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Malignant Melanoma

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Case Presentation

HPI

- 62 y/o male Vietnam veteran
- PMH – HTN, hyperlipidemia, PTSD, depression

Dermatology History

- 9/27/2007 - s/p 8mm x 7mm x 1mm shave biopsy of right arm lesion
 - 7mm round pearly brown-red papule
 - suspected BCC vs. seborrheic keratosis
 - Path: 0.7mm malignant melanoma
- 10/18/2007 - s/p 10mm x 10mm wide local excision of right arm wound down to fascia
 - Path: malignant melanoma





Follow-up

- Serial full-body skin exams every 6 months
- 12/14/2010 – noted to have 1cm mobile non-tender lymph node in right axilla
- 12/22/2010 – PET/CT
 - 15mm x 8mm right axillary lymph node
 - SUV 5.3

Surgery

- 1/19/2011 – excision of right axillary lymph node, right axillary lymph node dissection
 - Frozen path: 15 x 10mm black mass, metastatic malignant melanoma confined to lymph node
 - Permanent path: 9/9 lymph nodes negative
 - Immunohistochemistry:
 - S100+
 - HMB45+
 - WT-1+

Discussion

Melanoma Prevention

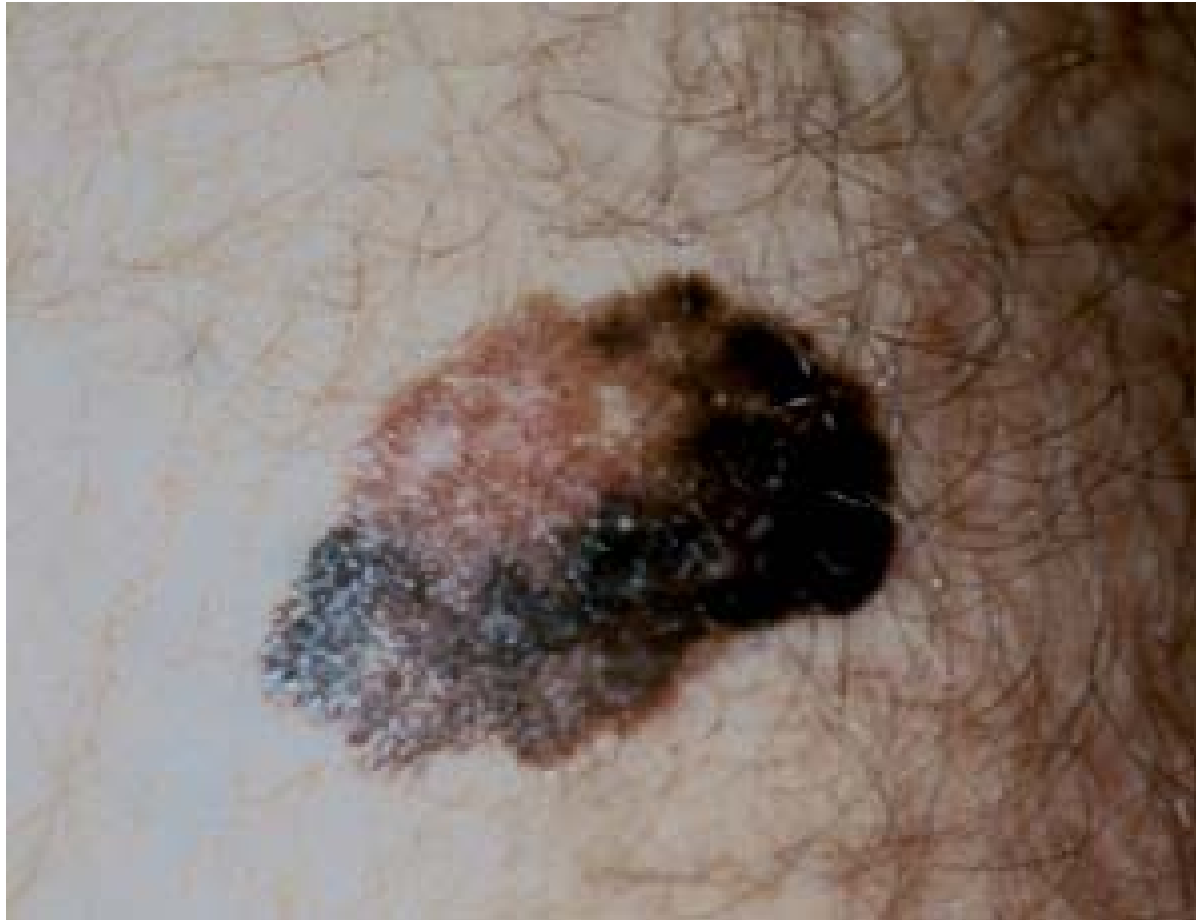
- Sun precautions when UV index is elevated
 - National Weather Service
 - Environmental Protection Agency
- Protect skin with clothing and sunscreen
- Avoid tanning beds

