadenitis/abscess felt to be most likely. Please correlate with physical exam and clinical data.

Radiology Report  
05/30/2007

CT Head

Clinical History: Squamous cell carcinoma of the neck, preoperative for neck surgery

Technique: Axial images were obtained from base of skull through vertex, before and after IV administration of 50 cc of Omnipaque-350. No prior studies for comparison.

Findings: There is no intracranial hemorrhage. There are no masses or foci of abnormal enhancement. There is no evidence of infarct. CSF spaces are within normal limits. There are no osseous lesions. At the inferior margin of imaging, just inferior to the external auditory canal on the right, there is some abnormal amorphous soft tissue. Correlation with the neck CT of 05/15/2007 shows that this represents the superior extent of a large soft tissue mass centered in the parotid region. This visualized superior portion of the lesion does not appear significantly changed. Extracranial structures are otherwise unremarkable.

Impression:

1. No evidence of brain metastases or other intracranial abnormality.
2. Only the superior margin of the right parotid soft tissue mass is visualized. This does not appear significantly changed from the neck CT of 05/15/2007.

## Discharge Summary

Date of Admission: 06/06/2007

Date of Discharge: 06/11/2007

Reason for Admission: Squamous cell carcinoma of right parotid and right neck

Hospital Course: Patient is a 72-year-old retired RN who presented with a rapidly enlarging mass involving the right tail of parotid and superior right neck. Fine needle aspiration in my office revealed a squamous cell carcinoma. The patient had extensive preoperative testing, as well as a metastatic work-up and patient was cleared for surgery preoperatively. The patient was taken to the operating room on 6/6/2007 where she underwent a total right parotidectomy with right radical neck dissection. The patient tolerated the procedure quite well and was admitted to the ICU overnight. She had approximately 350 cc of blood loss and the inferior three branches of the right facial nerve as well as the spinal accessory nerve were sacrificed intraoperatively. Patient's pulmonary status remained stable postoperatively. She had a rather uneventful course. She was transported to the regular floor on the second postoperative day where she continued to advance her diet. She remained afebrile throughout the hospital stay. The drainage into the JP drains slowed and the first JP drain was removed on postop day three. The second drain was removed on the fourth postop day. Consultations with medical oncology and radiation oncology physicians were obtained and the patient was scheduled for follow-up radiation oncology appointment. Her final pathology was made available prior to discharge. This revealed a moderately differentiated squamous cell carcinoma measuring 7.5 cm in greatest dimension with vascular invasion. There were two of four lymph nodes containing carcinoma, as well as one of 8 superior lymph nodes. The admitting inferior lymph nodes were completely free of neoplasm. The report does state that the carcinoma extended to the posterior soft tissue margin, however, I did do further resection in this region, peeling the tumor off of the facial nerve trunk in the skull base and I feel that a complete en bloc resection was achieved. The patient was quite stable on the fifth postoperative day, tolerating diet well and afebrile. She was thus discharged on 06/11/2007.

Disposition: The patient is discharged on Keflex 500 mg p.o. t.i.d. for one week, Tylox 1-2 q4-6h for pain, and Ativan 0.5 mg q6h for pain. She is to continue all of her preoperative medications. The patient is resume regular diet as tolerated. She will follow-up with me on 06/15/2007 for suture removal. I will call and scheduled an appointment to see an Oral Surgeon for a dental extraction prior to her radiation oncology appointment.

History & Physical  
06/06/2007

Reason for Admission: Squamous cell carcinoma of right parotid metastatic to right neck

History of Present Illness: Patient is a 72-year-old retired registered nurse who was referred to my office for large firm mass involving the right tail of parotid and right superior neck. The lesion had grown over approximately one-month period of time. At the time of her exam the patient's facial nerve was fully functioning. I performed a fine needle aspiration of the mass, which revealed a squamous cell carcinoma. Thorough evaluation of the nasal cavity, nasopharynx, oral cavity, hypopharynx and larynx revealed no mucosal abnormalities and thus primary squamous cell carcinoma of the parotid metastatic to neck was suspected. A subsequent neck CT was performed which revealed a 4.2 cm mass with central necrosis involving the right tail of parotid and right superior neck. Patient is thus admitted for a right parotidectomy with right radical neck dissection. Over the past two days the patient has developed a weakness of the right facial nerve due to encroachment of the nerve by her malignant tumor.

Past Medical History: Significant for chronic obstructive pulmonary disease. She has had history of chronic renal disease and thrombocytosis in the past. She has had diverticular bleed in February of 2002. She has had severe peripheral vascular disease diagnosed. She has had peripheral neuropathy, hyperlipidemia, atheromatous plaque of the aorta, and history of alcoholism and tobaccoism. She had left ventricular hypertrophy diagnosed in 2000, recent cardiac evaluation including a thallium stress test, however, was essentially normal. Extensive preoperative pulmonary function testing has also been performed revealing chronic obstructive pulmonary disease with moderate obstruction of airflow. However, she has been surgically cleared by pulmonary.

