



# MACS Clinic Expert Consultation Report

Date: June 25, 2020

**PREPARED FOR:**

**PATIENT NAME**, 67 Years, Female

Diagnosis - Undifferentiated Carcinoma of left Lung (under evaluation), Early Stage.

**PREPARED BY:**

**Dr. Sandeep Nayak P**

Senior Consultant Surgical Oncologist, Fortis Hospitals, Bangalore

Trained at: Chittaranjan National Cancer Institute (CNCI), Kolkata

**Total Years of Experience: 22 Years**



**Dear Patient Name**

Thank you for signing up to receive MACS Clinic consultation for your Cancer treatment journey. As per the medical history & documentation shared by you, our team had prepared a concise case summary and asked MACS Clinic Panel Doctors to review the same and provide their valuable inputs.

These inputs have been summarized for your perusal and included in this report. Also included is a section where MACS Clinic Panel Doctors have provided answers to the specific questions that you had raised while signing up for the consultation.

We hope you find this report comprehensive and helpful in your journey towards treating Cancer effectively. Should you have any further questions on this or wish to follow up with our medical team, please feel free to drop a line to us or just call us. You are entitled to 25 Days of Free Follow-ups at MACS Clinic starting today.

Thank you!

Sincerely,

Team MACS Clinic



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## Dr. Sandeep Nayak P

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**Senior Consultant Surgical Oncologist, Fortis Hospitals, Bangalore**

**Trained at: Chittaranjan National Cancer Institute (CNCI), Kolkata**

**Total Years of Experience: 21 Years**

### About Dr. Nayak

Dr. Sandeep Nayak is the Chief of Surgical Oncology, Robotic, and Laparoscopic at Fortis Hospital, Bangalore. Prior to this he worked at reputed hospitals such as Kidwai Memorial Institute of Oncology, Bangalore and Grecian Super-Specialty Hospital, Mohali. Dr. Nayak graduated from Kasturba Medical College, post which he did his post-graduation in General Surgery from Govt. Medical College, Calicut and his postdoctoral training in Surgical Oncology from Chittaranjan National Cancer Institute, Kolkata. He also did a fellowship in Laparoscopic and Robotic Onco-Surgery and travelled and worked at various centers in India and abroad.

During his 20 years of experience, Dr. Nayak has gained immense knowledge and experience in Colorectal cancer, Esophageal cancer, Head and Neck cancer, Thoracic cancers, and Gynecological oncology. Furthermore, he is a pioneer in minimal access cancer surgery and open, laparoscopic and robotic cancer surgeries.

Dr. Sandeep has many national and international scientific publications to his credit. His pioneering techniques in laparoscopic cancer surgery like Minimally Invasive Neck Dissection (MIND) for cancer of mouth and Modified Video Endoscopic Inguinal Lymphadenectomy (VEIL) for groin nodes are his inventive techniques. He has also been bestowed with many accolades during his career like Detroit fellowship and best video awards to name a few.

Apart from his educational and professional endeavors, Dr. Sandeep is a Member of the Royal College of Surgeons of Edinburgh, UK and is also an active member of many national and international professional associations like Association of Surgeons of India (ASI), Society of Surgical Oncology (SSO), Indian Association of Surgical Oncology (IASO), and Association of Minimal Access Surgeons of India.

### Paper Presentations:

1. Sandeep Nayak P, Chunduri Srinivas, Jaiprakash Gurawalia, Vishnu Kurpad, Shiva Kumar. Uptake of Laparoscopic Colorectal Cancer Surgery at Regional Cancer Centre, South India. IJSR; Vol 6 Issue 4; 2017 Apr; 652-655.
2. Sandeep Nayak P, C. Srinivas, Vikas Sharma. Comparison between Minimally Invasive and Open Esophagectomy in Cancer Esophagus Experience at a Tertiary Cancer Centre in India. IJSR; Vol 6 Issue 3; 2017 Apr; 189-191 etc.

## MACS Clinic Summary of Recommendation

- The patient is a 67-year-old diabetic female diagnosed to have a case of Undifferentiated Carcinoma of left lung lower lobe (under evaluation), Early stage.
- We need to come to conclusion regarding the exact TNM stage & the type of cancer to decide on the primary modality of treatment.
- We additionally recommend the following investigations:
  1. MRI Brain (Plain and Contrast)
  2. Slides and Blocks to be submitted for pathology review with a reputed Pathologist like Dr. Anita Borges or at a reputed center like TMH Mumbai and for IHC testing to ascertain the exact morphological type and subtype of lung cancer.
  3. EBUS-guided FNAC from mediastinal nodes.
  4. USG-guided FNAC from supraclavicular LN to rule out metastatic disease.
- The main modality of treatment would depend on stage and subtyping of disease depending on above reports. Further treatment would depend on final stage of patient after above reports.
- Please do revert with all the above investigations because it may so happen that we might be dealing with an early resectable lung cancer. In that case, radical surgery may cure the patient.



