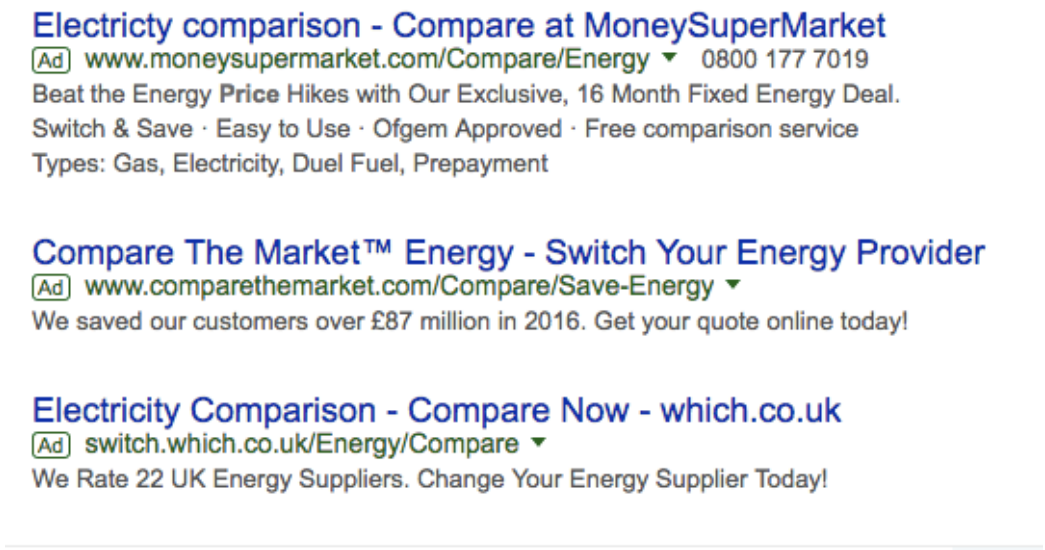
Making choices

All decisions have uncertainty

Making the wrong decision has consequences

We are more likely to make the right decision if we have a look at the evidence



The Value of Research

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When the decisions are about choosing cancer treatment they are hard to make

Consequences have an opportunity cost (health for a patient and cost for the NHS)

Research can reduce uncertainty about a decision

Melanoma: sentinel lymph node biopsy – yes or no?

Use this option grid to help you and your healthcare professional decide whether or not to have sentinel lymph node biopsy. It contains information about the procedure itself, its advantages and disadvantages and also about prognosis which some people may not want to have at this time.

Frequently Asked Questions	Having sentinel lymph node biopsy (SLNB) with follow up	Follow up without sentinel lymph node biopsy
What does it involve?	SLNB is an operation to see if the melanoma has spread to the lymph nodes (often called glands) nearest to the melanoma. This is usually done at the same time as removing more tissue from around the original scar. It is usually done under a general anaesthetic. You will also have regular follow up checks.	This means having regular follow up checks to examine the lymph nodes.
What might the results mean?	In 80 of every 100 patients (80%), SLNB will show no melanoma in the lymph nodes. Although this may be reassuring, some people may feel that the operation was unnecessary. If SLNB shows no melanoma cells in the lymph nodes the outlook is good and around 90 in every 100 people (90%) will be alive 10 years later. If SLNB shows melanoma cells in the lymph nodes the outlook is less good, only around 70 in every 100 people (70%) will be alive 10 years later.	Does not apply
Is my chance of being cured improved?	No, having SLNB does not improve your chance of being cured.	No, choosing not to have SLNB does not improve your chance of being cured.
What are the advantages?	A SLNB result will show if the melanoma has spread to the lymph nodes, and indicates the chance of future spread. Knowing more about whether the melanoma is or is not likely to spread in the future can be helpful. Having SLNB may allow you to take part in clinical trials of new treatments for melanoma. If SLNB shows melanoma cells in the lymph nodes, you may be offered an operation to remove the rest of the lymph nodes (see Completion Lymphadenectomy Option Grid).	Not having SNLB means that you do not have an operation and the risks that come with it.

