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## Documentation Dissection

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### Operative Report

**PREOPERATIVE DIAGNOSIS:** Recurrent right cervical breast cancer metastasis.

**POSTOPERATIVE DIAGNOSIS:** Recurrent right cervical breast cancer metastasis [4].

### PROCEDURES:

1. Right cervical and brachial plexus exploration for excision of recurrent breast cancer metastasis [2].
2. Internal neurolysis of the upper trunk and the brachial plexus [3].

**ANESTHESIA:** General endotracheal.

**IV FLUIDS:** 3000 mL of crystalloids.

**ESTIMATED BLOOD LOSS:** 300 mL.

**SPECIMENS:** Right cervical mass sent to Pathology.

**DRAINS:** Jackson-Pratt in right neck.

**IMPLANTS:** None.

**COMPLICATIONS:** None.

**INDICATIONS:** A 72-year-old woman with breast cancer who presented with right arm weakness and pain last year. At that time, she underwent a right brachial plexus exploration with resection of the metastasis. At that time, it was felt that we had no clean margins; however, since that time, she initially woke up neurologically intact. Over the last few weeks to months, she has had a progressive pain in her right neck and right arm and first in her thumb as well as in her anterior lateral aspect of the right arm [4]. She also was severely weak with only 1 to 2 out of 5 in her right deltoid and 2 to 3 in her right biceps. The MRI revealed large recurrence of tumor centered in the right brachial plexus which we felt had involved the upper trunk and was resulting in causing her weakness [5]. Because of the severe pain and progressive deficits, risks and benefits of surgical exploration with re-resection were explained to the patient versus conservative management. She elected to proceed with surgical resection. It was also noticed that she had a very painful lesion on her left chest wall between her breast and axilla which was concerning for a scar seating. At the same setting, Dr. with General Surgery was consulted for resection of this lesion. Risks and benefits of both procedures were explained to the patient and her family, and they elected to proceed.

**DESCRIPTION OF PROCEDURE:** After informed consent was obtained, the patient was taken to the operating room and placed under general anesthetic, A standard surgical time-out was performed, and a dose of preoperative antibiotics was administered. At this time, her aim was to translate to less exposure of right neck [6]. Her existing Z-shaped incision was marked with plans to extend it in both directions. This region was prepped and draped in the usual sterile fashion and infiltrated with local anesthetic. There was one area where tumor had obviously eroded to the skin as well as an area of wound dehiscence. A decision was made to ellipse out both these regions and close them primarily at the conclusion of the case.

This incision was opened with a #15 blade scalpel and carried down in subcutaneous tissues with Metzenbaum scissors. Immediately upon ellipsing out the tumor lesion as expected, there was a 5 cm tumor [7]. A dissection was carried medially in an attempt to get around this aspect of the tumor and was taken up to the sternocleidomastoid muscle. Part of the SCM had to be resected to remove this initial portion of tumor, which ultimately was able to be removed with what appeared to be clean margins. This tumor was sent off to Pathology as superficial tumor portion [8]. For the majority of the tumor, the dissection was carried down and the tumor was easily identified. Dissection was initially carried out in the superior direction; quite a nice plane in the superior aspect of the tumor. Using Metzenbaum scissors and bipolar cautery, tissue plane was identified, and we were able to get around the tumor in a cephalad direction. This was repeated on the lateral margin and was taken all the way posterior down to the trapezius muscle. A nice, clean, fatty margin was identified and dissection was carried out on the lateral aspect of the tumor. On the inferior aspect of the tumor, it was carried down to the clavicle, in a subclavicular fashion, the dissection was carried down until the tumor was encroaching on the subclavian vessels. Subclavian artery was identified and great care was taken to not disturb

this vessel. Tumor was able to be peeled off with a nice margin in inferior direction as well. There appeared to be some abnormal tissue abutting the subclavian artery, but the risk of debriding this tumor was not worth with the damage of the artery. This erythematous area was left. Medially, dissection was carried around and this was where the margin was quite obscured. Slowly, it was taken around until we identified the phrenic nerve. The tumor was completely encasing the phrenic nerve and the decision was made to take nerve as we felt there would be no long term sequela. On the deep margin of the tumor, it was intricately encased with the brachial plexus. The C5, C6, C7, and C8 were all ultimately identified. Initially, C5 was found to be most involved with tumor and it had to be taken as it merged with the upper trunk. We felt that this was the region which had the most deficit <sup>[9]</sup> and we explained to her preoperatively that in order to get as much tumor as possible, we may have to take the C5 root and possibly the upper trunk. At this time, where the C5 and C6 roots merged to form the upper trunk and brachial plexus, the upper trunk was opened sharply. The fascicles of the C5 root were removed from the upper trunk as they were again encased with tumor. This internal neurolysis was done in a very meticulous fashion with tenotomy scissors until what was felt to be primarily C5 fibers that were involved with the tumor were all removed <sup>[10]</sup>. The C6 root was also had some apparent tumor abutting the perineurium; however, this was able to be debrided off the nerve quite well and because she had some fairly good C6 function, we opted to not take this route. The C7 and C8 which were also identified but appeared to be clean of tumor. The tumor ultimately had to be removed in a piecemeal fashion with internally debulking with a CUSA, followed by stepwise circumferential resection on the periphery of the tumor <sup>[11]</sup>.

