

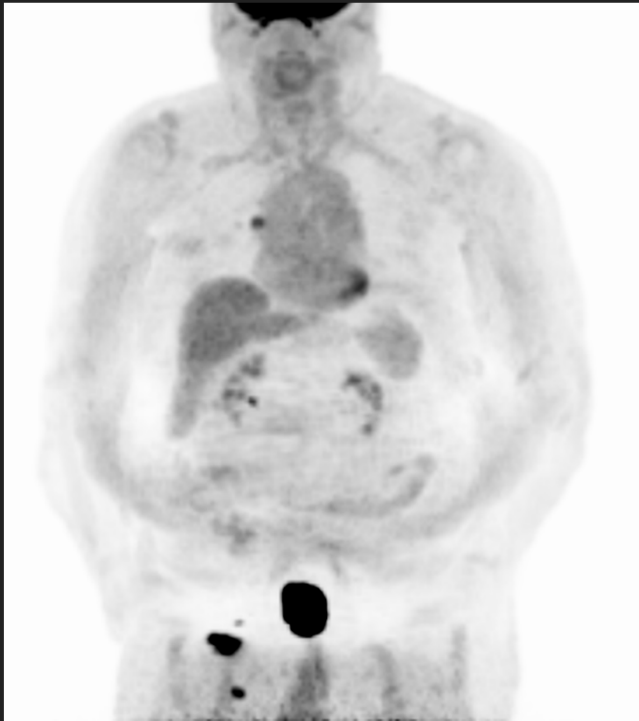
# Metastatic Melanoma

Zaid Obaida

# Case

- 74 y.o man with hx of prostate cancer, pulmonary nodule and melanoma of the right 4th toe presented with new right sided inguinal lymphadenopathy.
- Melanoma history:
  - Diagnosed in 2016 with biopsy followed by amputation. Pathology at that time showed malignant melanoma with lymph/vascular and perineural invasion.
  - Margins were negative. Patient did not have sentinel lymph node biopsy at UVA since he established care elsewhere.
  - T4bNx (atleast stage IIB)
- Social History:
  - Worked as a carpenter and had exposure to asbestos and Radon
  - Prior smoker (quit 5 years ago)

# Imaging



# Imaging

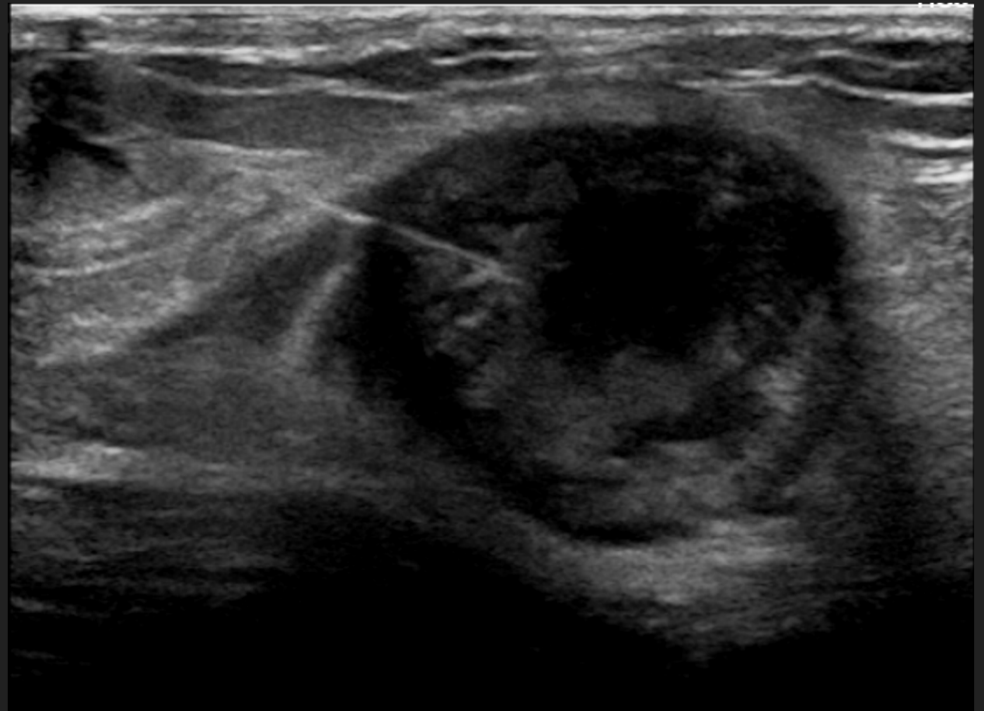
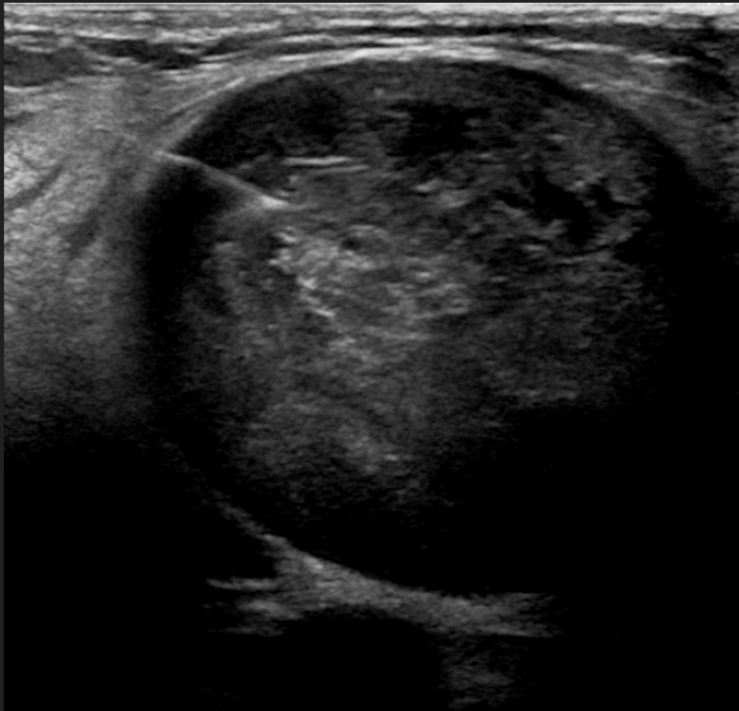
- **Brain MRI: Negative**
- **Body PET/CT: showed**
  - < 1 cm hypermetabolic right hilar lymph node (SUV max 4.6).
  - Right inguinal chain lymphadenopathy, with the dominant middle lymph node the largest, however it only demonstrates FDG uptake along its lateral aspect, a region that measures approximately 3.8 x 1.8 cm.

