



Bright Ideas in Lung Cancer

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HOPE

\hoʊp\ n. v. hoped hop-ing

the feeling that what is wanted can be had or that events will turn out for the best; to believe, desire; to place trust; rely

Hope

- Why here?
 - Lung cancer remains the number one cause of cancer deaths
 - Why now?
 - The face of cancer and lung cancer is changing

Hope for the future

- Screening
 - To find disease earlier and allow better treatment
 - To increase the number of survivors
- New treatments
 - Not just old drugs doing different things
 - New drugs doing different things

Cancer Screening

- Cancer screening well established for:
 - Colon – colonoscopy
 - Breast – mammogram
 - Prostate – PSA
 - Lung - ?

Lung cancer screening

- Screening trials require many patients, take a long time to complete and are very expensive
- Most all previous trials for lung screening have been negative (used chest x-ray)
- Recent screening exams have used CT scans and have shown benefit

Screening for Lung cancer

- Improves the chance we can find cancer earlier
- Cancer caught early is better treated
- Early stage cancer /lung cancer can be cured
- 20% reduction in lung cancer death due to screening



The NEW ENGLAND
JOURNAL of MEDICINE

Reduced Lung-Cancer Mortality with Low-Dose Computed Tomographic Screening

The National Lung Screening Trial Research Team

N Engl J Med 2011; 365:395-409 | August 4, 2011 | DOI: 10.1056/NEJMoa1102873

Screening



Lung Cancer Screening Results

- If screening shows a 20% reduction and we catch those that would have advanced disease – 40,000 to 50,000 lives saved yearly
- Screening programs are active in our community now!

Chemotherapy in the past

- Previously advances made by combining new drugs with same mechanism of action
- Combining existing drugs in new combinations
- Advances were made by teaching old dogs new tricks!!

