

Metastatic Carcinoma to the Skin

Paul K. Shitabata, M.D.

Director of Dermatopathology

Harbor-UCLA Dermatology

Which are true statements?

- 20% of all patients with internal cancers have cutaneous metastases.
- Inflammatory breast carcinoma is associated with increased neutrophils within the dermis
- Primary mucinous carcinomas of the skin are characteristically CK20 positive
- Metastatic carcinoma from the lung to the skin is the most common primary carcinoma site in men and women.

Helpful immunohistochemical stains to confirm a metastatic renal cell carcinoma to the skin include:

- Cytokeratin-pan
- CK7
- CK20
- Vimentin
- S100
- Oil red O

May have more than one answer

Answers

- NONE.
- 5-10% of all patients with internal cancers have cutaneous metastases.
- Inflammatory breast carcinoma is associated with dermal lymphatic invasion within the dermis
- Primary mucinous carcinomas of the skin are characteristically CK20 negative
- Metastatic carcinoma from the lung to the skin is the most common primary carcinoma site in men-in women, the primary site is breast.

Answers

- Cytokeratin-pan
- Vimentin

Additional positive stains include CD10 and EMA.

Oil red O is a cytochemical stain, which can only be performed upon fresh or frozen tissue.

Features that favor a diagnosis of primary Merkel cell carcinoma of the skin to a metastatic small cell carcinoma from the lung include:

- CK20 positive
- CK7 positive
- TTF positive
- CEA positive
- Chromogranin positive
- LCA positive
- S100 positive

May have more than one answer

Answers

- CK20 positive

Although Merkel cell carcinoma is chromogranin positive, this will not separate it from other neuroendocrine carcinomas such as a small cell carcinoma from the lung.

What is the most specific immunohistochemical stain for the primary malignancy?

Organ	Immunohistochemical Stain
Prostate	
Thyroid	
Melanoma	
Lymphoma	
Choriocarcinoma	

Answers

Organ	Immunohistochemical Stain
Prostate	PSA (prostate specific antigen)
Thyroid	TTF-1
Melanoma	HMB-45 or Melan-A
Lymphoma	LCA
Choriocarcinoma	HCG (human chorionic gonadotropin)

Which stains would **NOT** be helpful in distinguishing a metastatic adenocarcinoma from the colon from a primary eccrine adenocarcinoma of the skin?

- TTF1
- CEA
- S100
- CK-pan
- Melan-A

May have more than one answer.

Answers

- CEA
- S100
- CK-pan

Primary eccrine carcinomas of the skin and colon cancers are typically cytokeratin positive and may show positivity for CEA and S100. TTF-1 is positive in lung and thyroid cancers while Melan-A is specific for melanomas.