# Biopsy

- US Guided biopsy of right inguinal lymph node without any complications.
- 6 fine needle aspiration biopsies (25 gauge)
- 18-gauge Tenmo core biopsy x1

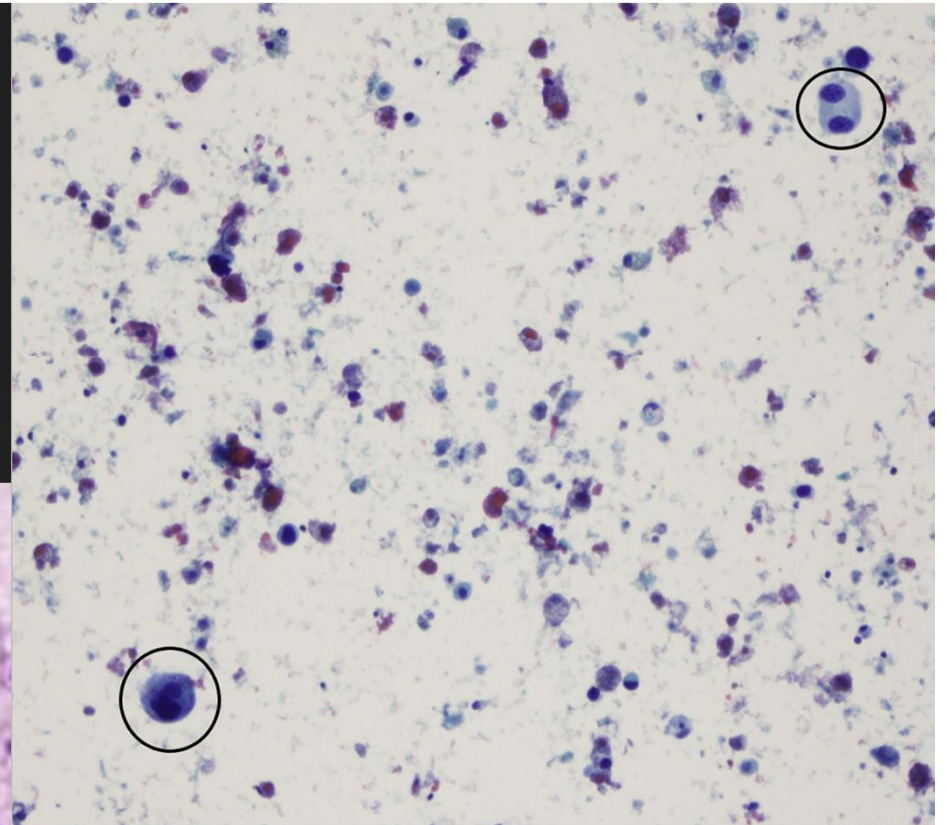
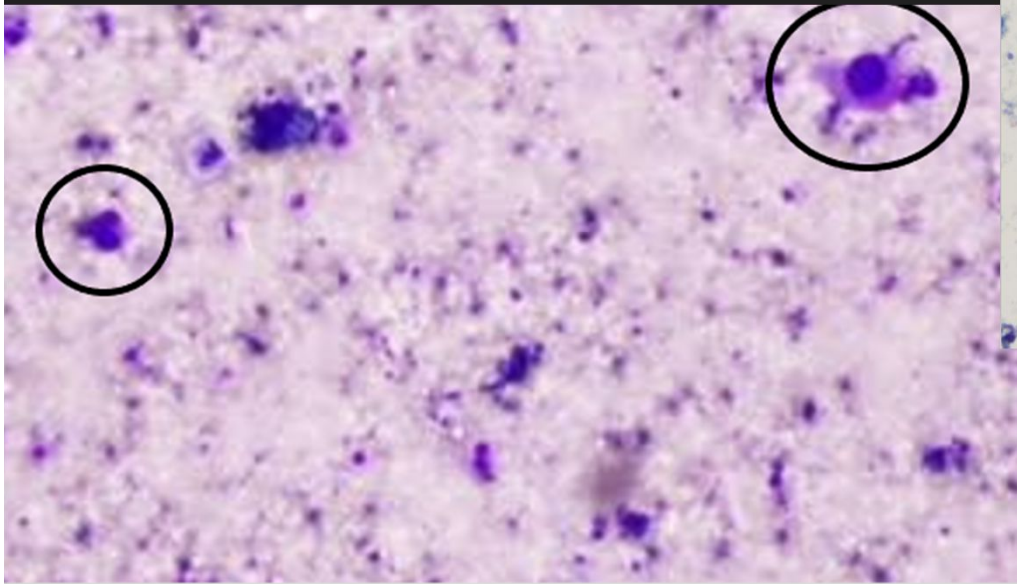