## Recommendation for Treatment

### General Information

Lung cancer accounts for 13% of total cancer cases and 18% of cancer related deaths. It is the most common cancer diagnosed in males and 4<sup>th</sup> most common cancer in females. Cigarette smoking is the biggest risk factor. It increases risk by 10-30-fold. Other risk factors are genetic predisposition, exposure to asbestos, arsenic, second hand smoking and radiation. Symptoms of lung cancer are cough, blood in sputum, chest pain, difficulty in breathing, change in voice, liver involvement (abdominal pain, yellowish discolouration of eyes, vomiting, nausea), bone pain, brain involvement (headache, seizures). When patient presents with suspected lung cancer, complete history and physical examination of the patients is to be done. Laboratory tests like complete blood picture, liver function tests, contrast-enhanced CT scan of chest and upper abdomen is routinely suggested. Tissue sampling (biopsy) is done to confirm the diagnosis and to determine molecular markers (EGFR, ALK). There are two main types of lung cancer to determine the treatment approach. They are non-small cell lung cancer (NSCLC) and small cell lung cancer (SCLC).

Patients with stage 1 and 2 NSCLC are generally treated by multi-modality treatment which include surgery, radiotherapy and chemotherapy. Surgery is the standard and preferred treatment approach. It may be in the form of lobectomy (removal of affected lobe) or pneumonectomy (removal of entire affected lung) along with mediastinal lymph node dissection. Chemotherapy is given to decrease recurrence rate in all stage 2 and few stage 1b patients. Generally, Cisplatin-based chemotherapy regimen is given. Radiation is indicated in patients who are unfit for surgery and whose surgical resection specimen shows positive margins. The 5-year survival rate in these patients is 50-77%. Median survival is 20-60 months.

### Diagnosis

- The patient is suffering from Undifferentiated Carcinoma of left Lung lower lobe (under evaluation), Early stage.

## Specialist's Notes on Patient's Condition

- The patient is a 67-year-old female who initially had investigations for persistent runny nose, cough, and congestion in May 2019.
- Biopsy and cytology from left lung mass revealed undifferentiated carcinoma.
- PET-CT of May 27, 2019 showed hypermetabolic lesion in LLL. The PET-CT scan also mentions (??) involvement of the lymph nodes; faint FDG uptake seen in subcentimeter left level III, IV cervical and left supraclavicular node (6 mm), Faint FDG uptake seen in subcentimeter right hilar nodes (8 mm, SUVmax – 2) and non-FDG-avid left lower paratracheal nodes (7 mm).
- We need to come to conclusion regarding the exact TNM stage of the disease & exact cancer type to decide/determine the primary modality of treatment.
- The TNM stage as of now is not very clear.
- The CT scan and PET-CT scan reports have been thoroughly reviewed, and the following important points have been noted:
  - In view of very small subcentimeter nodes and faint uptakes, we are not sure if the nodes in the neck, hilar area, paratracheal region are actually involved by the disease.
  - We might actually be dealing with an early stage (T2N0M0) lung cancer.
  - Hence, we suggest additional investigations and tests before deciding the final course of treatment / management
- Additional investigations:
  1. IHC on biopsy report to know subtyping of tumor and translocations might be needed depending on reports.
  2. EBUS-guided FNAC from mediastinal nodes.
  3. USG-guided FNAC from supraclavicular LN to rule out metastatic disease.
- We need clarity on the exact cancer type in this patient before we decide the further line of treatment.
- The biopsy report mentions undifferentiated carcinoma. We need to understand that, broadly, there are 2 types of lung cancer: NSCLC (>80%) and SCLC (<20 %).
- Furthermore, the subtypes of NSCLC are
  - Adenocarcinoma.

- Squamous cell carcinoma.
- Adeno-squamous carcinoma.
- Large cell carcinoma.
- Sarcomatoid carcinoma.

### Primary Modality of Treatment

- The main modality of treatment would depend on stage and subtyping of disease depending on above reports. Further treatment would depend on final stage of patient after above reports.

### Treatment Recommendation

#### **A) Description of the treatment that is most relevant for this case at this stage**

- We need to conclude regarding the exact TNM stage of the disease and then decide/determine the primary modality of treatment.
- The TNM stage as of now is not very clear and also, we need clarity on the exact cancer type in this patient before we decide the further line of treatment
- Please do revert back with the above investigations to define further management. Surgery, radiation or chemotherapy would depend on above reports.
- After investigations, if the lung cancer is early stage, then the treatment will be left lower lobectomy with mediastinal lymph node dissection. Further treatment will be decided after surgery based on the pathology report.

