

The cost of success - living with the side effects of new cancer treatments

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Good News

- New Drugs are curing more patients
- New drugs help patients live with incurable cancer for longer
- Side effects of new drugs different to chemotherapy
- Quality of Life usually better with new drugs than with chemo
- But... Not every patient benefits

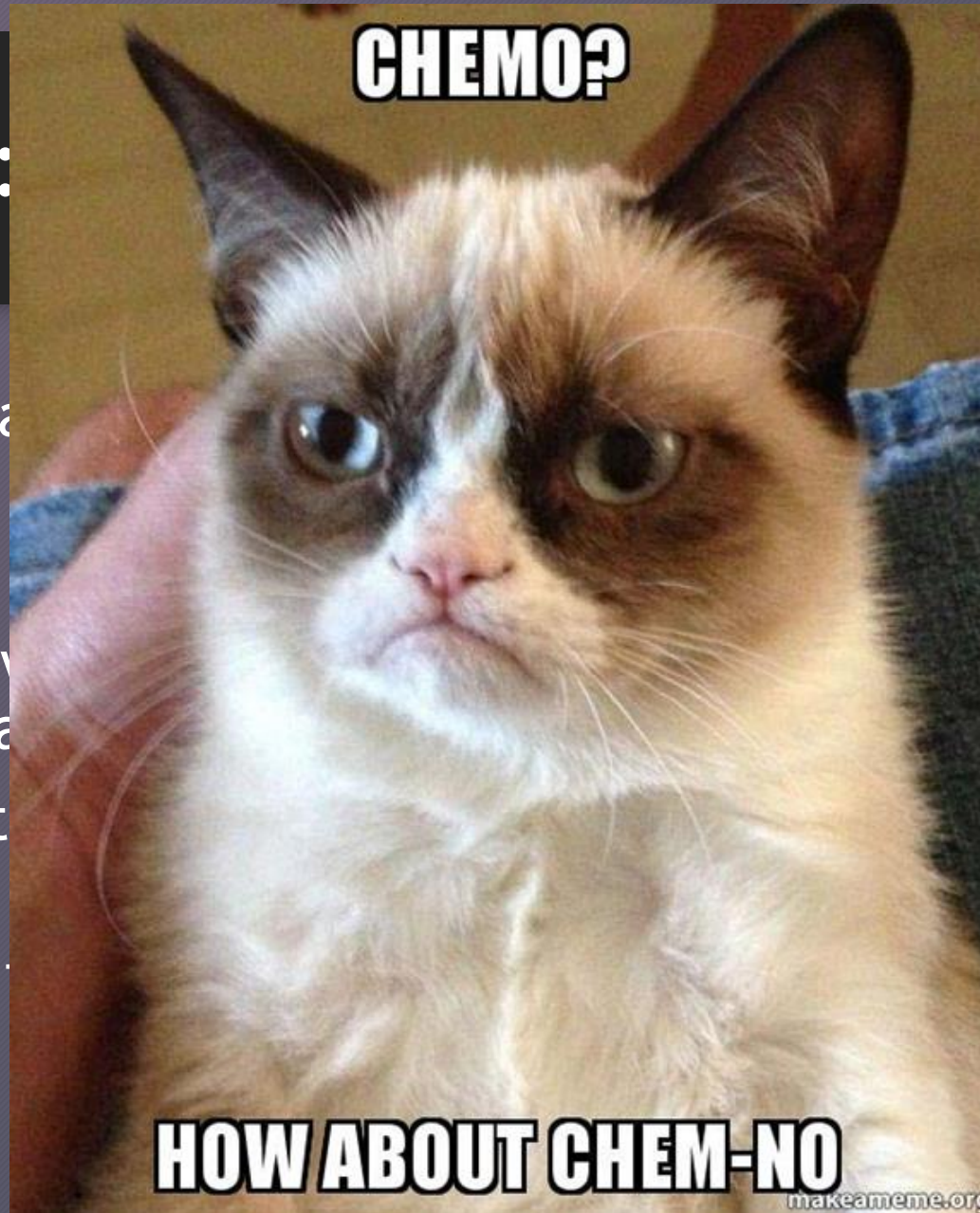


New Drugs: Tyrosine Kinase Inhibitors

- Turn off a signalling pathway in the cancer cell
- More targeted than chemotherapy
- Still have side effects - on target and off target
- May cross blood brain barrier - good for preventing/treating metastases - may have brain side effects

