TITLE OF OPERATION:, Total laryngectomy, right level 2, 3, 4 neck dissection, tracheoesophageal puncture, cricopharyngeal myotomy, right thyroid lobectomy.,INDICATION FOR SURGERY: , A 58-year-old gentleman who has had a history of a T3 squamous cell carcinoma of his glottic larynx having elected to undergo a laser excision procedure in late 06/07. Subsequently, biopsy confirmed tumor persistence in the right glottic region. Risks, benefits, and alternatives of the surgical intervention versus possibility of chemoradiation therapy were discussed with the patient in detail. Also concerned for a CT scan finding of possible cartilaginous invasion at the cricoid level. The patient understood the issues regarding surgical intervention and wished to undergo a surgical intervention despite a clear understanding of risks, benefits, and alternatives. He was accompanied by his wife and daughter. Risks included, but were not limited to anesthesia, bleeding, infection, injury of the nerves including lower lip weakness, tongue weakness, tongue numbness, shoulder weakness, need for physical therapy, possibility of total laryngectomy, possibility of inability to speak or swallow, difficulty eating, wound care issues, failure to heal, need for additional treatment, and the patient understood all of these issues and they wished to proceed.,PREOP DIAGNOSIS: , Squamous cell carcinoma of the larynx.,POSTOP DIAGNOSIS: , Squamous cell carcinoma of the larynx.,PROCEDURE DETAIL: , After identifying the patient, the patient was placed supine on the operating room table. After the establishment of the general anesthesia via

oral endotracheal intubation, the patient had his eyes protected with Tegaderm. A #6 endotracheal tube was placed initially. Direct laryngoscopy was performed with a Lindholm laryngoscope. A 0-degree endoscope was used to take pictures of what was apparently a recurrence of tumor along the right true vocal fold extending into the anterior arytenoid area and extending about 1 cm below into the subglottis. Subsequently, a decision was then made to go ahead and perform the surgical intervention. A hemi-apron incision was employed, and 1% lidocaine with 1:100,000 epinephrine was injected. A shoulder roll was applied after the patient was prepped and draped in a sterile fashion. Subsequently, a hemi-apron incision was performed. Subplatysmal flaps were raised at the hyoid bone into the clavicle. Attention was then turned to the right side, where a level 2, 3, 4 neck dissection was performed. Submandibular fascia was appreciated inferiorly along the submandibular gland, this was incised allowing for identification of the digastric muscle. Digastric tunnel was performed posteriorly to the level of the sternocleidomastoid muscle. The fascia along the sternocleidomastoid muscle was then dissected along the anterior aspect until the cranial nerve XI was identified. Level 2A contents were then dissected off the floor of the neck including levels 3 and 4. Preservation of the phrenic nerve was obtained by identification, and subsequently cross-clamping fibrofatty tissue and lymph nodes just adjacent to the jugular vein inferiorly at level 4. The specimen was then mobilized over the internal jugular vein with preservation of

hypoglossal nerve. Levels 2, 3, 4 neck dissection specimens were then labeled appropriately, attached with staples, and sent for histopathological evaluation.,Attention was then turned to attempting to perform a partial laryngectomy up front with a possibility of total laryngectomy as discussed. Subsequently, the strap muscles were separated in the midline. The trachea was identified in the midline. The thyroid isthmus was plicated using the Harmonic scalpel, and attention was then turned to transecting the strap muscles at the superior aspect of the thyroid cartilage. Once this was performed, sinuses were mobilized from the thyroid cartilage both on the right and left side respectively. The cricothyroid joint was then freed on the left side and then on the right side with noting on the right side that this cartilage was a bit more irregular. Attention was then turned to performing a cricothyrotomy. Upon performing this, it was obvious that there was tumor just above the level of the cricothyrotomy incision. A #7 anode tube was then placed in this area and secured. Attention was then turned to performing the laryngotomy at the level of the petiole of epiglottis. Subsequently, the cuts were made on the left side with visualization of the vocalis process and coming down to the level of the cricoid cartilage, and the thyroid cartilage was then intentionally fractured along the anterior spine. It was evident that this tumor had extended more than 1 cm into the subglottic region. Careful dissection of larynx from an inferior margin and portion of cricoid cartilage resection then was performed posteriorly, though it was evident that the cricoid

cartilage was invaded. Frozen section biopsy then confirmed this finding as read by Dr. X of Surgical Pathology.,In light of this finding with cartilaginous invasion and inability to preserve the cricoid cartilage, the patient's case was then converted into a total laryngectomy. Subsequently, the trachea was transected at the level 3, 4 tracheal ring into cartilaginous space and anterior tracheal stoma was fashioned using 3-0 vertical mattress sutures for the skin. A W-plasty was also performed to allow for enlargement of the stoma. Attention was then turned to identifying the common parting wall of the trachea and the esophagus. Attention was then turned to resecting the hyoid bone. The remainder of the specimen cuts were made superior from sinus preserving a modest amount of pharyngeal mechanism. The wound was copiously irrigated. Subsequently, a tracheoesophageal puncture site was performed using a right-angled hemostat at about approximately 1 cm from the posterior tracheal wall superior aspect. Once this was performed, a running 3-0 canal stitch was used to close the pharynx. Subsequently, interrupted 4-0 chromic stitches were then used as reinforcement line from superior to inferior, and fibrin glue was applied. Two #10 JP drains were placed on the right side and one on the left side and secured appropriately with 3-0 nylon. The wound was then closed using interrupted 3-0 Vicryl for the platysma and staples for the skin. The patient tolerated the procedure well and was brought to the Weinberg Intensive Care Unit with the endotracheal tube still in place to be decannulated later.