Past Surgical History:

1. Aorto-bifemoral bypass July 2002
2. Adenotonsillectomy in 1938
3. She had endometrial biopsy in 1996, which was benign

Allergies: Lipitor

Medications: Current medications include:

1. Adalat CC 30 mg once daily
2. Niaspan 1000 mg q.h.s.
3. Fosamax 70 mg once weekly
4. Lisinopril 20 mg p.o. daily
5. Vicodin one p.o. at bedtime and every four hours for pain of the right neck
6. Maxi-Myst 0.083 of Albuterol and one amp Atrovent four times daily
7. Enteric-coated aspirin
8. Os Cal with vitamin D 600 t.i.d.
9. Centrum Silver one daily
10. Advil two daily

**Social History:** The patient is married and lives at home with her husband. As stated she is a retired nurse. She has two children. Patient did consume alcohol heavily in the past. She quit drinking in July 2004. She continues to smoke one pack of cigarettes daily and has a 50-pack-year smoking history.

**Family History:** Significant for hypertension, coronary artery disease, and diabetes

**Review of Systems:**

**HEENT:** Patient has had daily right-sided headaches over the past two weeks. CT of the head, however, was negative for metastatic disease.

**Lungs:** Patient has no productive cough

**Heart:** There is no chest pain or palpitations

**Gastrointestinal:** There is no dyspepsia, diarrhea or other GI abnormalities

**Extremities:** She is having mild symptoms of peripheral neuropathy in her distal extremities

**Physical Examination:**

**GENERAL:** Shows a thin white female in no apparent distress

**Vital Signs:** BP: 140/70. P: 70 and regular. R: 16.

**HEENT:** She is normocephalic and atraumatic. Pupils react to light and accommodation.

Extraocular movements are intact. Nasal exam reveals a rather straight septum with patent airflow. Transnasal flexible fiberoptic laryngoscopy in my office revealed no abnormalities of the nasopharynx, oropharynx, base of tongue, vallecula, epiglottis, endolarynx or pyriform sinus. Her true vocal cords moved normally during phonation. Her ear exam reveals normal tympanic membranes, with no effusion, infection, perforation or retraction. Neck palpation reveals a rather firm 5 x 6 cm mass involving the right tail of parotid extending into the right posterior superior neck. This is nonfluctuant and slightly tender to palpation.

**Chest:** Clear to auscultation

**Heart:** Regular rate and rhythm without murmur

**Abdomen:** Positive bowel sounds, soft, and nontender with no masses.

**Extremities:** No clubbing, cyanosis or edema

**Neurologic:** Patient has a partial paralysis of the right facial nerve involving all branches. This is a new onset over the last two days. Remainder of her cranial nerves are intact. Patient is alert and oriented times three.

As stated patient has had preoperative cardiac and pulmonary clearance as well as general medical clearance by her regular physician.

**Impression:**

1. Squamous cell carcinoma of right parotid metastatic to right neck
2. Hypertension
3. History of chronic renal insufficiency, resolved
4. History of thrombocytosis
5. Peripheral vascular disease
6. Chronic obstructive pulmonary disease with nocturnal hypoxia

#### 7. Peripheral neuropathy and hyperlipidemia

Plan: The patient is admitted to undergo a direct laryngoscopy with esophagoscopy and right total parotidectomy with probable facial nerve sacrifice and right radical neck dissection. All risks and benefits of this procedure including bleeding, infection, stroke, potential need for transfusion and possible intraoperative death as well as a chance of postoperative permanent complete facial nerve paralysis was discussed and explained with the patient and her husband. I also answered all preoperative questions. Patient will be monitored postoperatively in the Intensive Care Unit and I have asked her family doctor and pulmonologist to assist in the care of the patient postoperatively.

SIGNED: ENT

Operative Report  
06/06/2007

Preoperative Diagnosis: Squamous cell carcinoma of right parotid metastatic to right neck

Postoperative Diagnosis: Squamous cell carcinoma of right parotid metastatic to right neck

Operative Procedure: Total right parotidectomy and right radical neck dissection, direct laryngoscopy and esophagoscopy

Anesthesia: General

Estimated Blood Loss: 350 cc.

Indications: Patient is a retired R.N. who presented to my office with a four-week history of a rapidly enlarging right parotid and neck mass. Fine needle aspiration in my office revealed squamous cell carcinoma. The patient had no obvious primary site within the upper airway or digestive tract. She was thus a candidate for the above procedure.