ABCDE

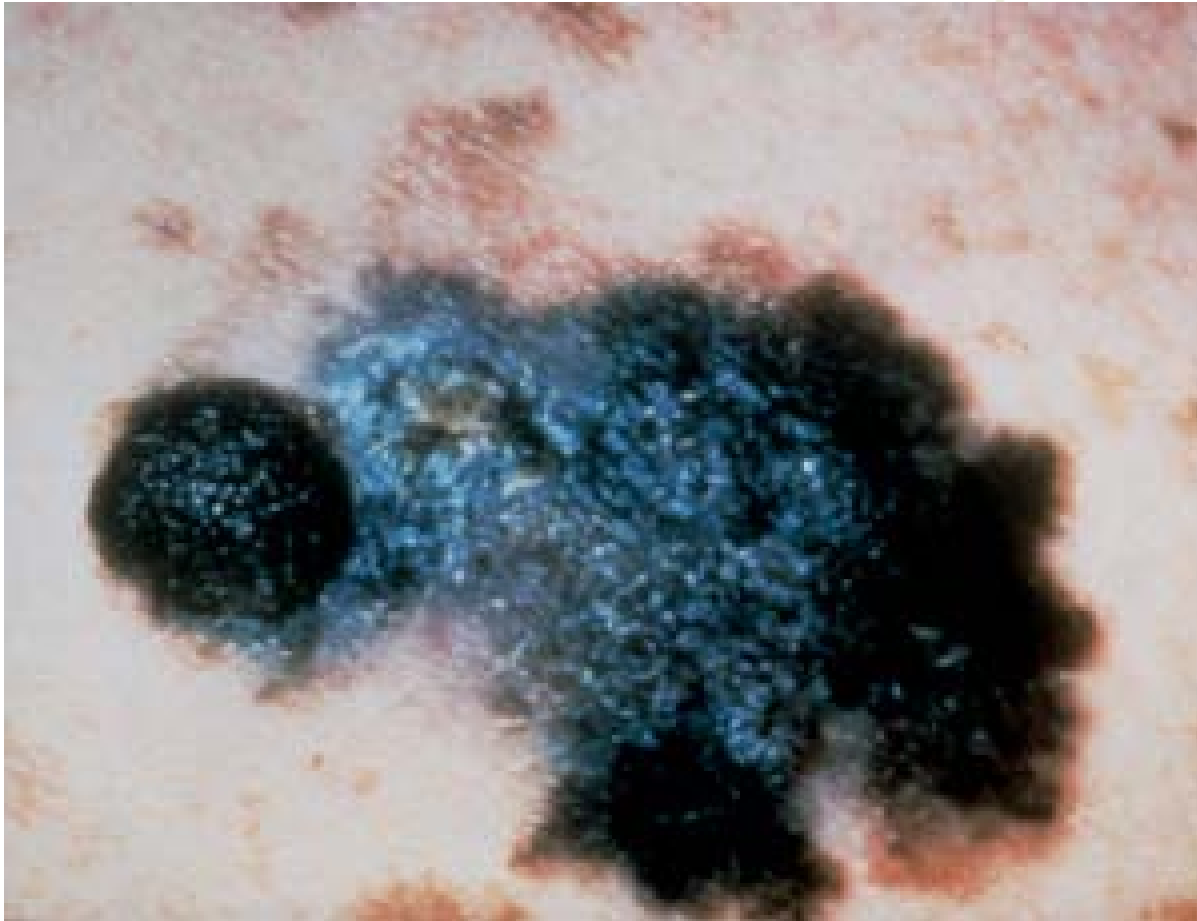
- **A**symmetry
- **B**order irregularity
- **C**olor variations
- **D**iameter $>$ 6mm
- **E**volving