Immunotherapy for stage IV melanoma

Current choice is a drug which blocks a protein called PD-1 (such as nivolumab) OR nivolumab combined with a drug which blocks a protein called CTLA4 (ipilimumab)

There are pros and cons for the patient

- In a proportion of patients neither the single or combination therapy gives the patient any benefit in terms of more time (25% with the combination and 40% with the single agent alone) *** figure are preliminary
  - So if we could predict this then those 25 to 40% could try something else which might work
- The combination therapy is much more toxic: the side effects are so significant that 1/3 of the patients stop the therapy
  - If we had a biomarker (a test of some sort) which predicts who would suffer too much from the side effects they could try the single agent therapy alone
- There is some evidence that we might be able to predict a proportion of patients who don't actually need the combination anyway: they do just as well with single agent treatment

Issues for the NHS as a whole

Cost of the drugs when they don’t work for everyone

Cost of treating the side effects when the drug in the end wont help the patient

Weak economy, aging population, ever more expensive drugs

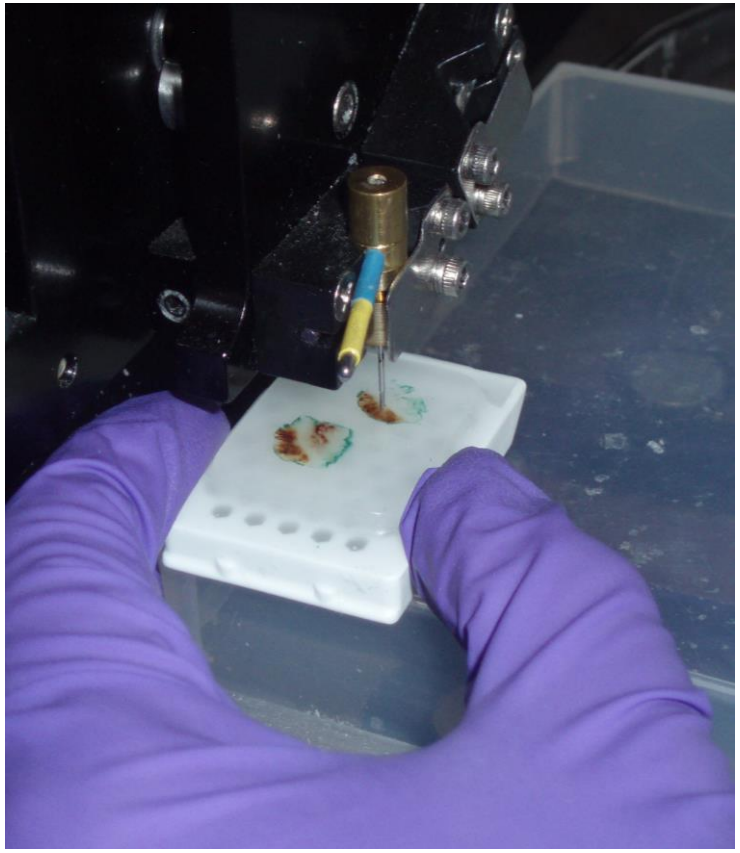
Therefore value for money is what the NHS wants to see

The MRC Stratified Medicine Consortium LATERAL

A proposal to find and develop tests (either blood tests or tests of the stored tumour samples) which would predict which drug choice would be better for an individual patient

The research will require thousands of patients to take part in the research when they start immunotherapy