New Drugs:

- Some cancers are
- We have drugs that can attack it
- More patients with esophageal cancer
- Patients with thyroid cancer, kidney cancer,
- But... Difficult



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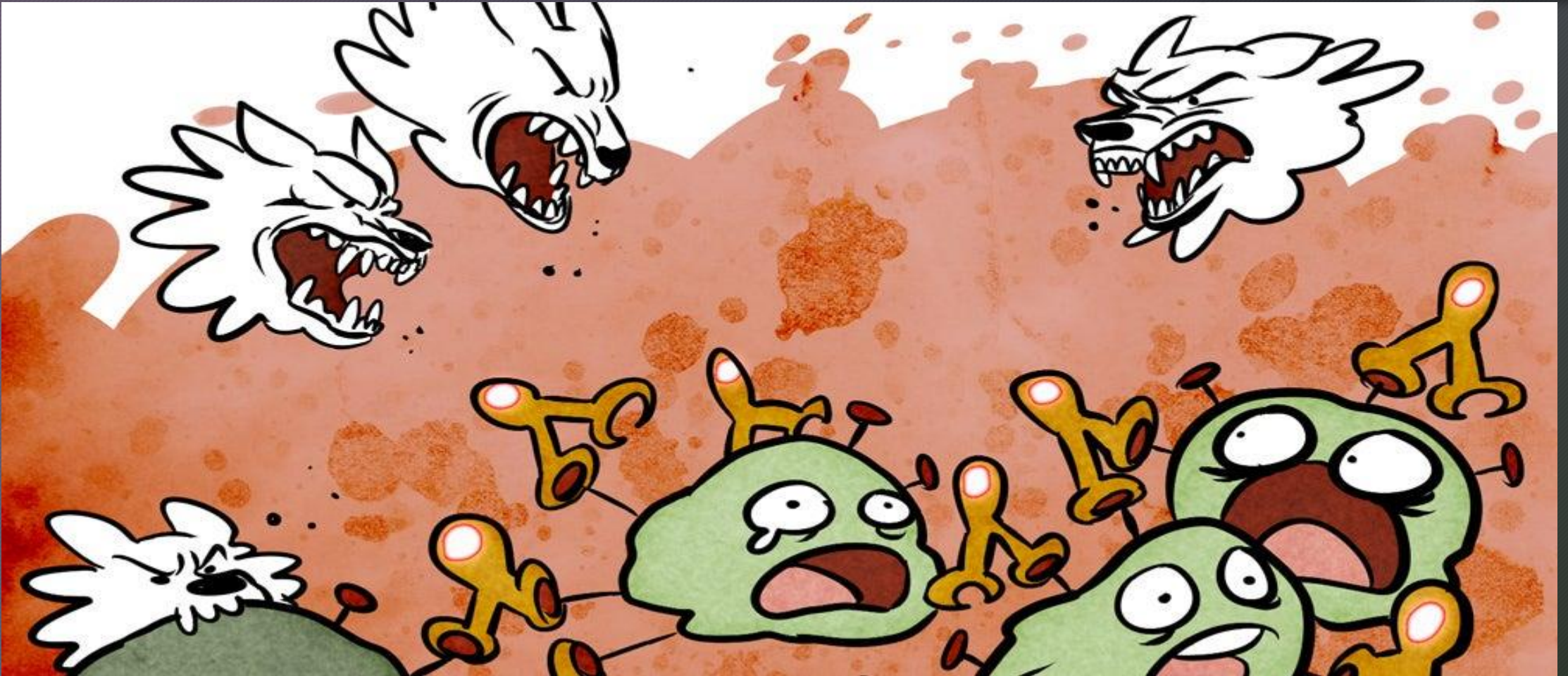
immune system

