Malignant Melanoma: An exciting new frontier

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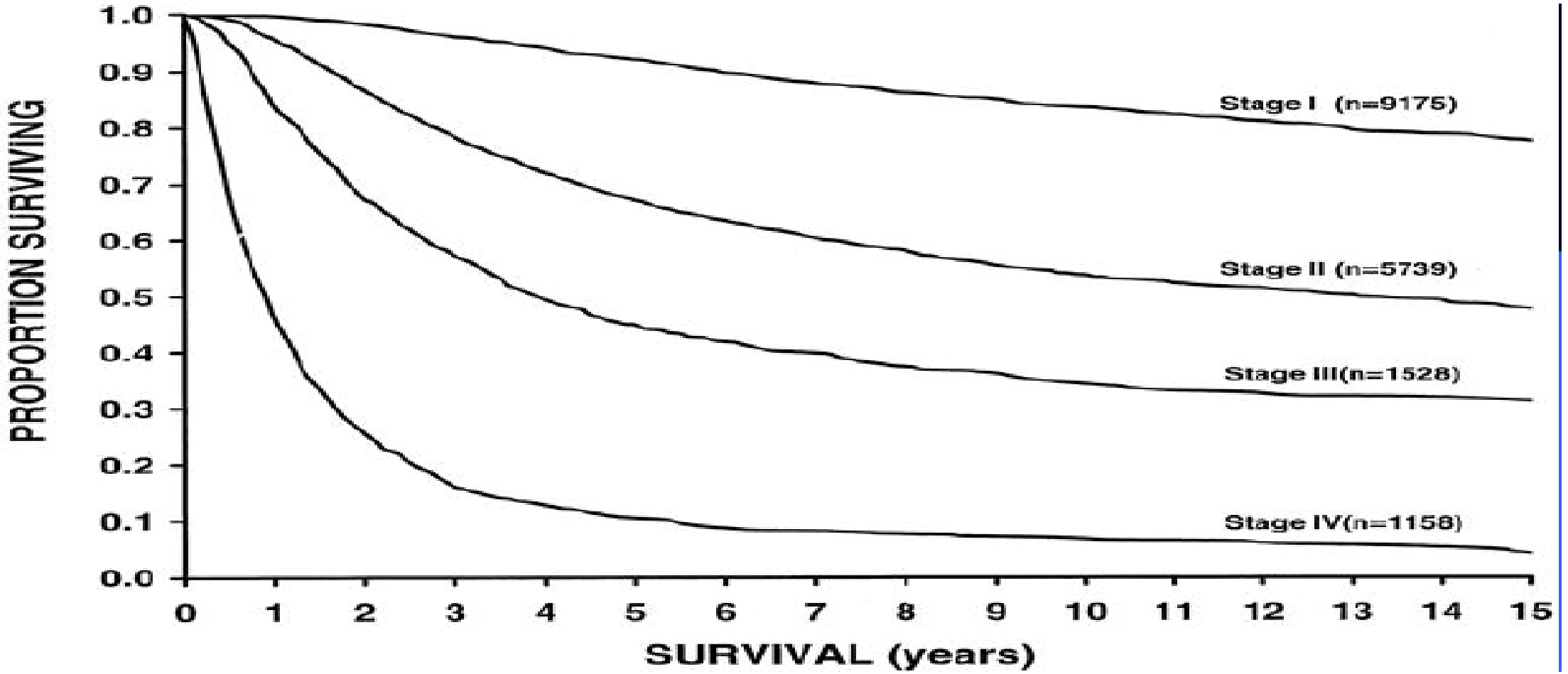
Introduction

- Cutaneous melanoma is a readily curable neoplasm, with 85% of diagnosed patients enjoying long-term survival following simple surgical excision.
- Melanoma has become one of the most rapidly evolving and exciting fields in cancer research over the past years

Melanoma prognosis



Prevention

Reduce your risk of melanoma and other skin cancers by protecting your skin from the sun:

- Wear a broad spectrum (UVA/UVB) sunscreen every day.
- Wear a hat, sunglasses and other sun-protective clothing.
- Seek shade when outside between 10 a.m. and 4 p.m.
- Avoid tanning and tanning beds.