# Biopsy



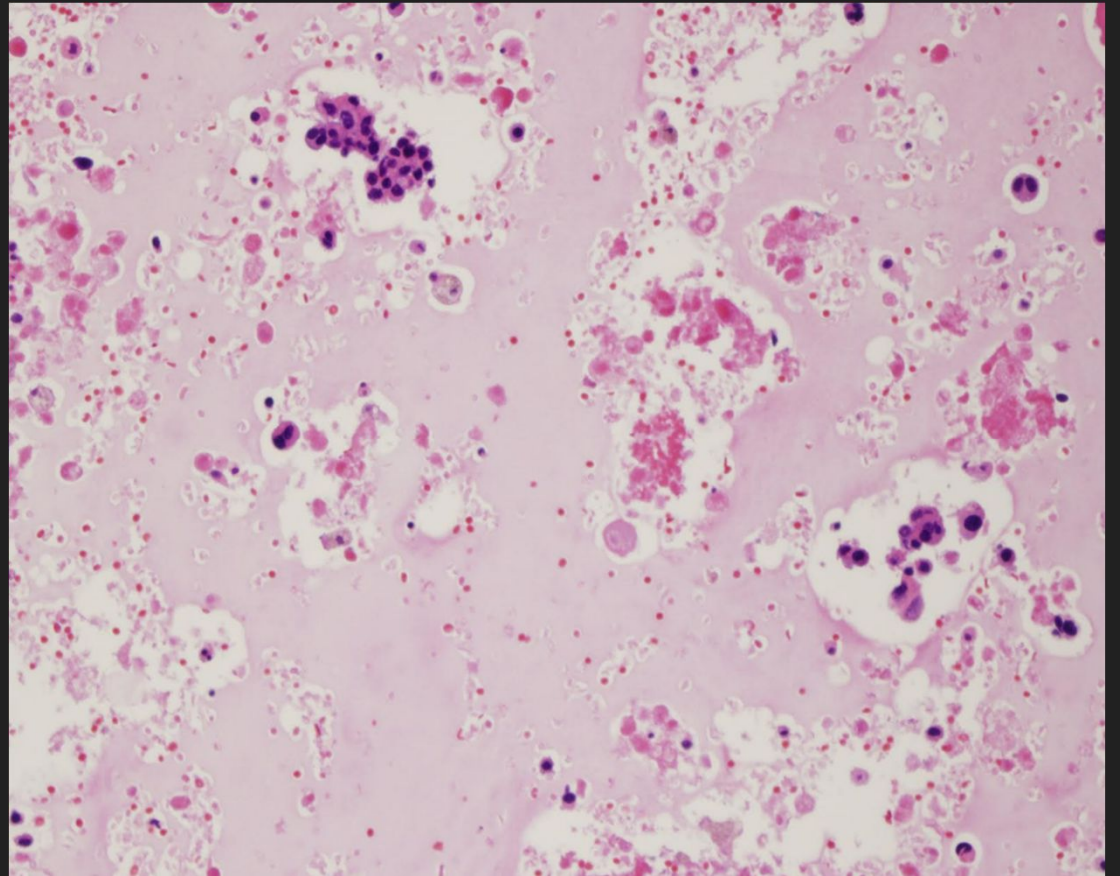
## Results- FNA

Malignant neoplasm, favor metastatic malignant melanoma with extensive necrosis.



## Results- Core

- Further stains pending.
- PD-L1 and BRAF pending
  - Initial melanoma diagnosis was negative for both.





# AJCC Staging and prognostics

Primary tumor (T)			Regional lymph nodes (N)		
T category	Thickness	Ulceration status	N category	Extent of regional lymph node and/or lymphatic metastasis	
				Number of tumor-involved regional lymph node	Presence of in-transit, satellite, and/or microsatellite metastases
TX: Primary tumor thickness cannot be assessed (eg, diagnosis by curettage)	Not applicable	Not applicable	NX	Regional nodes not assessed (eg, SLN biopsy not performed, regional nodes previously removed for another reason). <b>Exception:</b> Pathological N category is not required for T1 melanomas, use cN.	No
T0: No evidence of primary tumor (eg, unknown primary or completely regressed melanoma)	Not applicable	Not applicable	N0	No regional metastases detected	No
Tis (melanoma <i>in situ</i> )	Not applicable	Not applicable	N1	One tumor-involved node or in-transit, satellite, and/or microsatellite metastases with no tumor-involved nodes	
T1	≤1.0 mm	Unknown or unspecified	N1a	One clinically occult (ie, detected by SLN biopsy)	No
T1a	<0.8 mm	Without ulceration	N1b	One clinically detected	No
T1b	<0.8 mm	With ulceration	N1c	No regional lymph node disease	Yes
	0.8 to 1 mm	With or without ulceration	N2	Two or three tumor-involved nodes or in-transit, satellite, and/or microsatellite metastases with one tumor-involved node	
T2	>1 to 2 mm	Unknown or unspecified	N2a	Two or three clinically occult (ie, detected by SLN biopsy)	No
