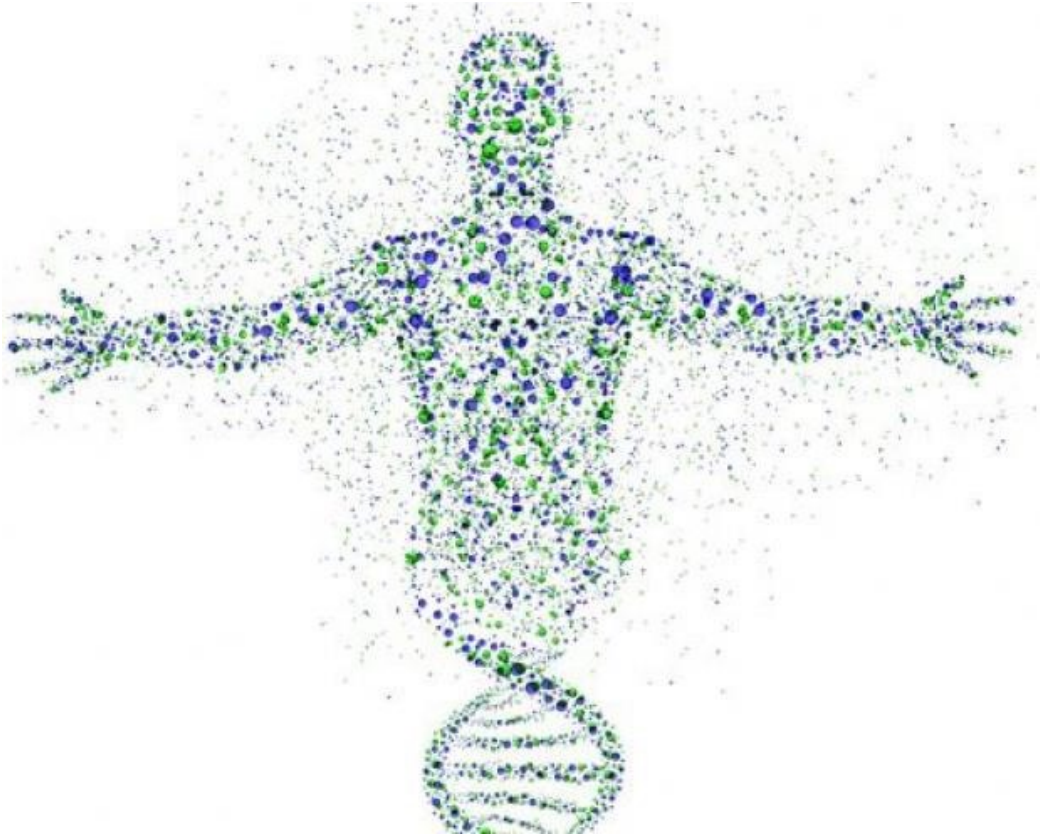
Biomarkers and Cancer: Saving Lives and Money

Marc R. Matrana, MD, MS, FACP
System Medical Director of Precision Medicine,
Endowed Professor, and Senior Medical Oncologist
Ochsner Health, New Orleans, Louisiana

What is a biomarker?

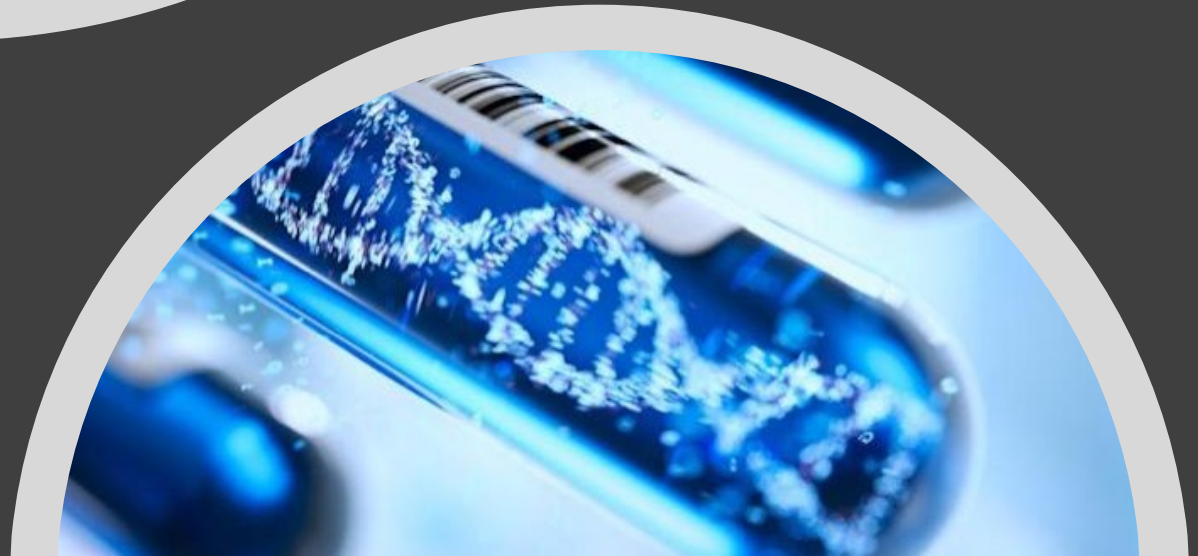
- Anything in the human body that can be measured to help predict a patient's risks of a disease, help diagnose a disease, or guide treatment.