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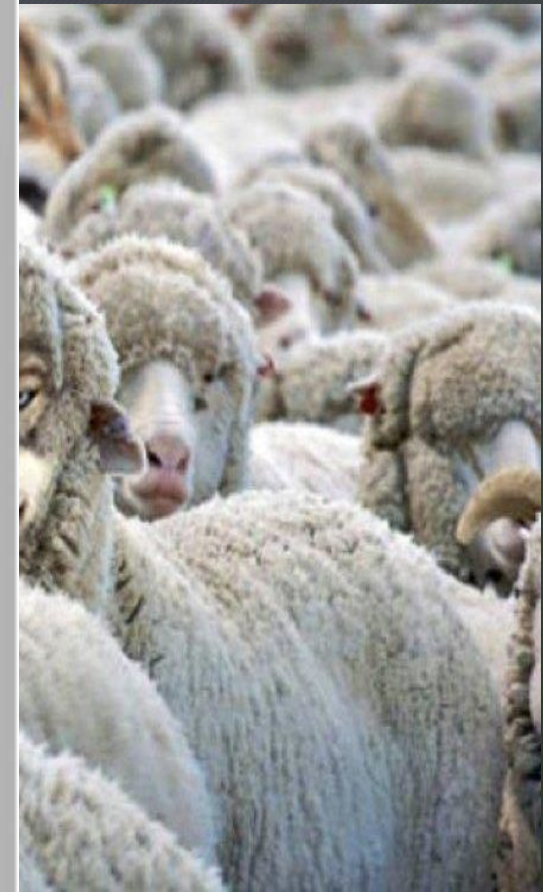
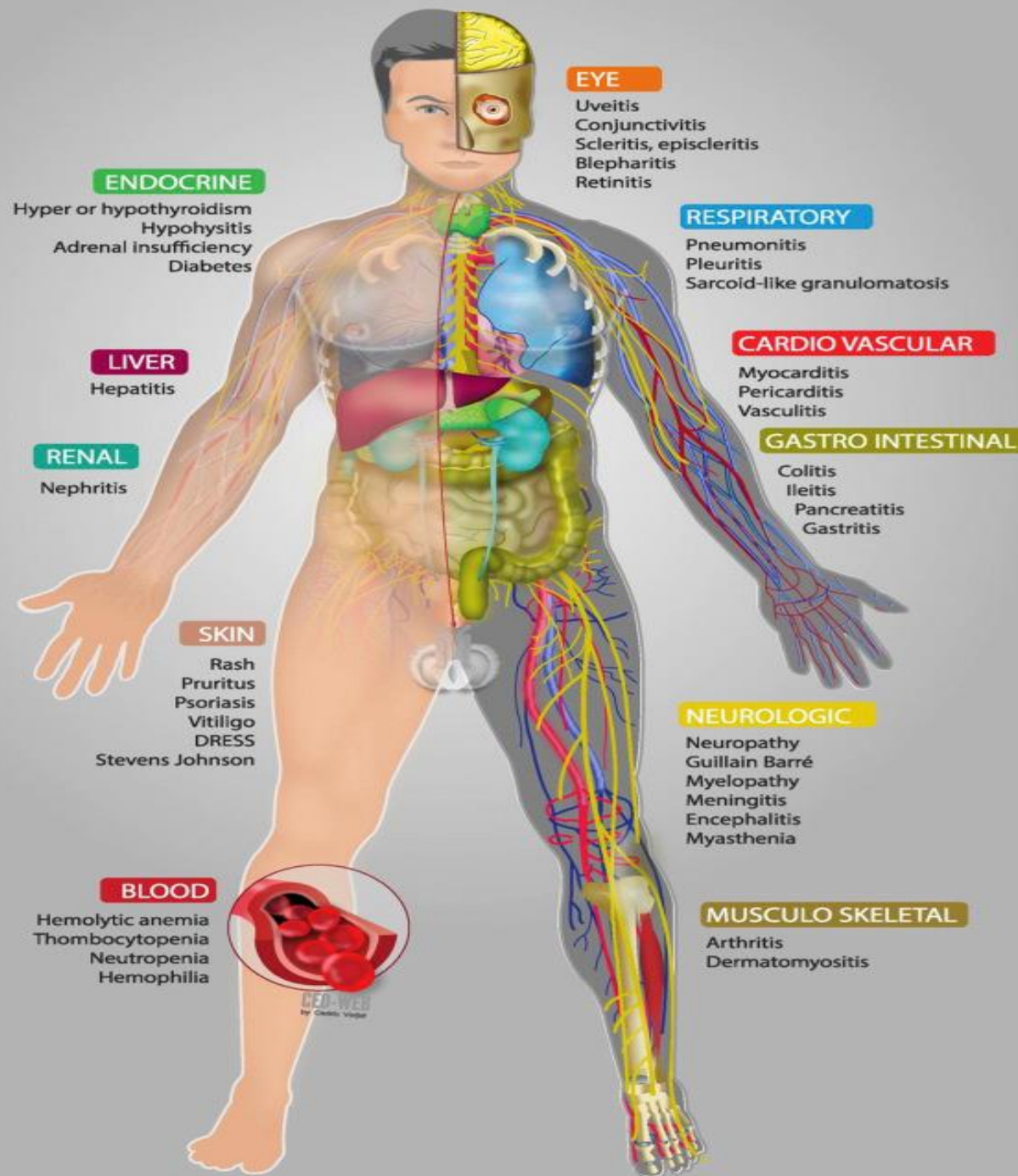
will respond