T2a	>1 to 2 mm	Without ulceration	N2b	Two or three, at least one of which was clinically detected	No
T2b	>1 to 2 mm	With ulceration	N2c	One clinically occult or clinically detected	Yes
T3	>2 to 4 mm	Unknown or unspecified	N3	Four or more tumor-involved nodes or in-transit, satellite, and/or microsatellite metastases with two or more tumor-involved nodes, or any number of matted nodes without or with in-transit, satellite, and/or microsatellite metastases	
T3a	>2 to 4 mm	Without ulceration	N3a	Four or more clinically occult (ie, detected by SLN biopsy)	No
T3b	>2 to 4 mm	With ulceration	N3b	Four or more, at least one of which was clinically detected, or presence of any number of matted nodes	No
T4	>4 mm	Unknown or unspecified	N3c	Two or more clinically occult or clinically detected and/or presence of any number of matted nodes	Yes
T4a	>4 mm	Without ulceration			
T4b	>4 mm	With ulceration			

# AJCC staging and prognostics

Distant metastasis (M)		
M category	M criteria	
	Anatomic site	LDH level
M0	No evidence of distant metastasis	Not applicable
M1	Evidence of distant metastasis	See below
M1a	Distant metastasis to skin, soft tissue including muscle, and/or nonregional lymph node	Not recorded or unspecified
M1a(0)		Not elevated
M1a(1)		Elevated
M1b	Distant metastasis to lung with or without M1a sites of disease	Not recorded or unspecified
M1b(0)		Not elevated
M1b(1)		Elevated
M1c	Distant metastasis to non-CNS visceral sites with or without M1a or M1b sites of disease	Not recorded or unspecified
M1c(0)		Not elevated
M1c(1)		Elevated
M1d	Distant metastasis to CNS with or without M1a, M1b, or M1c sites of disease	Not recorded or unspecified
M1d(0)		Normal
M1d(1)		Elevated