- In cancer patients, biomarkers may include genes and proteins found in blood or tumor tissue.



The rise of genomic medicine

- The science of genetic biomarkers to personalize healthcare is advancing RAPIDLY.
- In 2003, sequencing the first human genome was completed. It took 13 years and $2.7B.
- Today, we can sequence any patient's genome in a few days for $200 or less.



Why are biomarkers important in cancer?

- Biomarker testing saves lives!
- Testing biomarkers in is CRITICAL to selecting the right therapy and is often recommended by national guidelines.
- Up to 40 percent of cancer patients have actionable mutations on sequencing, which often changes their therapies.
- Failure to follow guideline recommendations like testing for comprehensive biomarkers can be considered malpractice.

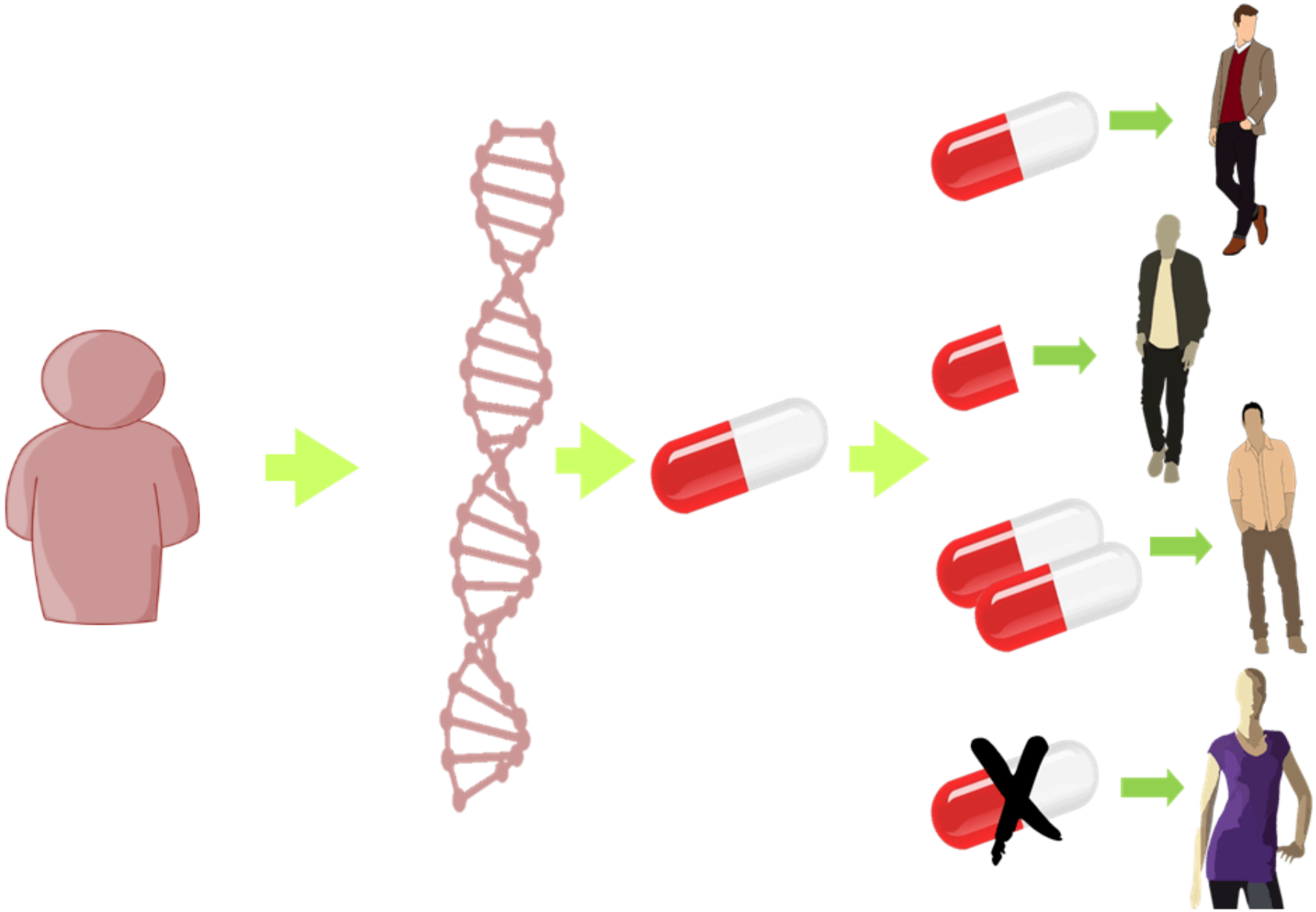
Real Case Example

- 70-year-old gentleman with Stage IV prostate cancer, progressed through multiple lines of therapy including radiation, hormonal based therapies, and chemotherapy.
- Next generation sequencing was performed and showed that the patient cancer was MSI high, suggesting that immunotherapy would work well.
- He was started on 30 min long infusions once every 6 weeks. After two infusions, his cancer was shrinking dramatically, and he had never felt better.