Risk factors

- A personal or family history of melanoma
- Fair skin
- Blue eyes
- History of sunburns
- Having a large number of moles (more than 50)

ABCDEs of Melanoma		Mole	Melanoma
A	**Asymmetry** One half of the mole does not match the other half		
B	**Border** The mole's edges look ragged or blurred		
C	**Color** Uneven coloring with shades of black, brown or other colors		
D	**Diameter** Larger than .25 inches (or 4mm)		
E	**Evolving** Changing size, shape or color		

Diagnostic Tests

Physical exam:

- Your doctor will ask questions about your health history and examine your skin to look for signs that may indicate melanoma.

Biopsy:

- Removing a sample of skin and sending it to a lab for testing to confirm the diagnosis.

TNM staging

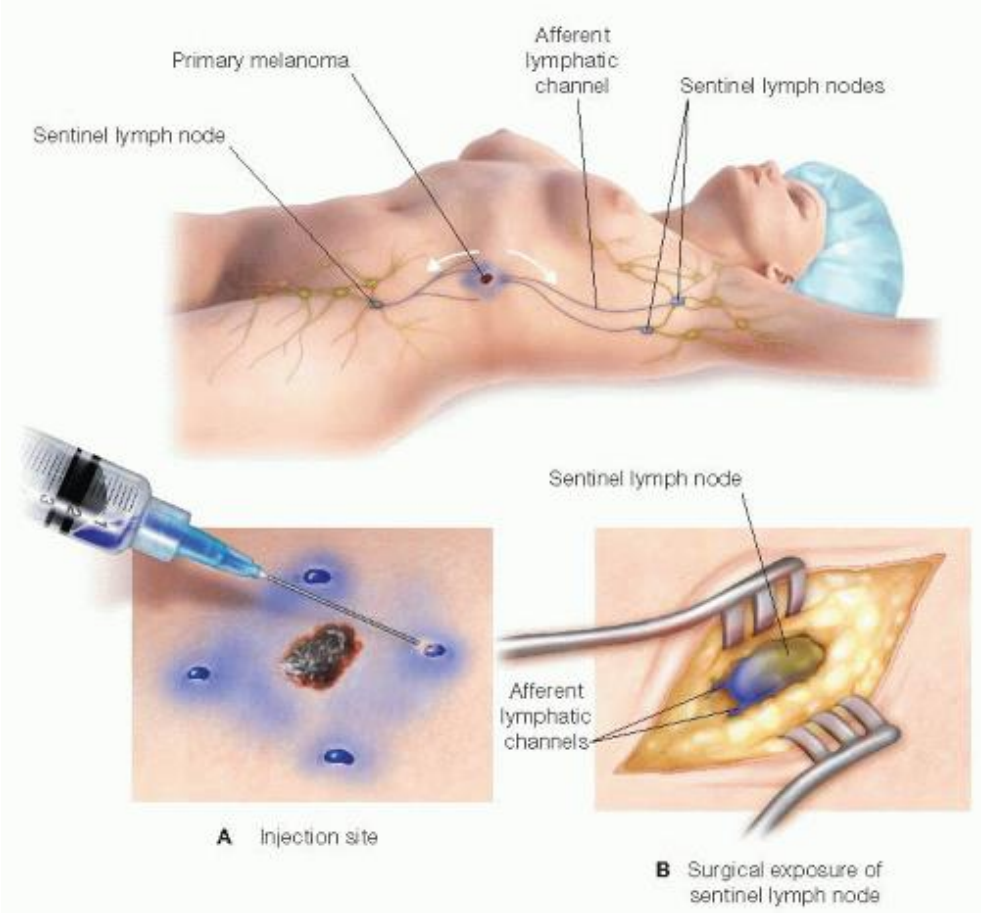
Determine the thickness (T stage)

- The thickness of a melanoma is determined by carefully examining the melanoma under a microscope and measuring it with a special tool.
- In general, the thicker the tumor, the more serious the disease.
- Thinner melanomas may only require surgery to remove the cancer and some normal tissue around it.
- If the melanoma is thicker, your doctor may recommend additional tests to see if the cancer has spread before determining your treatment options.

Staging

Check for lymph node spread (N)

- If there's a risk that the cancer has spread to the lymph nodes, your doctor may recommend a procedure known as a sentinel node biopsy.
- During a sentinel node biopsy, a dye is injected in the area where your melanoma was removed.
- The dye flows to the nearby lymph nodes.
- The first lymph nodes to take up the dye are removed and tested for cancer cells.
- If these first lymph nodes (sentinel lymph nodes) are cancer-free, there's a good chance that the melanoma has not spread beyond the area where it was first discovered.