Findings: The patient had no mucosal findings in her nasopharynx, oropharynx, hypopharynx or endolarynx. Her esophagus was also normal. The patient had a very firm tumor. The epicenter appeared to originate from the deep lobe of the parotid gland. The tumor encircled the facial nerve on the right side and the patient did in fact have a preoperative complete paralysis of the lower three branches of the facial nerve. The tumor also abutted the skull base and stylomastoid foramen on the right, extended into the right superior neck, was quite adherent to the carotid at the level of the bifurcation up superiorly. There was thrombosis of a facial artery and ascending pharyngeal artery on the right side. The spinal accessory nerve was completely encompassed with tumor and had to be sacrificed, as did the lower two branches of the facial nerve. Tumor was peeled off the facial nerve trunk, although it was quite ischemic and possibly no longer functional. There were several other metastatic nodes in the submandibular triangle and low in zone four of the neck.

Procedure: Following informed consent the patient was brought to the Operating Room, placed on the operating table in supine position. Following induction of general endotracheal anesthesia the head and body were draped. Tooth guard was placed. The anterior commissure laryngoscope was introduced into the oral cavity for full evaluation of the oropharynx, hypopharynx, vallecula, pyriform sinus and endolarynx with no specific findings. The laryngoscope was removed and esophagoscope was then advanced past the cricoid region, past the cricopharyngeus, into the upper esophagus and slowly advanced into the distal esophagus and then slowly withdrew the esophagoscope carefully, examining all of the mucosa. There were no specific mucosal findings. The esophagoscope was removed. The tooth guard was removed. The facial nerve monitor was placed.

The skin splitting incision was marked with a marking pen, running from the preauricular crease around the earlobe in a curved fashion into the superior neck. I then extended the incision in a

lazy J fashion to the midline of the neck above the sternal notch. The skin and subcutaneous tissue was infiltrated with 1% Xylocaine with 1:100,000 epinephrine. The entire right neck and face was then prepped and draped in the usual sterile fashion. An incision was made in the preauricular crease, carried around the earlobe and in a curvilinear fashion into the superior neck on the right side. A subcutaneous flap was elevated over the parotid gland. The tumor was immediately encountered, engulfing the sternocleidomastoid muscle and digastric muscle on the right side. The skin was carefully elevated up over the tumor, obtaining clear margins. The tumor was dissected up off of the sternocleidomastoid muscle, resecting the anterior half of the muscle, which was involved with tumor. A fine hemostat was then used to dissect the parotid gland off of the tragal cartilage. The facial nerve was then identified at the styloid mastoid foramen. It was stimulated with no movement distally. The facial nerve was then followed out anteriorly. The superior three branches were not involved with tumor. The parotid gland was peeled up off the branches using fine dissection. Several bleeders in the region were controlled with bipolar cautery and with a LigaSure device. The parotid gland was then resected around to the anterior margin, reflecting it inferiorly. The posterior fascial vein was identified. It was doubly clamped, cut and ligated within the parotid gland. The inferior two branches of the facial nerve were completely encircled and involved with tumor and could not be salvaged.

At this point I extended the incision in a lazy J fashion down into the lower neck. Subcutaneous flaps were elevated anteriorly and superiorly to the midline of the neck and up to the submandibular gland. The flap line was elevated inferiorly down to the clavicle and posteriorly to the trapezius muscle using Bovie cautery dissection and bipolar cautery. The sternocleidomastoid muscle was then freed up off the clavicle. It was then elevated up superiorly using sharp dissection. The omohyoid muscle was identified. It was detached at the inferolateral aspect and reflected up superomedially. The carotid sheath was identified. It was incised using sharp dissection at the most inferior aspect of the neck. The jugular vein was immediately identified. It was freed of the investing carotid fascia and with a right angle clamp an 0 silk tie was passed around the jugular vein x two. These were secured down. A 2-0 stick-tie was then passed between the two separate ties. The jugular vein was then cut between the two sets of ties. It was then reflected up superiorly using 0 silk as a retractor, freeing the carotid fascia. The vagus nerve and carotid artery were identified. The fascia was peeled up off both of these structures and reflected up superiorly. I then incised the deep fascia, exposing the contents. The fatty tissue and lymph nodes were then freed up off of the deep floor of the neck and the anterior scalene muscles. The phrenic nerve was identified and left intact. A spinal accessory nerve was entering tumor at the superior aspect and was sacrificed. Several bleeders in the region were controlled with LigaSure as well as bipolar cautery. Several of the larger ones were controlled with 2-0 silk ties.