Legislation is needed

- To ensure that patients have access to standard of care testing to determine the most appropriate, more effective, and least harmful therapies.
- Some states, (Arizona, Illinois, Louisiana and Rhode Island), have already passed bills ensuring comprehensive biomarker testing is available to patients when supported by medical and scientific evidence.

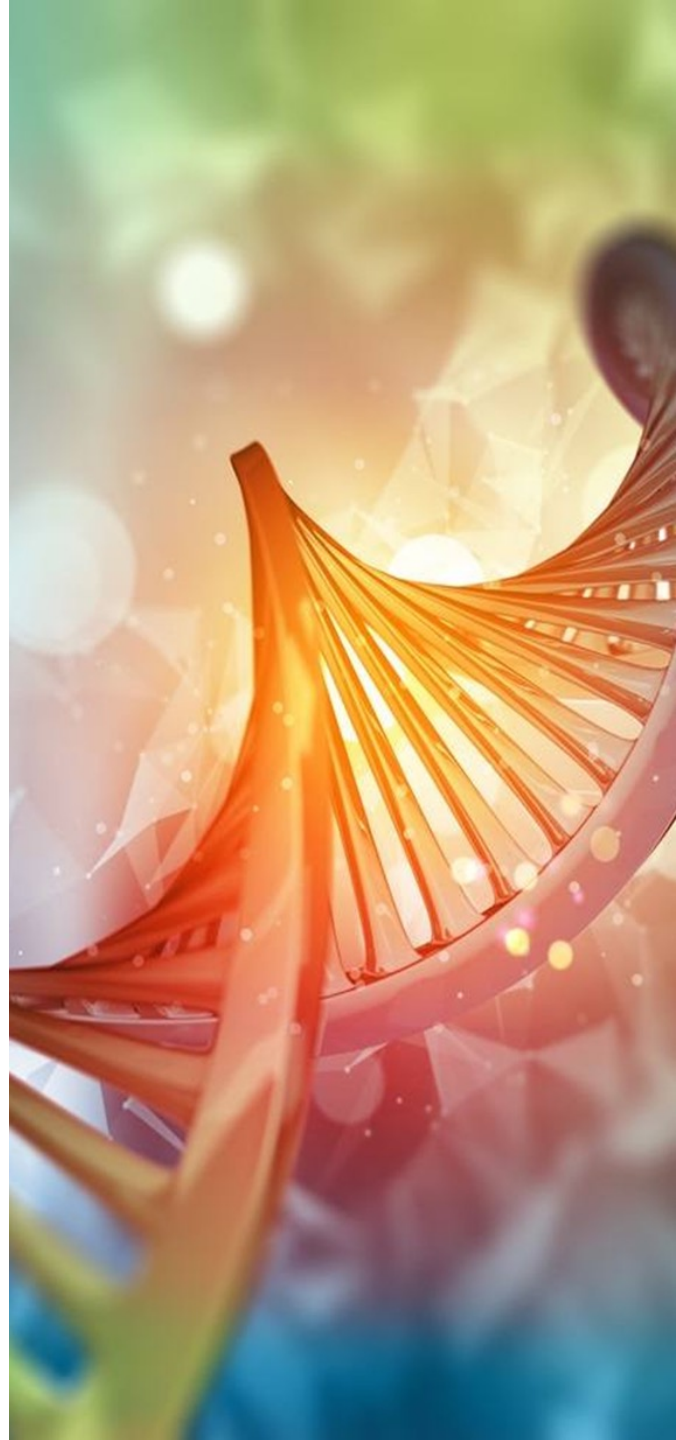
Dose and Medicine Selection Based On Genomic Profile



What this legislation won’t do:

- It will NOT require plans to cover unnecessary or unproven tests

- It ties coverage to proven sources of evidence:
  - FDA-approved/cleared tests or labeled indications for FDA-approved drugs
  - CMS coverage determinations
  - Nationally recognized clinical practice guidelines like NCCN.



What this legislation won't do:

- It will NOT increase costs.

- Comprehensive biomarker testing has been shown to **REDUCE** overall costs.
- When patients are on the right therapy, they often thrive, with less side effects, less time in the hospital, and fewer expensive therapies that don't work.
- Many plans are already covering much of this testing. This legislation creates common sense standards and requires all plans to play by the same rules and follow the science.