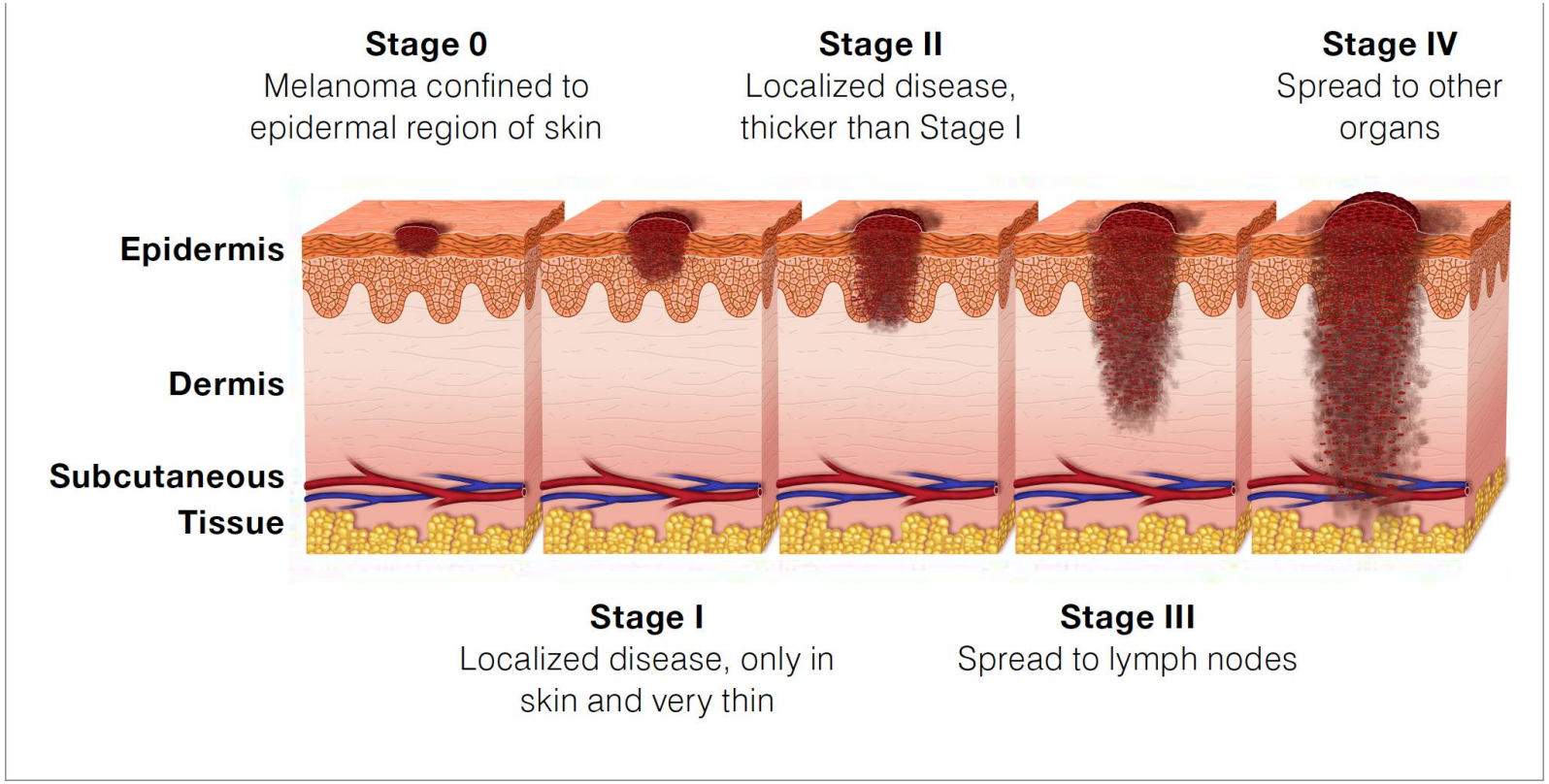


Staging

Look for distant metastases/blood borne spread (M):

- For people with more-advanced melanomas, doctors may recommend imaging tests to look for signs that the cancer has spread to other areas of the body.
- Imaging tests may include CT scans and positron emission tomography (PET) scans.
- These imaging tests generally aren't recommended for smaller melanomas with a lower risk of spreading beyond the skin.

