



Penn Medicine

# Peggy Spiegler Melanoma Research Foundation Head Spinning Progress in Melanoma

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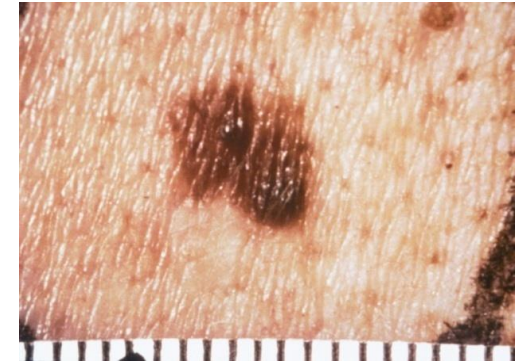
University of Pennsylvania, Abramson Cancer Center



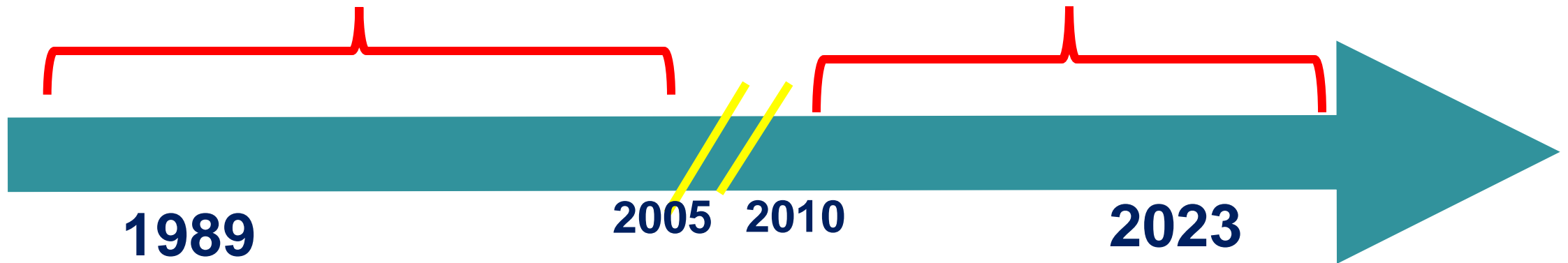
Division of Hematology/Oncology

# What is Melanoma?

- ▶ Melanoma: type of skin cancer that arises from melanocytes- in the cells that given pigment to the skin
- ▶ Most serious type of skin cancer because it can spread to lymph nodes or distant sites
- ▶ For every type of cancer- Stage of cancer is determined.
- ▶ Stage I and Stage II melanoma- confined to skin
- ▶ Stage III travel to lymph nodes
- ▶ Stage IV- spread to distant sites through the blood stream