Ultimately, we felt that we got very aggressive resection with minimal if any residual tumor left behind. Once the tumor had been resected, the Ojemann stimulator was used to stimulate the upper trunk. There was some firing at the biceps muscle with this maneuver. In addition to firing the C7, some of the C7 nerve led to some triceps firing. We were satisfied at this time that we had completed our resection and with preserving as much neurological function as possible <sup>[12]</sup>. The wounds were aggressively irrigated initially with diluted hydrogen peroxide followed by normal saline and bacitracin irrigation. Any bleeding was controlled with bipolar cautery and liquid Gelfoam. Once we were satisfied with hemostasis, attention was turned to closure. A #10 JP was placed in the cavity and tunneled through a separate stab exit site. The dermal layer was reapproximated with 3-0 Vicryl in a buried interrupted fashion. A 3-0 nylon and horizontal mattress were used to close the skin. Sterile dressings were applied to the wound and the drain exit site was also secured down with a 3-0 nylon suture. Large fluffs and a compressive dressing were applied to the neck. The case was then turned over to Dr. for her portion of the chest wall lesion. At the conclusion of our portion of the case, all counts were correct x2. Dr. X was present and scrubbed for all critical portions of this case.

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<sup>[1]</sup> Diagnosis is recurrent right cervical breast cancer metastasis. The location of cervical breast and laterality is indicated.

<sup>[2]</sup> Planned procedure #1 is right cervical and brachial plexus exploration for excision of breast cancer metastasis.

<sup>[3]</sup> Planned procedure #2 is the neurolysis of the upper trunk and brachial plexus.

<sup>[4]</sup> Indication of nerve compression caused by the tumor.

<sup>[5]</sup> Identifies the location of nerve compression in the right brachial plexus.

<sup>[6]</sup> Verification of procedure performed on the right side.

<sup>[7]</sup> This identifies the size of the tumor.

<sup>[8]</sup> Dissection and removal of tumor in the sternocleidomastoid muscle.

<sup>[9]</sup> Identifies compression of the brachial plexus because of the tumor.

<sup>[10]</sup> Neurolysis was performed at the upper trunk and brachial plexus.

<sup>[11]</sup> Identifies the dissection and removal by debulking of the tumor that was encasing nerves and blood vessels.

<sup>[12]</sup> Indicates testing of the nerves after decompression.

What are the CPT® and ICD-10-CM codes reported?

**CPT® Codes:** 21554, 64713-51-RT

**ICD-10-CM Codes:** C79.89, C50.911, G55

**Rationales:**

**CPT®:** In the CPT® Index locate Excision/Tumor/Neck, which refers to 21552 and 21554-21556. Code selection is based on the size of the tumor and where in the tissue it is located. Code 21554 identifies excision, tumor, soft tissue of neck or anterior thorax, subfascial (eg, intramuscular); 5 cm or greater.

In the planned procedure, an internal neurolysis of the upper trunk and the brachial plexus was indicated as one of the procedures to be performed. In the body of the operative report, it states an internal neurolysis was performed, which removed the tumor from the brachial plexus, the nerves to be decompressed. The procedure performed was a decompression of the nerves, which is known as a neuroplasty.

In the CPT® Index, look for Neuroplasty/Peripheral Nerve/Brachial Plexus referring you to 64713. Code 64713 identifies Neuroplasty, major peripheral nerve, arm or leg, open; brachial plexus. Modifier 51 is reported for multiple procedures. A HCPCS Level II RT modifier is appended to indicate the procedure was performed on the right side. Add-on code 64727 is not reported even though internal neurolysis is mentioned in the documentation. 64727 is use for microscopic excision of scar tissue from between nerve fascicles to enhance nerve regeneration after nerve injury or suture repair. There is no mention of the operating microscope, so it cannot be reported.

**ICD-10-CM:** CD-10-CM Table of Neoplasms, locate Neoplasm/connective tissue/cervical region/Malignant Secondary, which refers to C79.89. The Tabular List identifies C79.89 as Secondary malignant neoplasm of other specified sites.

In the ICD-10-CM Table of Neoplasms, locate Neoplasm/breast/Malignant Primary and you're directed to C50.9. The Tabular identifies C50.9 as Malignant neoplasm of breast of unspecified site. 5<sup>th</sup> and 6<sup>th</sup> characters are required to identify gender and laterality. Code C50.911 identifies Malignant neoplasm of unspecified site of female breast.

For the brachial plexus nerve compression caused by the tumor, in the ICD-10-CM Alphabetic Index, locate Compression/nerve/root or plexus NOS (in)/neoplastic disease (see also Neoplasm) , which refers to G55. The Tabular List identifies G55 as Nerve root and plexus compression in diseases classified elsewhere. There is a note that states, 'Code first underlying disease, such as: neoplasm (C00-D49)'.

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