The entire neck contents were then swept up superiorly. The cervical penetrator nerves were cut with the specimen. I then approached the submandibular triangle. The submandibular gland was dissected free. The lingual nerve was identified and it was left intact. Several lymph nodes in the area were removed with the specimen from the submandibular triangle. The digastric muscle was then followed back posteriorly near the carotid artery. The digastric was completely engulfed with cancer and the digastric muscle had to be resected along with a specimen at the tendon deep to the submandibular gland. The hypoglossal nerve was identified and was left intact. Just

superior to the carotid bifurcation, the tumor was identified. It was very meticulously peeled off the external carotid artery. However several of the early branches including the descending, pharyngeal and the facial artery were thrombosed and encircled by tumor. Both of these branches were clamped at their exit site from the external carotid artery. They were doubly clamped and ligated with 2-0 silk ties. The spinal accessory nerve, as stated, was completely engulfed with tumor and was resected inferiorly, which reflected up with the entire neck specimen as well as the sternocleidomastoid muscle.

I then worked from posterior where the remainder of the sternocleidomastoid muscle and digastric were reflected anteriorly as well as the tumor. The tumor was dissected up off the skull base and the stylomastoid foramen. It was peeled off of the main trunk of the facial nerve, leaving the nerve intact. However it was quite ischemic due to its involvement. Additional tumor was then peeled up off the styloid process, which was also removed with the specimen.

At this point the jugular vein was seen entering the skull base. It was meticulously peeled off from the tumor. It was isolated using a right-angle clamp. Two separate 0 silk ties were passed around the jugular vein at its entrance site into the skull base. The 0 silk was passed around the vein x three and the vein was cut just inferior to two of the 0 silk ties.

The remainder of the specimen, including the tumor was freed up off the scalene muscles of the neck. Some of the scalenes also were involved and had to be resected with the specimen. I felt I had achieved a clear margin circumferentially in the entire tumor bed, removing all of the gross firm tumor and achieving normal appearing tissue at the periphery of all of the resection.

As stated, the hypoglossal nerve was left entirely intact along its entire course, however tumor had to be peeled off hypoglossal, as it did enter the skull base. Once the entire tumor had been completely resected as well as the superficial portion of the parotid gland, the deep lobe of the parotid was resected deep to the nerve. At this point I followed the tumor down to stylomastoid foramen and then anteriorly. As stated, the facial artery and ascending pharyngeal artery were clamped and tied with 2-0 silk ties, as they were thrombosed and involved with tumor.

Once the entire resection had been completed, the entire bed was palpated and felt to be soft with a complete tumor excision. The wound was copiously irrigated with saline and suctioned. Two separate 15 French drains were passed through separate stab incisions posterior to the incision. These were secured to the skin using a 2-0 silk tie in a pursestring fashion. The deep layer of the incision was closed with 4-0 Vicryl in an interrupted figure-of-eight fashion. The skin edges were reapproximated using 3-0 nylon inferiorly in a running interlocking fashion, more superior aspect and the preauricular incision was closed with a 4-0 nylon running interlocking fashion. Polysporin ointment was applied to the wound followed by Mastisol and Telfa. The patient was extubated in the Operating Room and transported to recovery in stable condition. The patient had a total of 350 cc blood loss. She tolerated the procedure well and there were no complications.

Pathology Report  
06/06/2007

Clinical History: Squamous cell carcinoma right neck

Specimen:  
Right neck contents, right parotid gland

Gross Description:

The specimen consists of a modified radical neck dissection measuring 20.5 x 7.5 x 4.3 cm. The internal jugular vein measures 9.5 cm in length. The right submandibular gland measures 4.3 x 3.5 x 2 cm. Sectioning through the submandibular gland shows no evidence of gross abnormality. Sectioning through the remaining specimen shows a 7.5 x 5.5 x 4.3 cm, poorly circumscribed nodule. Sections are taken as follows: Cassette 1A contains sections of the submandibular gland, Cassette 1B contains sections of the internal jugular vein and adjacent tumor. A section of the medial margin is submitted in Cassette 1C. A section of the lateral margin is submitted in Cassette 1D. A section of the anterior margin is submitted in Cassette 1E and a section of the posterior margin is submitted in Cassette 1F. Following Dissect Aid fixation, lymph nodes are identified and submitted as follows: Cassette 1G contains the superior lymph nodes, Cassettes 1H and 1I contain mid lymph nodes, Cassette 1J contains the inferior lymph nodes. Also included are additional fragments of tissue in aggregate measuring 4 x 4 x 1 cm. Representative sections of the additional fragments of tissue are submitted in Cassettes 1K and 1L.

Final Diagnosis:

Submitted as right neck contents and right parotid gland: Moderately differentiated squamous cell carcinoma, 7.5 cm in greatest dimension, invading fibroadipose tissue, with vascular invasion, and 2 of 4 adjacent lymph nodes containing squamous cell carcinoma, see comment.

