April 25th 2016

Dear Mr. [redacted],

Thank you for reaching out to Tata Memorial Centre (TMC) and nationally acclaimed experts of the National Cancer Grid (NCG). Navya is pleased to offer this online expert consultation service for assessing your treatment options.

We converted your case reports into a structured summary to be reviewed by a medical oncologist in the Bone And Soft Tissue Disease Management Group at Tata Memorial Centre, one nationally acclaimed medical oncologist in the Bone And Soft Tissue Disease Management Group at Tata Memorial Centre, one other nationally acclaimed medical oncologist trained at Tata Memorial Centre, and a radiation oncologist in the Bone And Soft Tissue Disease Management Group at Tata Memorial Centre.

The TMC NCG Navya opinion is summarized as follows:

1. The clinical course is consistent with the clinical diagnosis of Neurotropic Melanoma.
2. Given the multiple locoregional and pulmonary metastases (i.e. presence of cancer cells/lesions locally and in other organs of the body, such as the lung), the treating oncologist(s) should first assess the feasibility for surgical resection/ complete pulmonary metastasectomy (i.e. whether surgical removal of metastases is possible). If feasible, then complete pulmonary metastasectomy followed by ablative surgery (i.e. amputation of the localized region of the body), is recommended at this time.
3. After completing surgery, or if complete pulmonary metastasectomy is not feasible, the treating oncologist(s) should assess fitness to receive chemotherapy. If the general condition is good/physically fit to receive chemotherapy, then an Abraxane based regimen is recommended.
4. Additionally, checkpoint inhibitors (such as Pembrolizumab or Nivolumab) or CTLA4 inhibitors (such as Iplimumab) may be considered.
5. Professor Paul Nathan at Mount. Vernon Cancer Center or Dr. Charlotte Benson at Royal Marsden in United Kingdom are internationally known experts in the management of the given clinical diagnosis. You or your treating oncologist(s) may get in touch with them if desired.

We hope that the expert opinion is helpful in determining the course of treatment.

Please discuss this opinion with your treating oncologist(s).

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There are good principles to follow for diet and care for patient's receiving treatment. Navya is pleased to provide additional information on comfort care measure during the course of treatment as mentioned below:

Consultation with a palliative care physician for home based medical and supportive care is recommended, especially if desired by the patient. Palliative care focuses on managing the symptoms of cancer, and keeping the patient as comfortable as possible. Symptoms that may be expected and commonly used treatments that may be prescribed by treating oncologist(s) include the following:

1. Pain control- Opiate pain medications, including morphine are recommended for control of pain associated with advanced stage cancer.
2. Nausea control- Ondansetron is a common medication used in cancer patients to help control nausea.
3. Low appetite- Small frequent meals can be helpful. Blended/mashed food is easier to digest, and can be taken in smaller quantities.
4. Confusion/sleepiness during the day and/or unable to sleep at night- This is a common symptom of any cancer involving the liver, and is caused by the buildup of the toxins in the body. Medications such as lactulose taken orally two to three times a day can help with increasing bowel movements to reduce the ammonia buildup in the body.
5. Swelling of the abdomen and legs- This can occur due to build up of fluid in the body, especially in cancers of the abdomen. The abdominal fluid may be drained for comfort with a procedure called paracentesis, but there is some risk associated with this procedure in respect to bleeding. Medications such as Furosemide may be given to help with urination and elimination of fluid. Decision on whether or not to drain the abdomen of fluid must be taken by the treating oncologist(s)/ physician(s) after assessing the safety of the procedure.
6. Fluid buildup in the chest- This can occur due to build up of fluid in the lungs, especially in cancers involving the chest. The chest fluid may be drained for comfort in a procedure called thoracentesis, or by placement of a semi-permanent catheter known as a pleurex catheter or an inter costal drain. There is some risk associated with this procedure in respect to bleeding. Medications such as Furosemide may be given to help with urination and elimination of fluid. Decision on whether or not to drain the chest of fluid must be taken by the treating oncologist after assessing the safety of the procedure.
7. Shortness of breath- oxygen as needed, even at home, can be used for comfort to reduce shortness of breath. Morphine can also be prescribed to help with shortness of breath. Inhalers/nebulizers of albuterol are also commonly used to help relieve wheezing caused by additional fluid or cancer involvement in the lungs.

Most of the time, patients with advanced cancer receiving supportive care alone can be managed at home with the appropriate medications and medical support. The local

treating oncologist may be able to prescribe medications and home health care to help support the patient.

Please do not hesitate to write to us or call us with any questions.