Staging


Stage 0
Melanoma confined to epidermal region of skin
Stage II
Localized disease, thicker than Stage I
Stage IV
Spread to other organs
Epidermis
Dermis
Subcutaneous Tissue
Stage I
Localized disease, only in skin and very thin
Stage III
Spread to lymph nodes

Treatment options for small melanomas

- Usually entails surgery to remove the melanoma.
- A very thin melanoma may be removed entirely during the biopsy and require no further treatment.
- Otherwise, your surgeon will remove the cancer as well as a border of normal skin and a layer of tissue beneath the skin.
- For people with early-stage melanomas, this may be the only treatment needed.

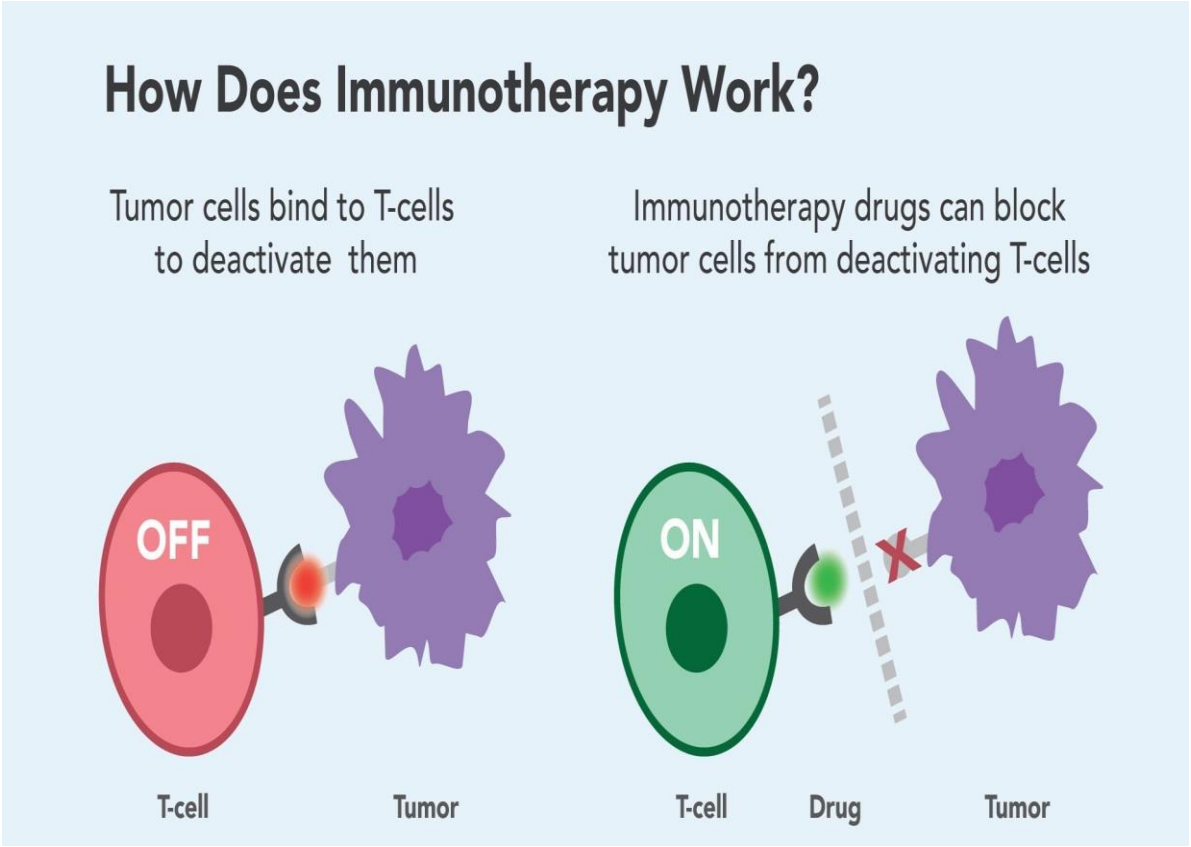
Treating melanomas with spread beyond the skin

Treatment options may include:

- Surgery to remove affected lymph nodes.
- If melanoma has spread to nearby lymph nodes, your surgeon may remove the affected nodes.
- Additional treatments before or after surgery also may be recommended.