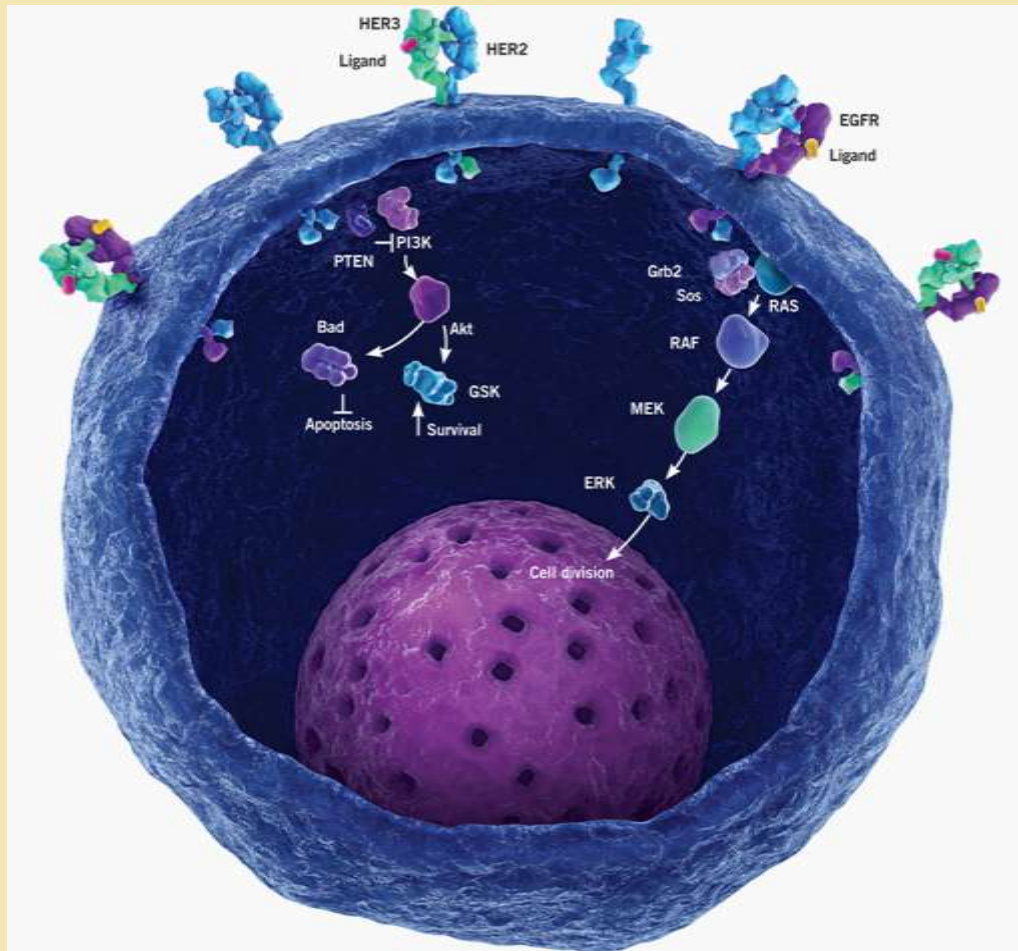


Chemotherapy of the future

- Research has shown us that cancer cells can be “targeted” specifically
- Our “dogs” have suddenly become very smart



Chemotherapy 2.0



- By identifying “unique” traits on cancer cells we can exploit
- Target the uniqueness
- Drugs are designed for specific traits not for specific disease (i.e. colon cancer, breast cancer, lung cancer)

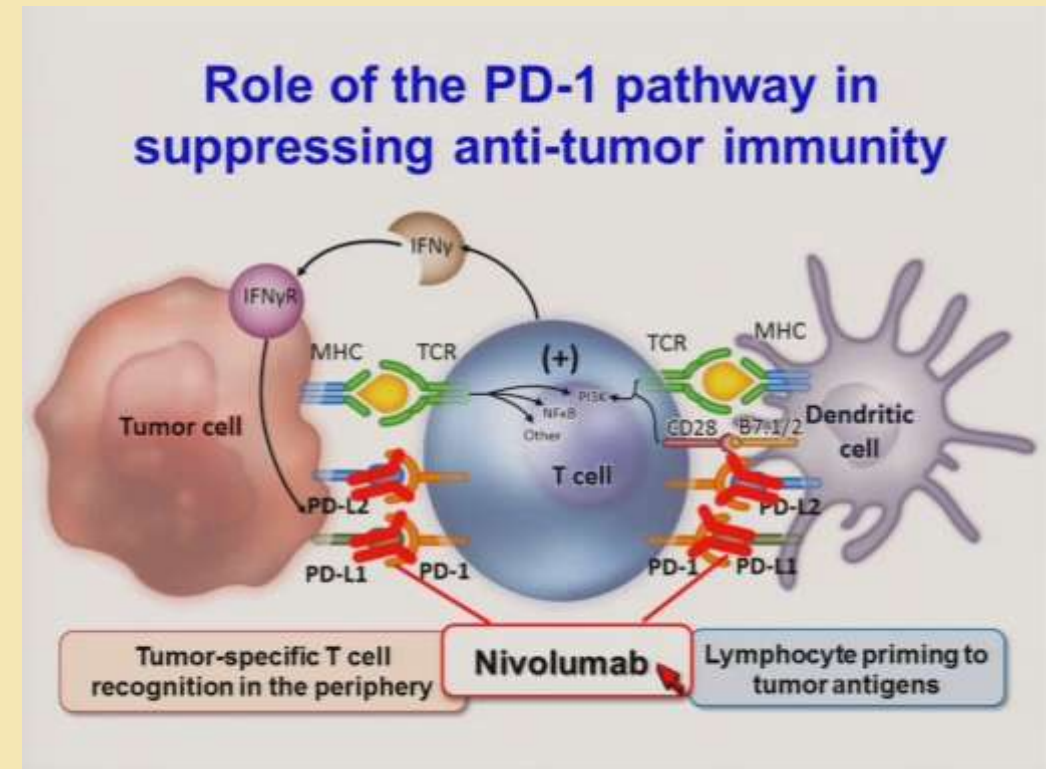
Chemotherapy in the future

- “targeted” therapy much more specific
- Often easier to tolerate with less side effects
- New advances have now targeted the immune system



Enter the age of immunity

- New treatments
- Acting by regulating the immune system in ways not done before
- Allows body's own defense system to attack cancer



The first shot across the bow?