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Superficial Spreading



Nodular



Lentigo Maligna



Acral Lentiginous



Acral Lentiginous



TNM Staging

- T – tumor thickness
 - a – no ulceration
 - b – ulceration (for upstaging)
- N – number of metastatic lymph nodes
- M – distant metastasis

TNM Staging

- Stage 0 – Tis
- Stage 1 – T1a, T1b, T2a
- Stage 2 – T2b, T3a, T3b, T4b
- Stage 3 – N1, N2, N3
- Stage 4 – M1

Wide Local Excision Surgical Margins

Tumor Thickness	Recommended Margins
Tis - In situ	0.5 cm
T1 - ≤ 1.0 mm	1.0 cm
T2 - 1.01 – 2 mm	1.0-2.0 cm
T3 - 2.01 – 4 mm	2.0 cm
T4 - > 4 mm	2.0 cm

Biopsy

- Limit margins to 1-3mm
- **AVOID SHAVE BIOPSY**
- Punch biopsy is acceptable for some sites
 - face, ear
 - palm, sole
 - distal digit, subungual tissue

Sentinal Lymph Node Biopsy Indications

- ≤ 1.0 mm with either
 - Ulceration
 - Mitotic rate ≥ 1 per mm^2
- > 1.0 mm thick

Sentinel Lymph Node Biopsy Procedure

- Perform prior to Wide Local Excision to prevent disruption of lymphatics
- Use both Lymphazurin (82%) and radiocolloid (94%) for maximum success (98%) in locating sentinel node
- Perform lymphoscintigraphy to map appropriate lymph node basin

MSLT-I trial

- intermediate-thickness (1.2 to 3.5 mm) melanomas
- Randomized prospective trial
- 2 groups
 - Observation with delayed lymphadenectomy for clinically detectable nodal recurrence
 - Sentinel lymph node biopsy with immediate completion lymphadenectomy if positive
- No difference in overall 5-year survival

MSLT-II ongoing trial

- intermediate-thickness (1.2 to 3.5 mm) melanomas
- Randomized prospective trial for patients with positive sentinel lymph nodes
- Control – immediate completion lymphadenectomy
- Experimental arm – completion lymphadenectomy if recurrence detected by nodal ultrasound

Sunbelt Melanoma Trial

Protocol A

- Single positive lymph node after Sentinel Lymph Node Biopsy and completion lymphadenectomy
- 2 groups
 - Observation
 - High dose interferon
- No significant difference in disease free survival or overall survival

Sunbelt Melanoma Trial

Protocol B

- Negative sentinel lymph node biopsy, but SLN positive by RT-PCR
- 3 groups
 - Observation
 - Completion lymphadenectomy
 - Completion lymphadenectomy + high dose interferon
- No significant difference in disease free survival or overall survival

Distant Metastasis

- Cancer cells create an immunosuppression that prevents lymphocytes from destroying tumor cells
- Decreases tumor burden by complete surgical metastasectomy can improve endogenous cancer fighting functions
- 15%-20% 5-year survival has been documented after resection of multiple metastases

Isolated Limb Perfusion for In-transit metastasis

- Died at 9 months



Isolated Limb Perfusion for In-transit metastasis

- Died at 12 months