- Blood tests
- Giving consent to use stored tumour samples



Issues we consider in setting up this sort of research

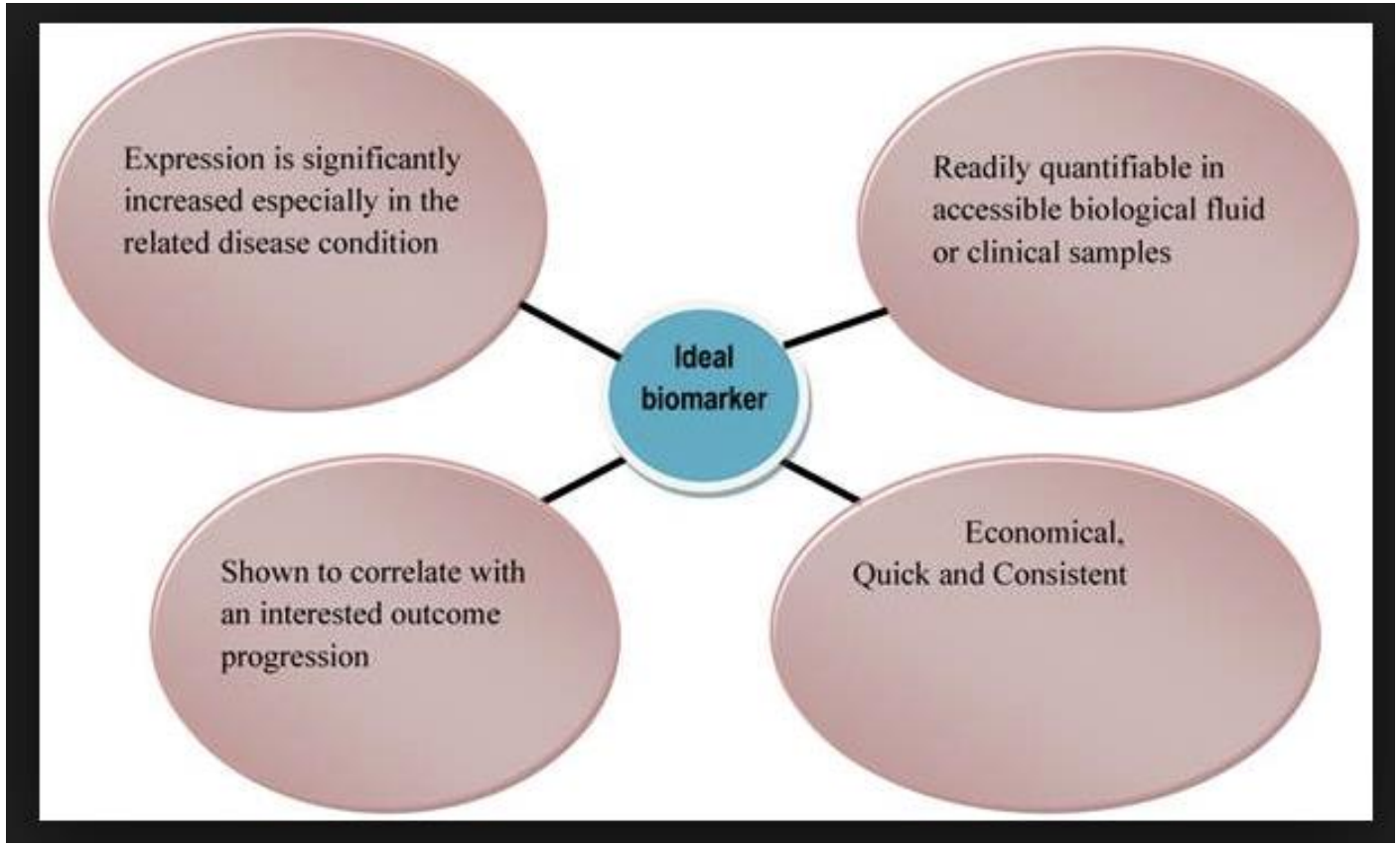
Ethics

- Consent
  - Use of tissues
    - Human Tissue Act
    - Would the patient ever need the tissue for another reason?
  - Does the patient really understand what is entailed?
- Data protection
  - Access to cancer registry data very useful to the researchers but these data might be considered by some to be private
  - Are the researchers keeping the data safe and private

Is the research likely to work?

- Would having blood tests put patients off?
- Would it put medical teams off (more work for them in an already stretched system)?
- How many patients are needed to get a definite answer?
- Can we afford the research?
- Can we afford not to do the research?

What is a good biomarker?



J Cancer 2010; 1:150-177. doi:10.7150/jca.1.150

Review

Novel diagnostic biomarkers for prostate cancer

Chikezie O. Madu, Yi Lu

An issue is the level of certainty the biomarker allows

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So

We anticipate that at the end of the consortium's work, there are a number of drug options and we would like to develop a test which predicts which combination would be most likely to work

What happens if no treatment is likely to work?

- Depends upon what "likely" means
  - What is a likelihood of benefit that would be acceptable to the patient?
- Depends upon the toxicity/likelihood of response balance
- May depend on the individual