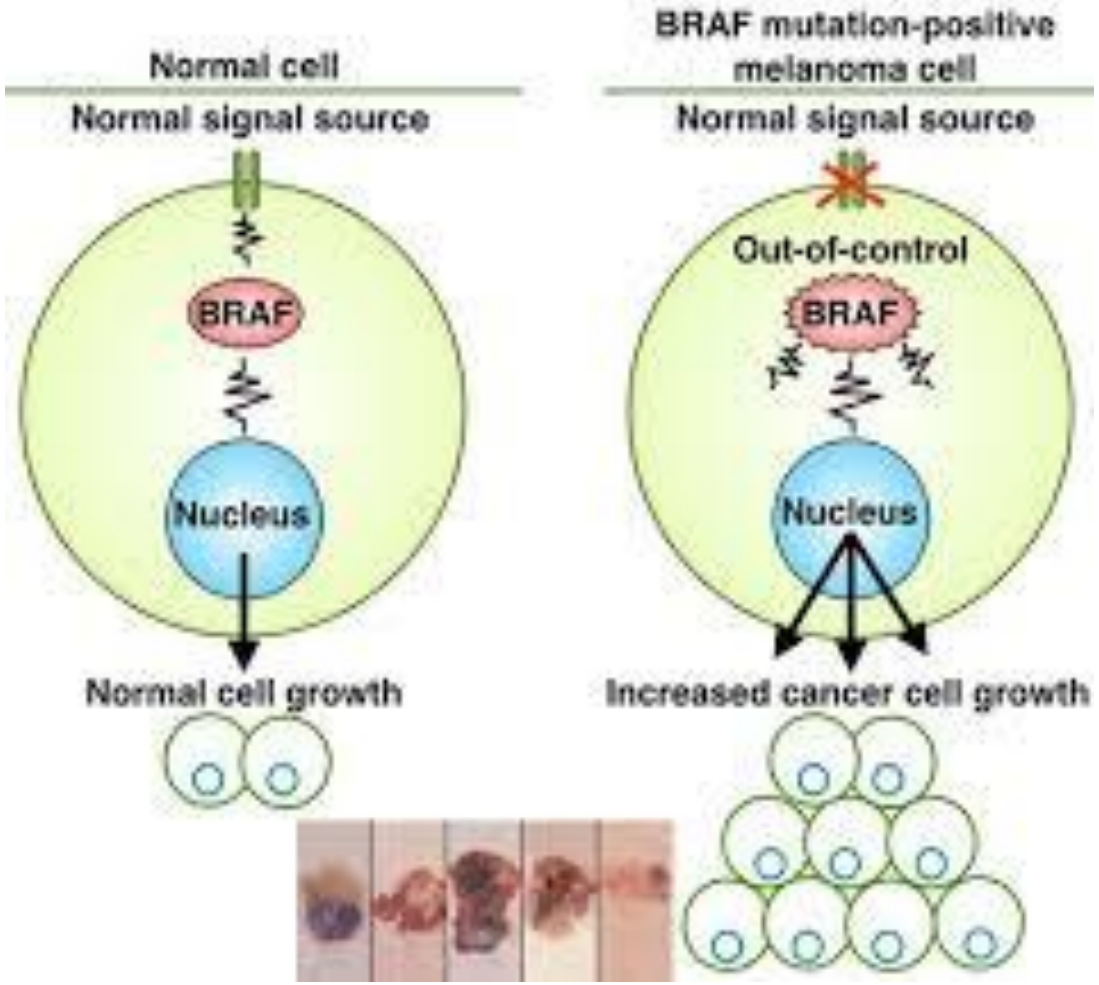
Immunotherapy

- Immunotherapy is a drug treatment that helps your immune system to fight cancer.
- Your body's disease-fighting immune system might not attack cancer because the cancer cells produce proteins that help them hide from the immune system cells.
- Immunotherapy works by interfering with that process.
- Immunotherapy is often recommended after surgery for melanoma that has spread to the lymph nodes or to other areas of the body.