Superior lymph nodes: 1 of 8 lymph nodes identified contain squamous cell carcinoma. Mid lymph nodes: 17 lymph nodes identified, negative for neoplasm.

Inferior lymph nodes: 3 lymph nodes identified, negative for neoplasm.

Right parotid gland with focal squamous cell carcinoma within vessels and 2 adjacent lymph nodes negative for neoplasm.

Right submandibular gland: No pathologic diagnosis.

The squamous cell carcinoma extends to the posterior soft tissue margin of excision and is very close to the lateral soft tissue margin of excision. The medial and anterior margins of excision are negative for neoplasm.

Radiotherapy Consultation  
06/07/2007

Reason for Consultation: Patient is a 72-year-old lady seen in consultation regarding potential postoperative radiation therapy for her suspected squamous cell carcinoma of the right parotid status post right total parotidectomy and right radical neck dissection (final pathology currently pending).

History of Present Illness: The patient was initially evaluated by her primary care physician in early May 2007 at which time she presented with an enlarging right parotid mass for approximately one month. The patient was subsequently referred to an ENT physician. A CT scan of the neck was obtained on 05/15/2007 which revealed a lobulated mixed density mass in the right parotid measuring 4.2 x 3.2 cm and on my review it is near the angle of the mandible and extending near the upper cervical neck area as well as near the right parapharyngeal space. Two-view chest x-ray taken the same date was negative for any acute disease. Dr. ENT evaluated the patient and on physical examination a 5 x 6 cm mass in the right tail of the parotid extending to the right posterior superior cervical neck area was noted. A fine needle aspiration of the mass 5/18/2007 confirmed squamous cell carcinoma. Complete endoscopic evaluation was negative for any suspicious primary sites or abnormalities elsewhere. The patient was felt to most likely have primary parotid carcinoma with metastatic disease to the upper neck. Approximately one week prior to admission the patient developed weakness in the right face area and this led to a CT scan of the head, which was negative for any evidence of metastatic disease. The patient was subsequently admitted to the Hospital and on 06/06/2007 the patient underwent right total parotidectomy with a right radical neck dissection. Intraoperative nodes indicate a large tumor with the epicenter being the deep lobe of the right parotid encircling the facial nerve and extending into the right neck for approximately 6 cm in total dimension. The patient is currently recovering well. The pathology is currently pending.

Past Medical History: Extensive and includes a history of hypertension, chronic obstructive pulmonary disease, cirrhosis, peripheral vascular disease, peripheral neuropathy and left ventricular hypertrophy. She is status post aorto-bifemoral bypass. She has a history of diverticular bleeding. She has a history of nocturnal hypoxia. She is status post tonsillectomy, appendectomy and endometrial biopsy as well as the aorto-bifemoral bypass procedure. She does not have any history of prior radiation therapy.

Allergies: Patient is allergic to lipitor which causes possible hair loss

Social History: Patient is married. She is a retired nurse. She has approximately 50-pack-year smoking history. She does have a history of alcohol use, but quit drinking in July of 2004.

Physical Examination:

Patient is resting comfortably in no acute distress

Vital Signs: T: 97.6. P: 78. R: 16. BP: 137/76.

HEENT: Reveals significant right facial droop. The right neck is bandaged. Pupils are equal, round and react to light and accommodation. Extraocular muscles are intact. Examination of the

oral cavity reveals some remaining teeth in the right mandibular area, which appeared to be in poor repair. No unusual masses or lesions are noted in the oral cavity. Examination of the left neck was unremarkable for any suspicious masses or lesions. The right neck was not examined secondary to the bandages and these were not disturbed.

Lungs: Clear to auscultation and percussion

Spine: Nontender

Cardiovascular: Regular rate and rhythm without murmurs or rubs noted

Abdomen: Reveals a soft and nontender abdomen with normal abdominal bowel sounds. No evidence of hepatosplenomegaly or masses.

Extremities: Without cyanosis or edema

Neurologic: Reveals right peripheral facial nerve palsy as described above. The patient does have some numbness around her right ear. The remaining cranial nerves are intact. No focal motor or sensory deficits noted in the extremities.

Psychiatric: Patient is alert, oriented and cooperative

Impression: Patient is a 72-year-old lady with likely primary squamous cell carcinoma of the parotid gland with possible lymph node involvement. The patient is status post right radical neck dissection and total right parotidectomy and the pathology from this procedure is pending.

Recommendations: I have had an opportunity to review patient's recent CT scan of the neck on 05/15/2007. I suspect the patient will likely benefit from postoperative radiation therapy based upon the large size and locally advanced appearance on CT scan. However, the final recommendations will be pending her pathology report. I did review with her in general terms the rule of radiation therapy. I did note that typically radiation therapy would start four to six weeks following surgery and certainly no decisions need to be made in the near future regarding this. I will be follow-up with the patient in two days for review of the pathology note and provide further recommendations at that time.