When Immune Cells Awake! ... Cancer Cells Flee



Unleash t

- Imagine T cells as
- These new drugs
- We hope they go
- But... they may at



What happens if the unleashed immune system attacks my

- Skin → Rash
- Lungs → Cough
- Gut → Sore mouth , diarrhoea
- Pancreas → Diabetes
- Joints → Arthritis

How do we

- Steroids - create weight gain
- Hormone Replacement Therapy
- Sometimes with chemotherapy, especially in the gastrointestinal system
- We may need to manage weight gain like Infliximab



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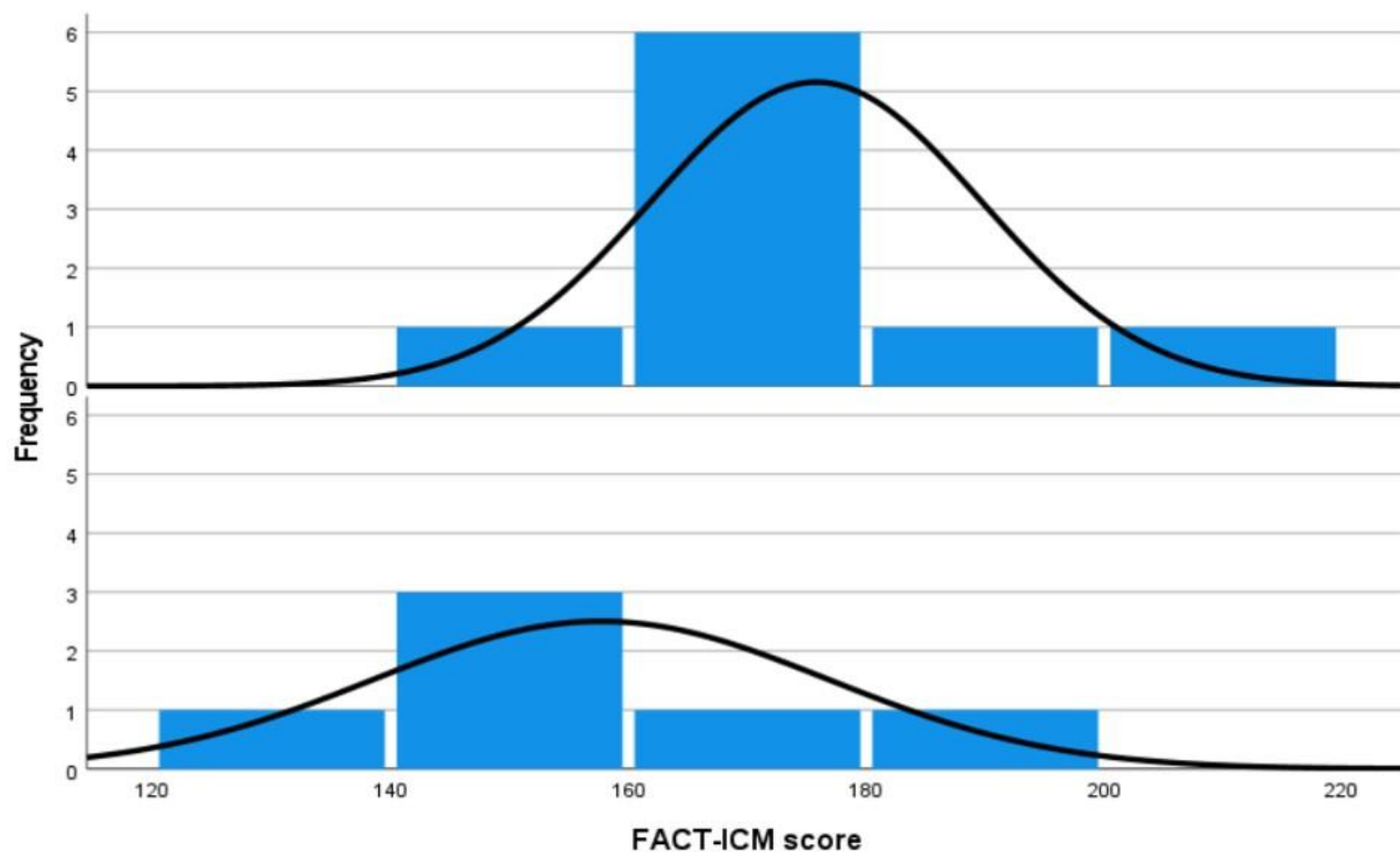
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Fatigue - common and poorly understood