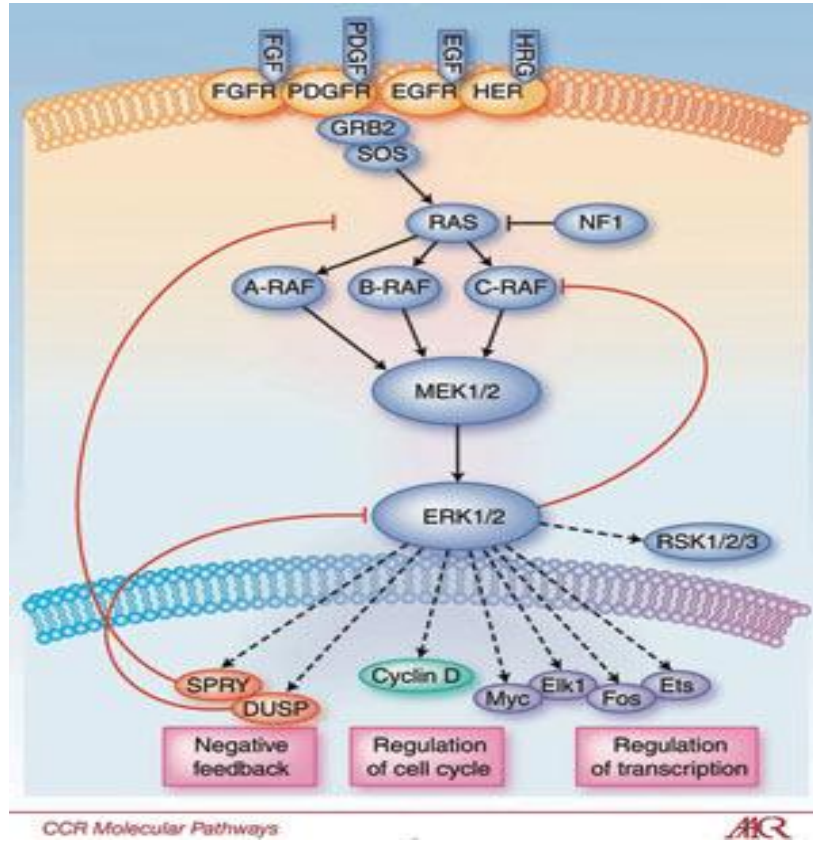


# 30 years- Desert to Tropical Rain Forest

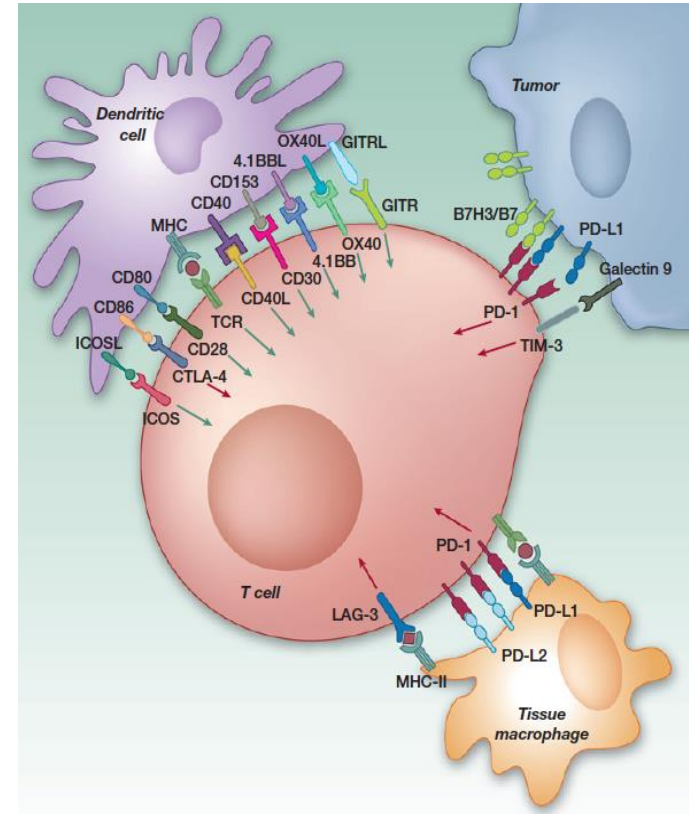


# Unprecedented Progress in Cancer Treatment

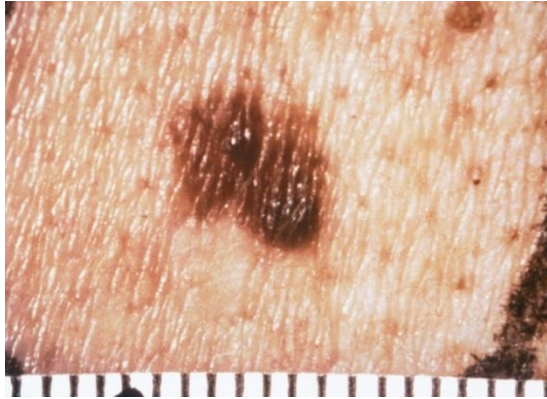
## Targeting MAP Kinase Pathway



## Immune check point inhibitors



# Distinct Somatic Genetic Changes in Melanoma



**Superficial Spreading Melanoma**  
Abnormal gene:  
**BRAF- 50%**  
**NRAS- 20%**

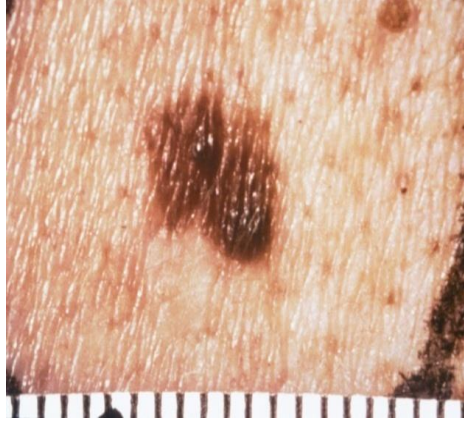


**Lentigo Maligna Melanoma**  
Abnormal gene:  
**C-kit-2%**  
**BRAF- 10%**  
**NRAS- 10%**



**Acral Lentiginous Melanoma**  
Abnormal Gene:  