# AJCC Prognosis

N category	T category								
	T0	T1a	T1b	T2a	T2b	T3a	T3b	T4a	T4b
N1a	N/A	A	A	A	B	B	C	C	C
N1b	B	B	B	B	B	B	C	C	C
N1c	B	B	B	B	B	B	C	C	C
N2a	N/A	A	A	A	B	B	C	C	C
N2b	C	B	B	B	B	B	C	C	C
N2c	C	C	C	C	C	C	C	C	C
N3a	N/A	C	C	C	C	C	C	C	D
N3b	C	C	C	C	C	C	C	C	D
N3c	C	C	C	C	C	C	C	C	D

**Instructions:**

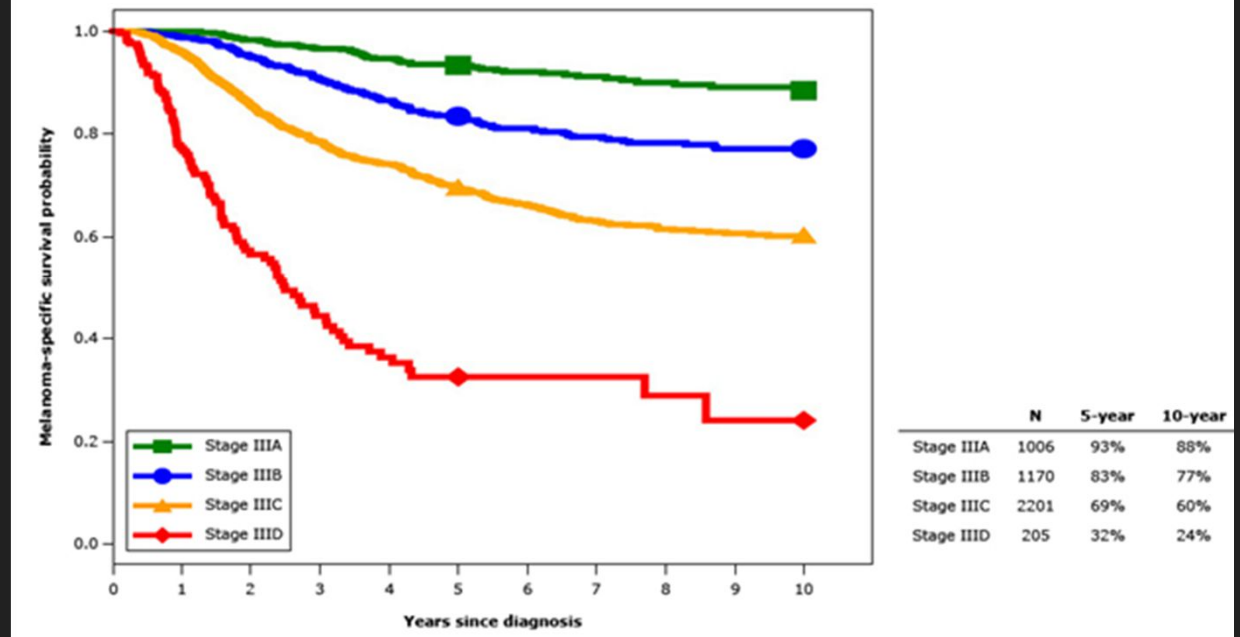
1. Select patient's N category at left of chart
2. Select patient's T category at top of chart
3. Note letter at the intersection of T and N on grid
4. Determine patient's AJCC stage using the key to the right

**Key:**

N/A	Not assigned
A	Stage IIIA
B	Stage IIIB
C	Stage IIIC
D	Stage IIID

AJCC: American Joint Committee on Cancer.

Kaplan-Meier melanoma-specific survival curves according to stage III subgroups from the eighth edition International Melanoma Database



# Closing

- Follow up
  - Pending on Path results.
  - Will need prior lung CT to be compared to current.
  - Possible lung bx.
  - Node resection vs systemic therapy pending on lung nodule.
  
- The End.

# References

1. Patient EMR Chart Review
2. Patient PACS Imaging Review
3. Melanoma staging: Evidence-based changes in the American Joint Committee on Cancer eighth edition cancer staging manual Gershenwald, J. E., Scolyer, R. A., Hess, K. R., Sondak, V. K, etc. A Cancer Journal for Clinicians, 67: 472-492. doi:[10.3322/caac.21409](https://doi.org/10.3322/caac.21409).
4. [Pathologyoutlines.com/topic/skintumormelanocyticsuperficialspreading.html](http://Pathologyoutlines.com/topic/skintumormelanocyticsuperficialspreading.html)