- Nivolumab was the first approved (April 6th 2015)
- Pembroluzumab FDA approval (October 2nd 2015)
- Trials have been very promising

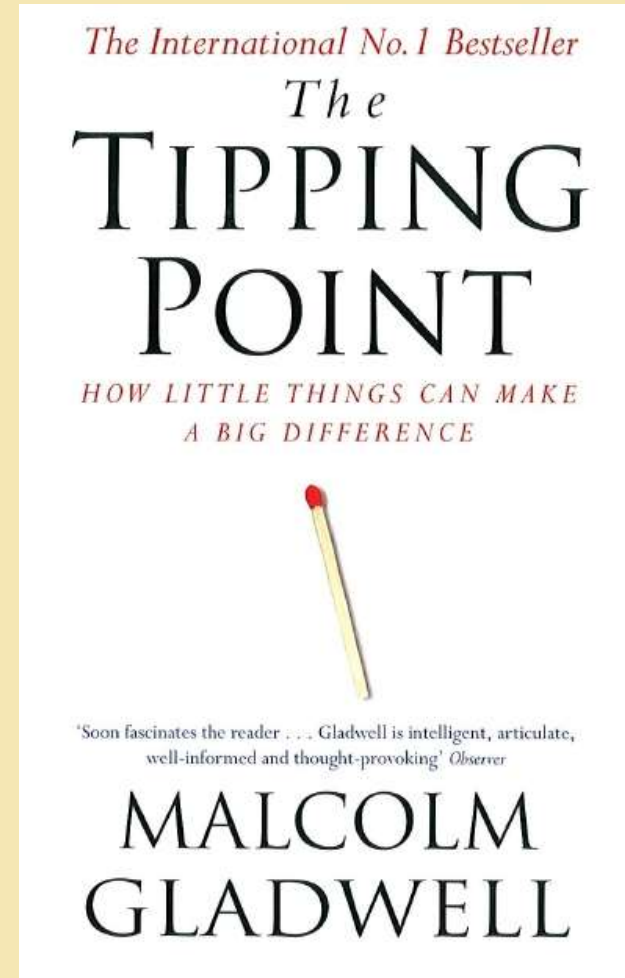


What happens when we screen and treat with new therapies?

- More people are diagnosed with cancer
- More people are diagnosed with early stage cancer and cured and more people are living longer with advanced cancer
- More people are survivors
- More people become **advocates**
- **Advocates** change the disease

A tipping point ?

- That magic moment when an idea, trend or social behavior crosses a threshold, tips, and spreads like wildfire
- What was “unacceptable” is now “acceptable”