Thank you for allowing me to participate in the care and evaluation of this very pleasant lady.

SIGNED: Radiation Oncologist

Medical Oncology Consult  
06/07/2007

Reason for Consultation: Head and neck squamous cell carcinoma of the distal tail of the parotid

History of Present Illness: Patient is a 72-year-old white woman who presented to her regular doctor only four to six weeks ago with a swelling in the pre and post auricular area that was fairly fast growing. At the time that he felt that it was hard, he thought that it was malignant. He referred her to ENT physician who did a FNA revealing squamous cell carcinoma invasive and moderately high grade.

The patient then underwent an extensive preoperative evaluation including CT scans of the neck, chest and upper abdomen, triple endoscopy, and a CT scan of the head and all of these were negative for extensive disease.

The patient also had an extensive medical evaluation prior to the surgery including cardiovascular clearance and pulmonary clearance. The patient was taken to radical parotidectomy and radical neck dissection yesterday and she has done remarkably well. The mass was removed en block. Nodal contents and other parts of this tumor are not yet available for us on pathology.

Past Medical History: Her past medical history is extremely significant and includes significant tabacism and she still smokes approximately a pack a day. She has coronary artery disease, peripheral vascular disease, and in the past she has had problems with alcohol but she has not had any drink since 2004. She has a history of mild thrombocytosis although not a problem at this time. She has had diverticulitis, hyperlipidemia, peripheral neuropathy, and some nighttime hypoxia.

Allergies: Allergies are really none, although Lipitor may have been a possible alopecia medications in 2002.

CURRENT MEDICATIONS: Her current medications are multiple and include:

1. Adalat 30 mg a day
2. Niaspan 1000 mg at bedtime
3. Fosamax 70 mg a week
4. Lisinopril 20 mg a day
5. Vicodin 1 at bedtime and 2 every 4h for pain
6. Maxi-Myst
7. Albutero
8. Atrovent
9. Enteric coated aspirin
10. Os-Cal
11. Centrum Silver
12. Advil

**Social History:** The patient is married and does live with her husband who I met in the room. I also met her daughter and son. She is a retired operating nurse. She still smokes one pack of cigarettes a day. She does not use illicit drugs and she has not had an alcoholic beverage since 2004.

**Family History:** Positive for diabetes, coronary artery disease, but negative for malignancy

**Review of Systems:** See H&P from admitting physician.

**Physical Examination:** Referable to oncologic needs and also her postoperative case.

**Vital Signs:** T: 98.8 BP: 130/85 P: 92 and regular. R: 20 and nonlabored.

**Neurologic:** Her neurological examination is absolutely intact with down going flexor plantar reflexes. The only thing that is completely unusual is the paralysis of her right maxillary branch of the seventh cranial nerve. This is almost certainly associated with the parotid tumor that involved and incased that nerve. The rest of her cranial nerve examination to her face is completely within normal limits.

**Neck:** Her neck is without adenopathy in the left side, her right neck is postoperative with a curvilinear scar that appears to have healed well.

**Chest:** Her chest has decreased breath sounds at the bases, although the chest itself is rather barrel with expiratory wheezes noted bilaterally.

**Heart:** The heart tones are slightly tachycardiac with a short systolic murmur at the left sternal border.

**Abdomen:** Her abdomen is flat without hepatosplenomegaly, ascites, jaundice or inguinal adenopathy.

**HEENT:** Her mouth examination, I question decent dentition and gum disease. She has several missing teeth and the status of her mouth looks to be average at best.

**Laboratory Data:** Sodium 132, potassium 4.8, chloride 108, hemoglobin 10.8, WBC 12.2, platelet count 320, alkaline phosphatase 57, ALT 23, AST 31, albumin 4.1, and creatinine 0.7.

**Studies:** Chest x-ray is negative for metastasis but does show chronic obstructive pulmonary disease.

**Impression:**

1. T3, N?, M0 (PET scan) squamous cell CA of the right parotid tail, status post right parotidectomy and right radical neck dissection.
2. Multiple medical comorbidities including the question of mouth status with dentition, chronic obstructive pulmonary disease, coronary artery disease and peripheral vascular disease.

**Recommendations:**

1. We obviously need her pathology report.
2. Radiation therapy for sure. Normally in elderly patients combination chemo RT is too toxic and just results in big side effects and delays in prescription. I favor RT alone up front.