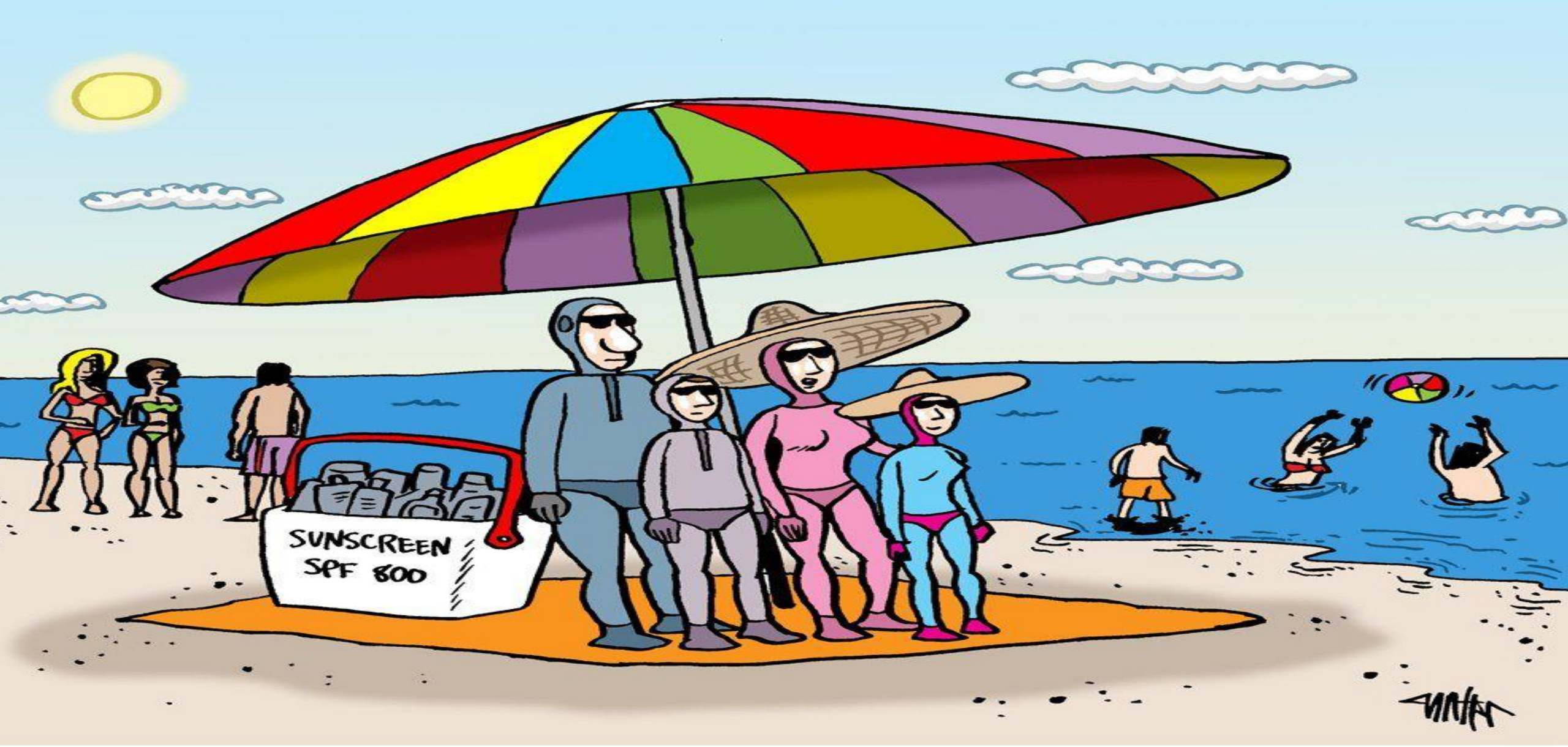
Targeted therapy

- Targeted drug treatments focus on specific mutations (BRAF) present within cancer cells.
- By targeting these mutations, targeted drug treatments can cause cancer cells to die.
- Cells from your melanoma may be tested to see if targeted therapy is likely to be effective against your cancer.
- For melanoma, targeted therapy might be recommended if the cancer has spread to your lymph nodes or to other areas of your body.



Radiotherapy

- Approximately 20% of patients are found to have brain metastasis at the time of diagnosis of metastatic melanoma, and more than 50% develop brain metastasis during the disease.
- Historically, patients with brain metastases were treated with whole brain radiotherapy.
- Stereotactic radiosurgery (SRS) is a specialised form of radiotherapy that offers an effective and less neurotoxic alternative to whole-brain radiotherapy.



MELANOMA RESEARCHER TAKES THE FAMILY TO THE BEACH.