- Frequent complaint - 62% of melanoma patients
- Need to rule out anaemia, low thyroid hormone
- Check B12, folate levels
- Consider anti depressants, counselling
- Diet and Exercise help - walking, lifting light weights

Life is better with less chemo



IO alone

IO and Chemo

Exercise as treatment



Benefits

- Improves Mood
- Maintains muscle
- May have an anti cancer effect
- May help the immune system
- Fit people tolerate side effects better

Barriers to Exercise

- Fatigue affects motivation
- Housework, Gardening and Childminding are also exercise
→ you may be too tired to do “real exercise” after a busy day!

Autoimmune Side Effects Not Always Bad

- Patients with autoimmune side effects have...
Increased rates of cure and/or long term disease control - proof we've woken the dozing immune bear!
- Depending on severity can wean off steroids and then rechallenge to check for tolerance
- Several of my metastatic melanoma patients who developed severe autoimmune hepatitis are free of disease off treatment, years later

How to get the most out of your immunotherapy

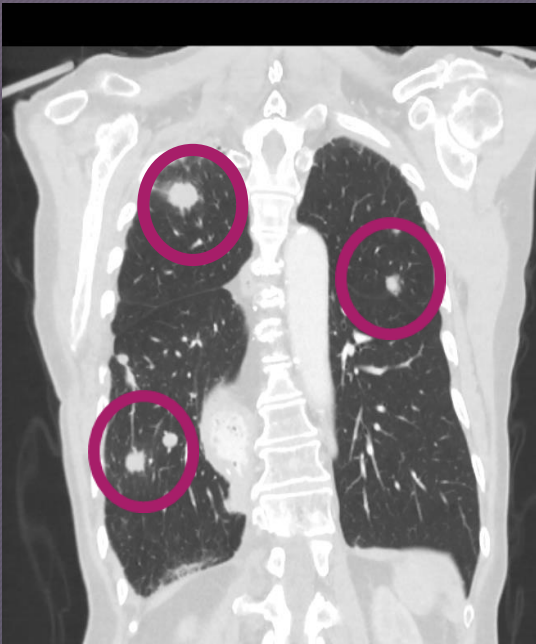
- Stay off probiotics
- If possible avoid/minimize antacids and antibiotics
- If you ring at night with problems, gently remind your team that you're on immunotherapy (may be on chemo as well)
- Its not easy for nurses and doctors to figure out whether your cough is coming from cancer, chemo, infection or immuno - we have to investigate all of these possibilities
- Let us know what you're experiencing, when it started and how bad it is

Patient Story - shared with his permission

- 70 year old man, fit and active
- Metastatic Oesophageal Cancer to lungs
- Excellent Care with chemotherapy in HSE South
- Referred to me for compassionate access Atezolizumab (4 cycles only)