#### **B) Follow-up plan**

- Please do revert with all the above investigations.
- In case of early stage, radical surgery can cure the patient.

#### **C) Additional medications to be taken**

- Diabetic medications to continue.
- Iron rich diet to maintain Hb levels.
- Chest exercises to build up respiratory function.

#### **D) Additional tests to be done**

- MRI Brain (Plain and Contrast)



- Slides and Blocks to be submitted for pathology review with a reputed Pathologist like D. Anita Borges or at a reputed center like TMH Mumbai and for IHC testing to ascertain the exact morphological type and subtype of lung cancer.
- USG-guided FNAC from supraclavicular LN to rule out metastatic disease.



## Answer to Patients Questions

1. **What is the safest, effective, and best treatment option considering her age is 67 years?**
  - Safest treatment can be decided after seeing the performance status of patient as age alone is not a criterion to decide treatment.
2. **How soon the treatment can be started?**
  - Please do revert with all the above investigation reports. As soon as all the investigations are done, treatment modality can be decided.
3. **What are the chances for recurrence?**
  - We need staging information, as chances of recurrence depend on stage of disease.
4. **What is the prognosis of the disease?**
  - We might actually be dealing with an early stage (T2N0M0) lung cancer. Hence, we suggest additional investigations and tests before deciding the final course of treatment / management.
5. **What is the stage of the disease?**
  - Needs further investigation to comment on stage.



## Summary of Clinical History

### General Information

**Date:** May 28, 2019

**Name:** Patient Name

**Age:** 67 Years

**Sex:** Female

**Diagnosis:** Undifferentiated Carcinoma Lung – Left lower lobe, cT2a cN3 cM0 (Stage IIIB)

**Current Performance Status:** Able to do daily activities with some little weakness post-pneumonia treatment. Performance Status ECOG – 1/2.

**Family History:** None Pertinent

**Social History:** None

**Allergies:** Allergic to iron-containing injections

**Complaints:** General weakness

### Clinical Summary

- The patient is a 67-year-old borderline diabetic female who is on no medications for diabetes (currently managed on diet).
- The patient presented to the clinic in May 2019 for complaints of fever, cough, runny nose and congestion for 10 days, where fever was subsided with medications but the runny nose, cough and congestion continued.
- Chest X-ray in May 2019 showed small patch- (?) infective- (as per the caregiver), suspected to be pneumonia and was treated with antibiotic course.
- Post antibiotic course, the patient repeated Chest X-ray which showed same patch with no symptomatic improvement.
- Blood Investigations on May 20, 2019 were valued at
  - WBC - 7.28, Hb – 12.7, MCV – 80.3, MCH – 26.0, MCHC – 32.4, PC – 294, RDW-SD – 14.7, PDW – 11.9, MPV – 9.8, P-LCR – 24.2, PCT – 0.29, Neutrophils – 3.03, Lymphocytes – 3.56, Monocytes – 0.62, Eosinophils – 0.06, and Basophils – 6.81.
  - RBS – 143.

- Creatinine on May 21, 2019 was valued at 1.0.
- 2D ECHO on May 21, 2019 revealed LVEF – 80, aortic sclerosis.
- CECT Chest on May 24, 2019 showed atheromatous calcification of the aorto-coronaries was seen. Trace of pericardial effusion was seen. There were a few subcentimeter pretracheal, precarinal, subcarinal and prevascular region left upper lobe with adjacent pleural retraction. A small non-segmental area of cicatricial atelectasis with early bronchiectasis was seen at the medial segment of the right middle lobe. Subtle fibro-atelectatic changes were seen at the medial and lateral segments of the right middle lobe, lingual as well as at the lower lobes of both the lungs. There was a minimally enhancing nodular soft tissue density equivalent lesion with spiculated outlines and extending closely abutting the oblique fissure and located at the superior and anterior basal segments of the left lower lobe. This lesion approximately measured about 2.6 cm AP x 3.2 cm ML x 2.9 cm CC. Subtle focal small faint nodular areas of ground-glass haziness were seen at the superior segment of the right lower lobe, lateral segment of the right middle lobe as well as at the medial segment of the right lower lobe. Multiple plate-like atelectatic changes versus fibrotic bands were seen at the anterior and lateral basal segments of the left lower lobe, medial basal right lower lobe and posterior basal segments of both lower lobes. Early atheromatous calcification of the aorta was seen. Liver was mildly enlarged and showed mild diffuse fatty infiltration.
- EBUS on May 25, 2019 showed left lower lobe bronchus mass lesion.
- Cytology of brushings from lung mass on May 25, 2019 was suggestive of an Undifferentiated Carcinomatous mass.
- **Biopsy from left lung, lower lobe mass on May 25, 2019 revealed suggestive of Undifferentiated Carcinoma**
- PET-CT Scan on May 27, 2019 revealed
  - **Neck:** Faint FDG uptake was seen in subcentimeter left level III, IV cervical and left supraclavicular node (6 mm).
  - **Chest:** Intense FDG uptake (SUV max – 5) was seen in spiculated soft tissue density lesion in LLL (longest dimension – 3.2 cm) note was made of adjacent pleural tag. Patchy atelectatic changes were seen in the left lower lobe showing no abnormal FDG uptake. Faint FDG uptake was seen in subcentimeter right hilar nodes (8 mm, SUV max – 2). Non-FDG-avid left lower paratracheal nodes were seen (7 mm) - **Hypermetabolic lesion in LLL as described – likely primary.**
  - **Bones:** Mild diffuse uptake was seen in the entire skeleton.