**C-kit-15%**  
**BRAF- 15%**  
**NRAS- 15%**

# BRAF Targeted Therapy in Melanoma



- 50% of Melanomas- BRAF mutation
- Genotype all patients with Stage III/IV
- BRAF targeted therapy- Adjuvant and metastatic disease

## Targeted Therapy

Dabrafenib

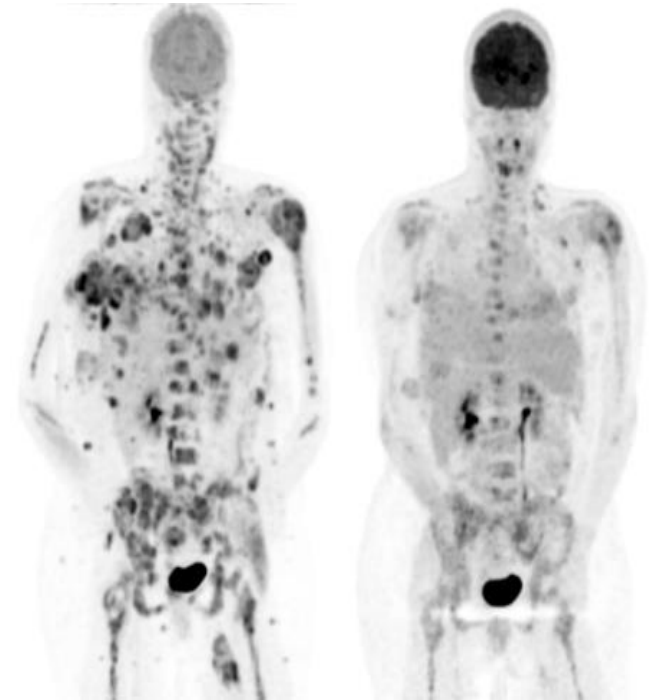
Trametinib

Vemurafenib

Cobimetinib

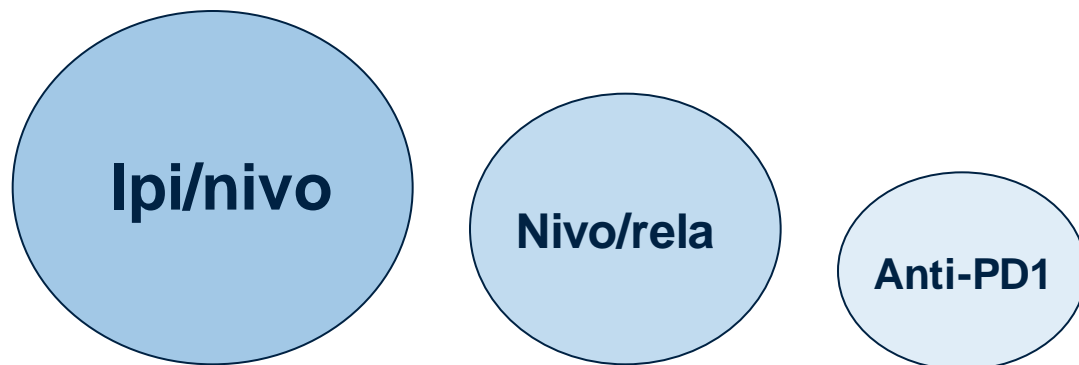
Encorafenib

Binimetinib



# Immunotherapy in Melanoma

- Clinically used to treat all types of melanoma
- FDA approved Adjuvant and Metastatic disease
- Stage II, Stage III, and Stage IV
- Toxicities vary by regimen