Sincerely,

Gitika Srivastava

CASE SUMMARY Navya ID ███ **Expert Opinion ID** ███

Current Diagnosis: Metastatic ? Neurotropic Spindle Cell Melanoma

Age: 26 Years Old

Gender: Male

Past Medical History: Asthma

First Presentation: [October 2014]

Cancer Laterality: Right

Complaint(s): Swelling of Rt forearm [October 2014]

MRI Right Arm: 14*6.3*5.5 cm upper 2/3rd Rt forearm flexor compartment ovoid mass abutting proximal ulnar cortex [April 12th 2015]

Prior Surgery #1:

Timing	**Surgery**	**Surgery Date**
Primary	Wide Excision- Right Soft Tissue Tumor + Ulnar Chip	May 9th 2015

Surgery Note: Large Rt forearm soft tissue tumor, infiltrating ulna, small infiltration with Rt elbow, ulnar nerve infiltration

Pathological Tumor Size (cm): 12*8*5

Bone Base Of Tumor (cm): 4*2*0.8

Base Of Tumor (cm): 8*4*3

Malignant Disease: Pleomorphic Spindle Cell Carcinoma (?Cellular Schwannoma)

IHC- Positive: S100 (Immunoreactive in tumor cells, Neurogenic Tumor) [May 28th 2015]

Note: ?Peripheral nerve sheath tumor, neurogenic tumor, unremarkable bony tissue, neural structure along with spindly areas. No comments on margins. Completely excised tumor, bony attachment at upper ulnar end free, adjuvant radiotherapy was not advised

Second Presentation: [October 2015]

Complaint(s): Nodes underarm [October 2015 to January 2016]

Note: O/E 4.5 cm Rt axilla, 1.5 cm Rt upper arm, 2.0 cm Rt ulnar mobile, smooth, hard, non tender swelling; distribution sensory loss [January 2016]

Diagnosis Made By: Slide/ Block Review- Wide Excision [January 12th 2016]

Malignant Disease: Spindle Cell Sarcoma (?Neural Origin)

Cancer Grade: I

MRI Right Arm/Axilla: Multiple, Rt upper limb predominantly along distribution of median & ulnar nerve lesions; multiple, 5.36*4.13 cm axillary lesions; multiple, other small 1.6*0.8 cm,1.3*1.0 cm & 1.3*1.2 cm axillary LNs; 2.92*1.6 cm, 2.08*1.8 cm upper arm lesions along the median nerve upto elbow; multiple, 3.1*2 cm & 2.2*2.2 cm elbow lesions noted medially; 2*1.82 cm & 2*1 cm lower down the arm lesions along upper ulna [January 16th 2016]

US Abdomen/ Pelvis: Fatty infiltration of liver. Normal [January 6th 2016]

CT Chest: Normal [January 6th 2016]

Prior Surgery #2:

Timing	Surgery	Surgery Date
Salvage	Radical Resection- Soft Tissue Lesion Excision	January 25th 2016

Surgery Note: 3*2.2*2 cm lesion close to ulnar nerve; 3*2.5*1.8 cm lesion close to median nerve; 2.6*2.5*2 cm lesion close to radial nerve; 2*1.6*1.5 cm mid part of Rt arm lesion; 7*6*4 cm axillary lesion; 1.5*1*0.6 cm lesion from medial epicondyle; 0.8*0.8*0.4 cm deep margin from Rt lower ulnar nerve lesion; 1.2*1*0.5 cm deep marginfrom lesion close to median nerve. Lesion excised, however some residual tumor could not be excised because of very close to associated with ?nerve to pronator.

Right Lower Ulnar Deep Margin: Negative(>10mm)

Malignant Disease: ?Malignant Peripheral Nerve Sheath Tumor (MPNST) vs. Dendritic Cell Sarcoma

Ki67: >=14% (15%-20%)

Diagnosis Made By: Slide/ Block Review- Surgical Specimen [February 10th 2016]

Malignant Disease: Metastatic Spindle Cell Melanoma (Axillary Lymph Node)

Malignant Disease: Neurotropic Spindle Cell Melanoma (Radial, Median & Ulnar Nerves)

IHC- Positive: S-100, MiTF

IHC- Negative: HMB- 45, Melan A, SMA, CD1a, Cytokeratin, EMA, LCA

B-RAF: Negative (Wild Type) [February 18th 2016]

EWS- ATF1 Translocation: Negative [February 24th 2016]

EWS- CREB-1 Translocation: Negative [February 24th 2016]

Note: O/E- 2*2 cm & 1*1 cm mobile axillary LN. Swelling over medial aspect of arm between upper 2/3rd & liver 1/3rd & lower end of elbow joint [March 29th 2016]

FDG-PET CT: FDG avid- 3.4*2.3*1.8 cm lesion in operative bed; multiple, Rt arm lesions along median & ulnar nerve distribution; four, 5.1*3.0*2.2 cm elbow joint lesions closely abutting proximal ulna with evidence of cortical erosion & anterior compartment of forearm; multiple, 1.4 cm short axis Rt level I, II & III axillary LNs; 1.1 cm short axis subcarinal & Lt hilar LNs; B/L three, mildly avid 1.1 cm Lt lung nodules [April 5th 2016]

Met: Mediastinal Lymph Node: Yes

Met: Lung: Yes

Bone Marrow (Hematologic) Function: Adequate

Kidney (Renal) Function: Adequate

Liver (Hepatic) Function: Adequate [December 25th 2015]

Heart (Cardiac) Function: Not done

Functional Status- ECOG Score: 1

General Condition: Early satiety after meals, patient is capable of all daily activities and capable of self care, goes to gym as well

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