3. Chemotherapy prescription down the line is possible, particularly if large numbers of nodes are positive. Before preparation for RT, may require dental extractions, renewed intensity of mouth care and possibly a PEG tube.
4. The aggressiveness of this tumor in four to six weeks is concerning. Hopefully some of it was benign inflammatory response with edema (as parotids can do), pre or postoperative PET scan probably would be wise.
5. Finally, will follow the patient as path arise and speak with Radiotherapy concerning combined modalities.

SIGNED: Medical Oncologist

Outpatient Clinic Note  
06/22/2007

Dear Colleagues:

I had the pleasure of seeing the patient today in follow-up regarding further treatment and recommendations for her recently diagnosed squamous cell carcinoma of the right parotid. The patient was seen in consultation by myself on an inpatient basis on 06/06/2007. At that point, the patient had recently undergone evaluation for rapidly enlarging mass in the right parotid area with a one week history of right facial nerve weakness. Metastatic work-up was negative. Extensive preoperative testing was undertaken. The patient, subsequently, underwent surgery on 6/6/2007 under the direction of ENT surgeon with a right total parotidectomy and right radical neck dissection with direct laryngoscopy and esophagoscopy. Intraoperative findings did not reveal any evidence of primary site within the upper airway or digestive tract. Complete paralysis of the lower three branches of the right facial nerve was noted preoperatively. At the time of surgery, the tumor had the Epicenter emanating from the deep lobe of the parotid gland and encircling the facial nerve on the right side, as well as abutting the base of the skull and the styloid mastoid foramen on the right, extending into the right superior neck and was quite adherent to the carotid at the level of the bifurcation superiorly. The spinal accessory nerve was also completely encompassed by tumor and had to be sacrificed, as did the lower branches of the facial nerve. The nerve was peeled off at the facial nerve trunk. Several metastatic lymph nodes were removed. Pathology from this procedure revealed moderately differentiated squamous cell carcinoma, 7.5 cm, with invasion into the fibroadipose tissue and vascular invasion in two out of four adjacent lymph nodes positive for squamous cell carcinoma. One out of eight superior lymph nodes also contained metastatic squamous cell carcinoma. The right parotid gland had focal squamous cell carcinoma with thin vessels. The additional lymph nodes were negative. The patient, subsequently, recovered well and was discharged from the hospital on 06/11/2007. She most recently was seen by the ENT surgeon on 06/15/2007 and the stitches were removed. She had a dental extraction of the remaining mandibular teeth yesterday.

Currently, the patient states she is feeling fairly well. She notes some mild pain since undergoing her dental extractions controlled with Tylenol. She is able to drink liquids with a straw without too much difficulty. She is tolerating soft foods well. She denies any pain or difficulty with swallowing. She denies any hoarseness. She continues to take tape the right eye at night to prevent dryness. In general, she is feeling fairly well.

Physical Examination: Patient is resting comfortably in no acute distress.

WT: 131.5 pounds. BP: 102/50. P: 72. R: 17. T: 97.6.

HEENT: Reveals marked right facial weakness. Examination of the oral cavity reveals normal oral mucosa. The patient is edentulous. Healing extraction sites are noted along the mandibular ridge. No unusual masses or lesions are noted in the oral cavity and visualized oropharynx.

Neck: Reveals the right surgical scar to be healing well. There are no palpable masses or adenopathy noted in either the right or left neck.

Lungs: Clear to auscultation and percussion.

Impression: Patient is a 72-year-old lady diagnosed with likely stage T4a (secondary to facial nerve involvement), N2b, M0, stage IV-A squamous cell carcinoma emanating from the deep lobe of the right parotid gland, status-post en bloc resection.

Recommendations: I reviewed with the patient and her daughter the aforementioned diagnosis and stage. I discussed treatment options from my standpoint, including no further treatment (which I do not recommend), radiation therapy or consideration of concurrent cisplatin based chemotherapy with radiation therapy. Given the locally advanced nature of her disease, the patient is felt to be at increased risk at this time for local recurrence without any further treatment and I have strongly recommended proceeding with additional therapy. I have had an opportunity to carefully review the patient's pathology and intraoperative notes, both with the ENT surgeon, as well as the pathologist, who did confirm involvement into the local soft tissues with disease. I have also had an opportunity to discuss the option of concurrent cisplatin chemotherapy with radiation therapy as an option with the medical oncologist. Two recently reported randomized phase-3 trials have evaluated the role of concurrent radiation therapy and chemotherapy postoperatively for high-risk squamous cell carcinoma of the head and neck (May 6, 2004 New England Journal of Medicine). One trial was from the U.S. (The RTOG/Intergroup) and the other was from Europe. Both trials showed significant improvement with local control with the addition of cisplatin chemotherapy to radiation therapy. In the American trial, the estimated two year rate of local region control is 82% in the combined therapy group compared to 72% in the radiation therapy group. There was no difference in overall survival in the American study, but the European study, which included a wider eligibility criteria did note a survival improvement as well. I have had an opportunity to review the patient's case with the medical oncologist and he believes the patient might be a good candidate for weekly cisplatin as a radiation sensitizer. The patient will be contacting his office in order to schedule further.