Sometimes things look worse...
before they get better

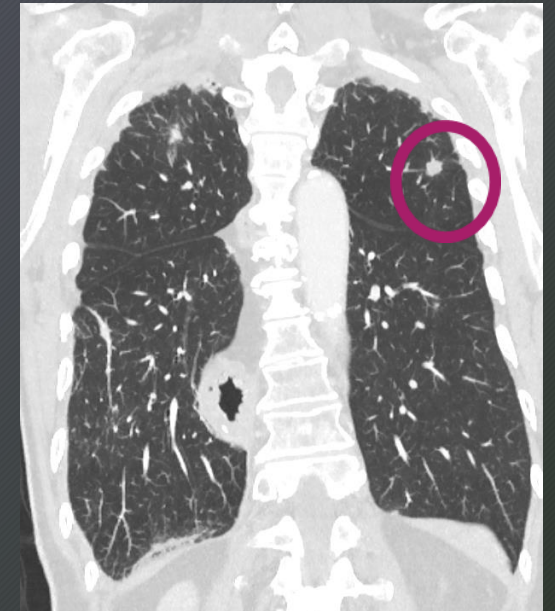
Baseline CT Chest



Scan at 3 months



Scan at 9 months



Patient Story - shared with his permission

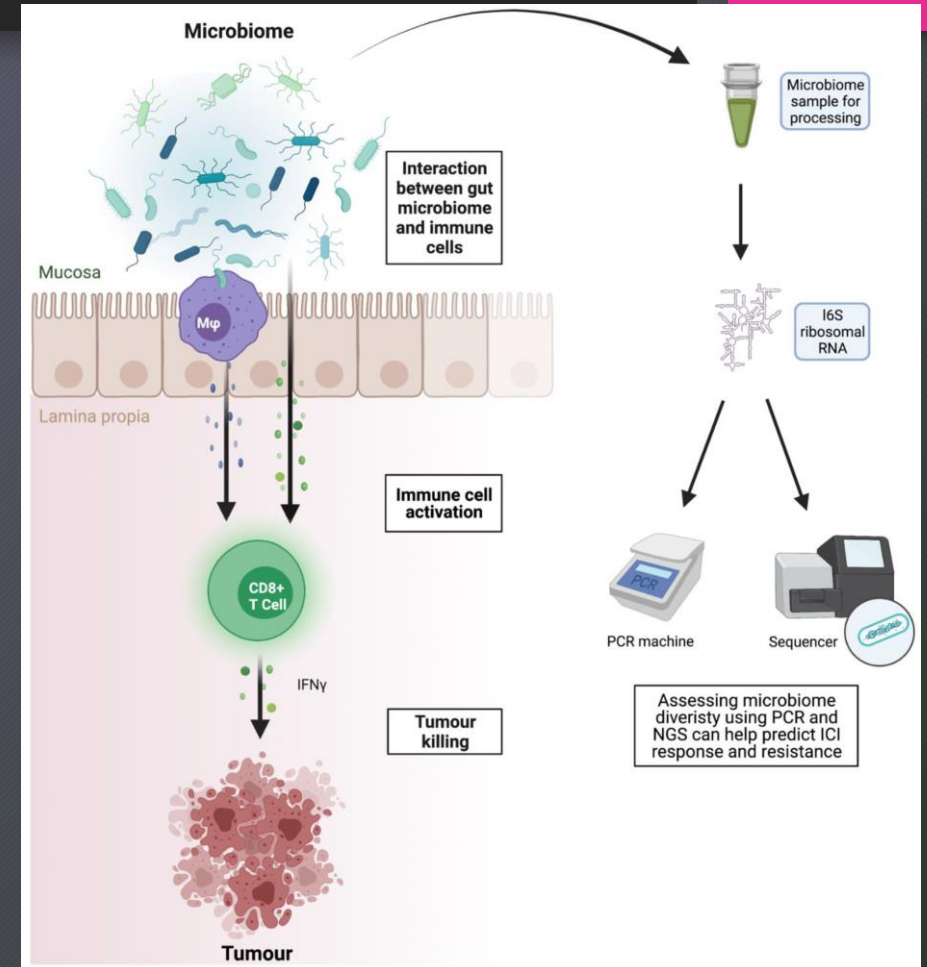
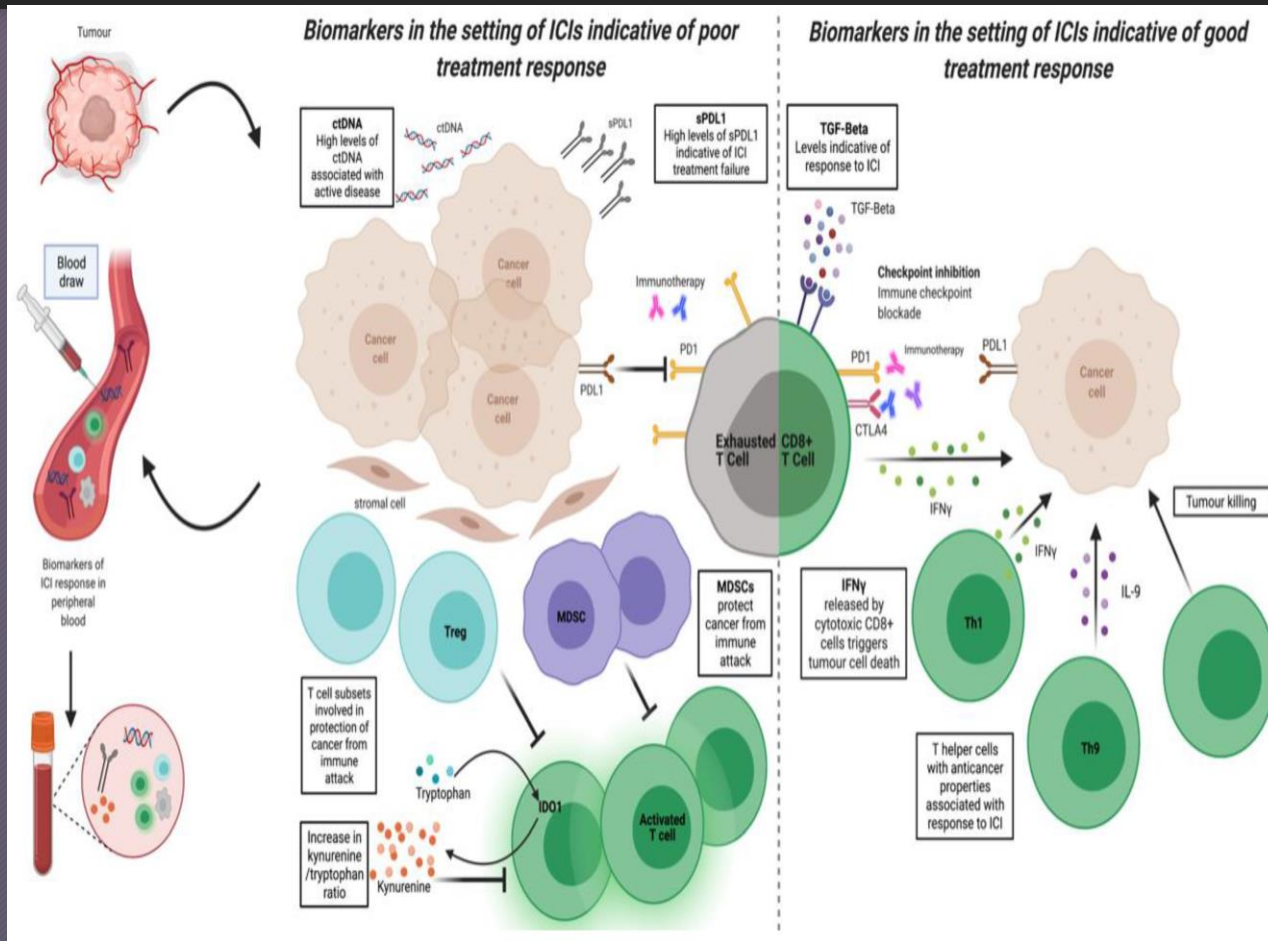
- 3 months immunotherapy on Atezolizumab
- Disease shrank for 1 year
- Disease then grew, then responded to few months oral chemo
- Then, responded well to compassionate access immunotherapy Nivolumab - stopped for fatigue
- Now reluctantly going back on Nivolumab after a 9 month break