*The family is now seeking consult to understand further plan of treatment and prognosis of the disease.*



## Appendix

### Patient's Clinical History

(as also summarized in the patient's medical history form):

- **May 20, 2019\_Blood Investigations**
  - WBC - 7.28, Hb - 12.7, MCV - 80.3, MCH - 26.0, MCHC - 32.4, PC - 294, RDW-SD - 14.7, PDW - 11.9, MPV - 9.8, P-LCR - 24.2, PCT - 0.29, Neutrophils - 3.03, Lymphocytes - 3.56, Monocytes - 0.62, Eosinophils - 0.06, and Basophils - 6.81.
  - RBS - 143.
  
- **May 21, 2019\_Creatinine**
  - Creatinine - 1.
  
- **May 21, 2019\_2D ECHO**
  - LVEF - 80, aortic sclerosis.
  
- **May 24, 2019\_CECT Chest**
  - Atheromatous calcification of the aorto-coronaries was seen. Trace of pericardial effusion was seen. There were a few subcentimeter pretracheal, precarinal, subcarinal and prevascular region left upper lobe with adjacent pleural retraction. Small non-segmental area of cicatricial atelectasis with early bronchiectasis was seen at the medial segment of the right middle lobe. Subtle fibro-atelectatic changes were seen at the medial and lateral segments of the right middle lobe, lingual as well as at the lower lobes of both the lungs. There was a minimally enhancing nodular soft tissue density equivalent lesion with spiculated outlines and extending closely abutting the oblique fissure and located at the superior and anterior basal segments of the left lower lobe. This lesion approximately measured about 2.6 cm AP x 3.2 cm ML x 2.9 cm CC. Subtle focal small faint nodular areas of ground-glass haziness were seen at the superior segment of the right lower lobe, lateral segment of the right middle lobe as well as at the medial segment of the right lower lobe. Multiple plate-like atelectatic changes versus fibrotic

bands were seen at the anterior and lateral basal segments of the left lower lobe, medial basal right lower lobe and posterior basal segments of both lower lobes. Early atheromatous calcification of the aorta was seen. Liver was mildly enlarged and showed mild diffuse fatty infiltration.

➤ **May 25, 2019\_EBUS**

- Passed a thick guide sheath through LB8a bronchus, mass identified within lesion.
- Impression: Left lower lobe bronchus mass lesion

➤ **May 25, 2019\_Cytology of Brushings from Lung Mass**

- Cytological features were suggestive of an undifferentiated carcinomatous mass.

➤ **May 25, 2019\_Biopsy from left lung, lower lobe mass**

- Suggestive of Undifferentiated Carcinoma

➤ **May 27, 2019\_PET-CT Scan**

- **Neck:** Faint FDG uptake was seen in subcentimeter left level III, IV cervical and left supraclavicular node (6 mm).
- **Chest:** Intense FDG uptake (SUV max – 5) was seen in spiculated soft tissue density lesion in LLL (longest dimension – 3.2 cm) note was made of adjacent pleural tag. Patchy atelectatic changes were seen in the left lower lobe showing no abnormal FDG uptake. Faint FDG uptake was seen in subcentimeter right hilar nodes (8 mm, SUV max – 2). Non-FDG-avid left lower paratracheal nodes were seen (7 mm).
- **Bones:** Mild diffuse uptake was seen in the entire skeleton.
- **Impression:** Hypermetabolic lesion in LLL as described – likely primary.



## Summary of Lab Information, Medications and Imaging Data

### Medical Reports

Type of Report
May 20, 2019_Blood Investigations
May 21, 2019_Creatinine
May 21, 2019_2D ECHO
May 24, 2019_CECT Chest
May 25, 2019_Endobronchial Ultrasound Bronchoscopy
May 25, 2019_Cytology of Brushings from Lung Mass
May 25, 2019_Biopsy from left lung, lower lobe mass
May 27, 2019_PET-CT Scan