From my perspective, I reviewed the overall treatment course of approximately six and a half to seven weeks. I discussed potential acute side effects, such as fatigue, skin irritation, sore throat, dry mouth, and altered taste. I also discussed potential long-term risks, including possibility of decreased hearing in the right ear, particularly if there is concurrent cisplatin chemotherapy, long-term altered taste and dry mouth symptoms. I also discussed potential other side effects, which are felt to be much less likely, including a small chance of serious damage to the jaw, spinal cord, or other tissues. The patient has been provided with educational information. I tentatively will plan to proceed with an IMRT treatment approach in order to spare the surrounding normal tissues. At this juncture, the patient is tentatively agreeing to proceed with current chemotherapy, but wants to discuss this further with the medical oncologist. The patient is scheduled to follow-up in this clinic tomorrow for initial simulation. I would anticipate starting her treatment around July 6, 2007. I will be coordinating this date with her medical oncologist, if indeed we do proceed with concurrent chemotherapy. I will be providing further updates once the patient has completed her treatment.

Thank you, again, for allowing me to participate in the care and treatment of this very pleasant lady.

Sincerely,  
SIGNED: Radiation Oncologist

## Radiotherapy Summary

### End-of-Treatment Note

Dear Colleagues:

I would like to provide you with the patient's formal treatment details regarding her postoperative radiation therapy in the aggressive combined modality treatment of her T4a N2b M0 stage 4a squamous cell carcinoma of the right parotid, status post right total parotidectomy and right radical neck dissection. The patient was initially seen in consultation by myself on June 6, 2007, at which point she had recently undergone the aforementioned procedure. The pathology had indicated very extensive disease with clinical involvement of the facial nerve with associated paralysis preoperatively. I had the opportunity to discuss the patient's case with her ENT surgeon, as well as with her medical oncologist. I recommended proceeding with aggressive, IMRT, based conformal radiation therapy to the right neck and surgical bed. The patient proceeded with treatment after informed consent.

SITE:	Planning treatment volume (described below)
TECHNIQUE:	IMRT
ENERGY:	6 mV photons
DOSE PER FRX:	200 cGy
NUMBER FRX:	33
TOTAL DOSE:	66 Gy, 3-millimeter bolus was placed over the surgical bed and operative site each day.
TREATMENT:	July 10, 2007 to August 24, 2007.

The patient was simulated on a dedicated CT scanner. The treatment images were brought to the treatment planning computer and subsequently an inverse planned IMRT conformal treatment plan was developed, which provided excellent coverage to the operative bed while minimizing dose to surrounding structures. The target volume includes the postoperative primary tumor bed, and high-risk lymph node regions, as well as the lower right neck, lower risk regions. The high-risk regions received 66 Gy in 33 fractions while the lower risk regions received 59.4 Gy at 1.8 Gy a fraction. After careful physics quality assurance testing, the patient was started on treatment.

Clinical Treatment Course: The patient did receive weekly cisplatin concurrent chemotherapy under the direction of her medical oncologist. Initially the patient tolerated her radiation therapy relatively well. However, after approximately the second week, she began to have increasing pain in the right neck and this necessitated narcotic analgesics, including OxyContin and OxyIR. The patient was given intravenous fluids as well for dehydration, secondary to poor appetite. Subsequently the patient was admitted and due to her poor nutritional status, percutaneous endoscopic gastrostomy tube was placed. She continued on speech and swallowing therapy. After additional evaluation, the patient appeared to be aspirating and was placed n.p.o. with percutaneous endoscopic gastrostomy tube nutrition only. She developed moderate skin reactions in the right neck with erythema and desquamation. She was evaluated as well on an in-

patient basis by her ENT surgeon. I had the opportunity to review the patient's case with him, and we concurred with proceeding with the remainder of the radiation therapy. The patient was started on Levaquin antibiotics for likely pneumonia. At the time of her end-of-treatment evaluation, the patient was feeling fairly well. She continued to have chronic facial nerve paralysis on the right. Her pain remained well-controlled. I have asked the patient to followup with myself in approximately three to four weeks. Her ENT surgeon and I remain cautiously optimistic that the patient's swallowing symptoms would improve once her acute treatment-related side effects abate. In the meantime she will remain on percutaneous endoscopic gastrostomy tube feedings for her nutritional support.

Thank you again for allowing me to participate in the care and treatment of this very pleasant lady.

Sincerely,

SIGNED: Radiation Oncologist