## Immunotherapy

Interferon

IL-2

Ipilimumab

Pembrolizumab

Nivolumab

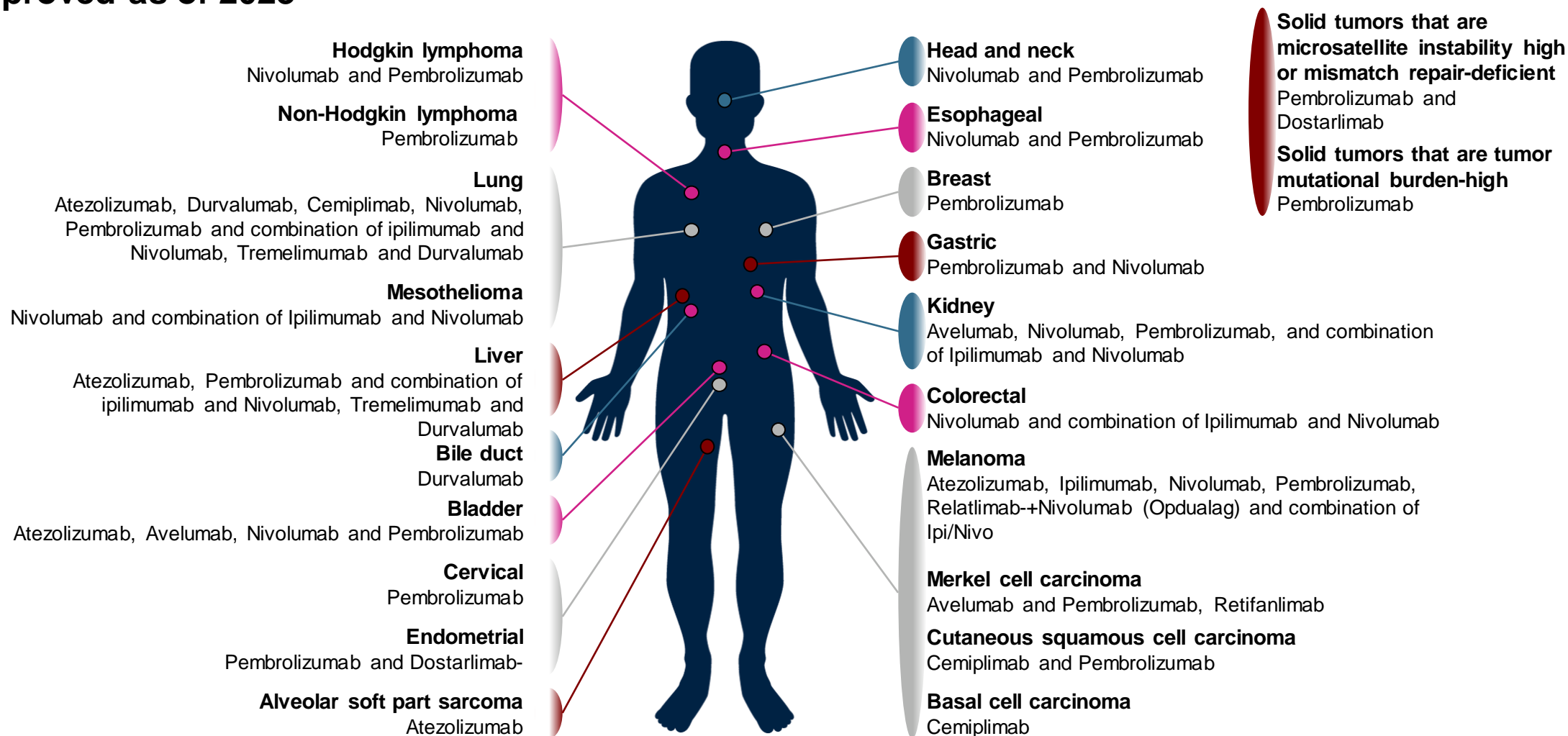
Ipilimumab + Nivolumab

Tebentafusp-tebn

Nivolumab + Relatlimab

# Immune Checkpoint Inhibitors

FDA-Approved as of 2023





# Let's Meet our Patients



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