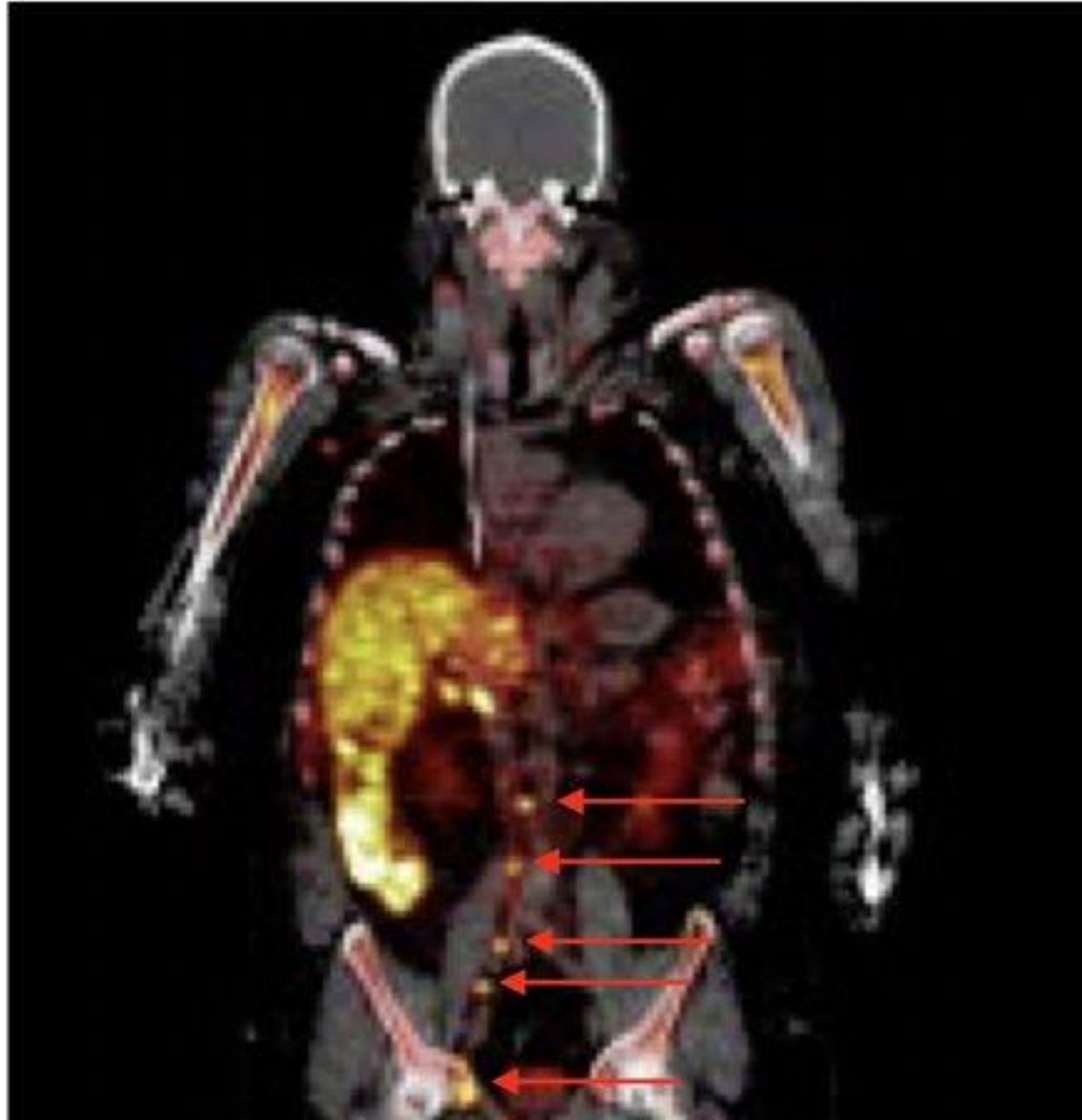


Future Directions

- Better Cancer and Immune Biomarkers are needed to predict response and toxicity
- Starting to use Immunotherapy in patients with pre-existing autoimmune disease
- Some patients may benefit from Faecal Oral Transplant
- New types of immunotherapy drugs are starting to enter the field - Relatimab just approved by CHMP for melanoma
- Neutrophils may protect cancer cells... so neutrophil inhibitors just entering trials

My Ongoing Research: working to predict who will benefit from immunotherapy





Summary

- We are only learning how to use immunotherapy and manage its side effects
- “Targeted” Drugs have real side effects
- By listening to the patient and by following protocol these side effects can be managed
- There is always an element of trial and error - if one drug doesn't control a side effect, others will be tried

Acknowledgements

- Patients and their families
- Nursing, Medical and Pharmacy colleagues
- And my daughter who made this legible and provided memes