Tipping points

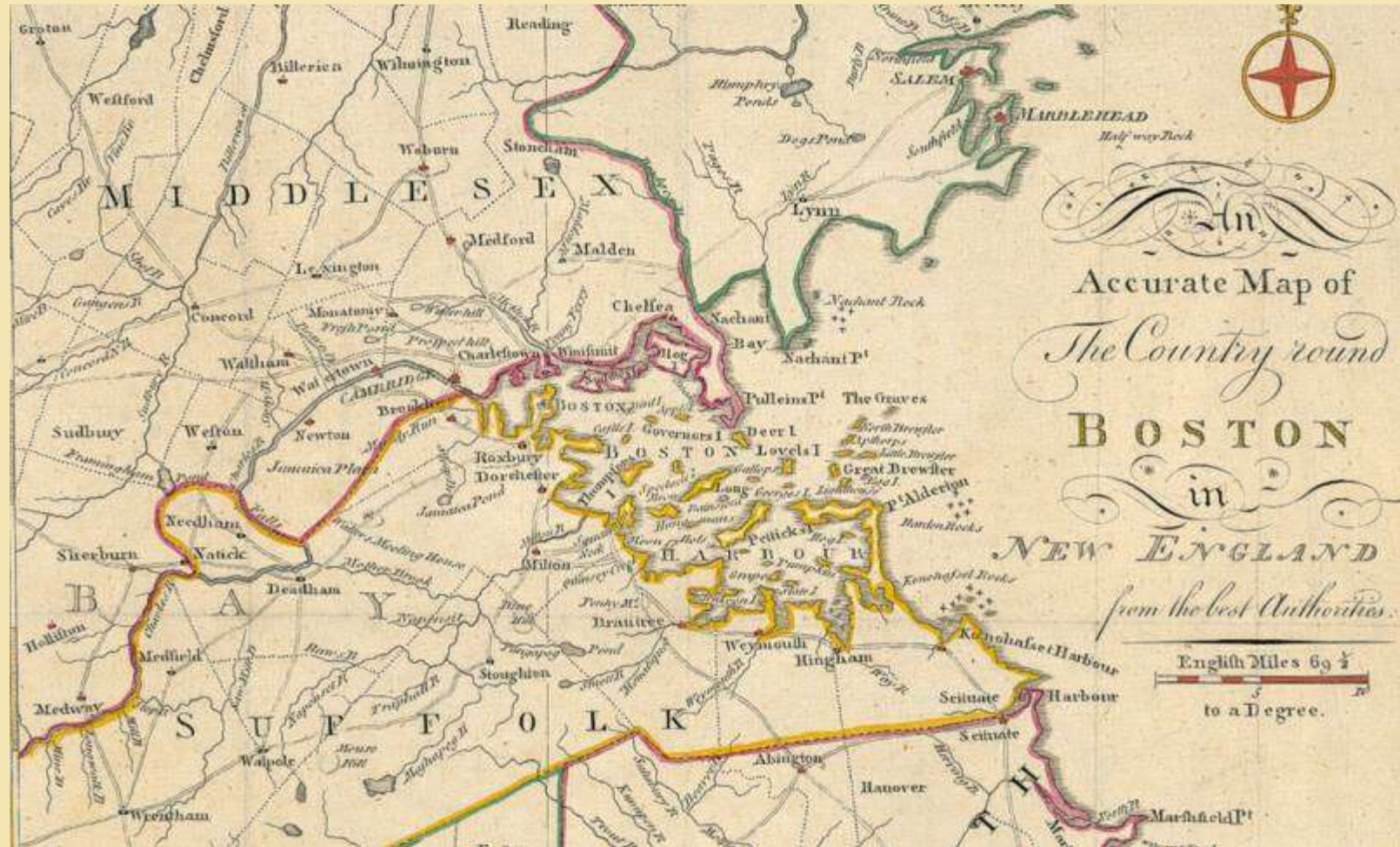
- Several factors are required:
 - **The right individuals**
 - Good timing – power of context
 - Social acceptance
 - **Group connectedness**
 - Resources (money and people resources)
 - Most of the time factors we don't see or influence



The law of the few



Boston in 1775



People in tipping points

- Why was Revere so successful where Dawes was not?
 - ***Social connectedness***
 - Had trust of others
 - Engaged in multiple vocations
 - Knew who to go to “to get the job done”

Group connectedness



Eunice's objectives

- Wanted to create awareness/ advocacy
- Empower kid's with special needs
- Build self confidence
- Erase stigma of disability
- She created an organization to do this
- That organization.....

Groups in tipping points

- Unlike a Revere who had ties to many people, she had ties to many groups (academic, political, social)
- Was able to build a community or culture
- Created groups with similar interests



Locally -

- Individuals
 - Patient advocates
 - Physician advocates
- **Building a foundation**
- Groups:
 - MAYO/ Gundersen
 - Lung cancer alliance
 - Living for liz
 - **Building a foundation**

Hope :

1. the feeling that what is wanted can be had
2. a person or thing in which expectations are centered
3. to believe, desire, or trust
4. to place trust; rely