

Breast Cancer Treatment Without Surgery?!

YOU CANNOT

BE SERIOUS!

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University of Minnesota



Disclosures

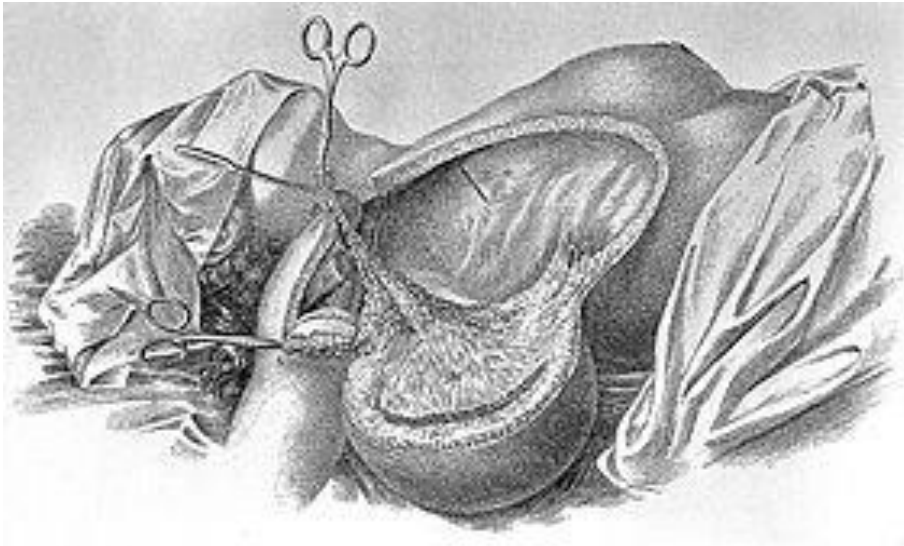
- I am a cancer surgeon
- I make money by performing cancer operations
- I make **more** money by performing **big** cancer operations



Evolution of Breast Cancer Surgery

1890s-1970s

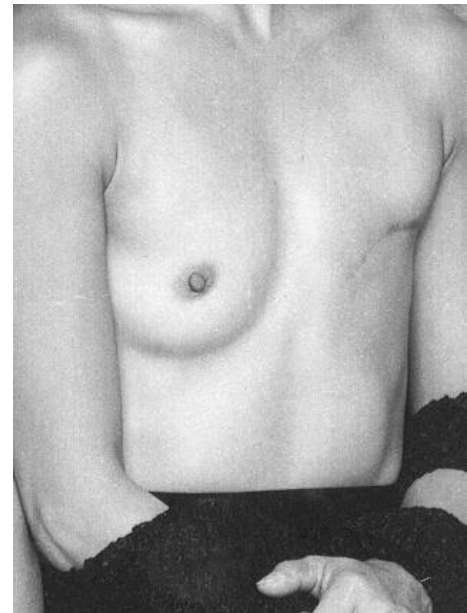
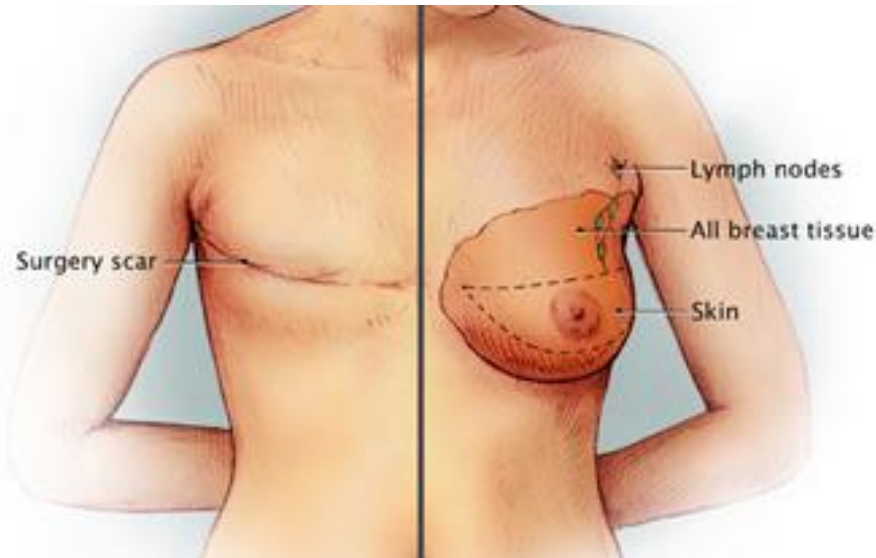
Radical Mastectomy



Evolution of Breast Cancer Surgery

1970s-1990s

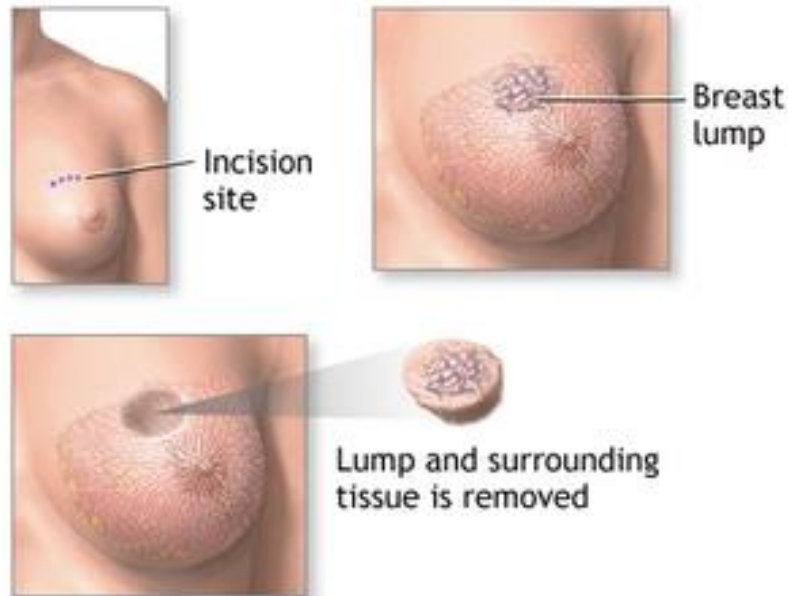
Modified Rad Mast



Evolution of Breast Cancer Surgery

1990s-Today

Lumpectomy (+RT)

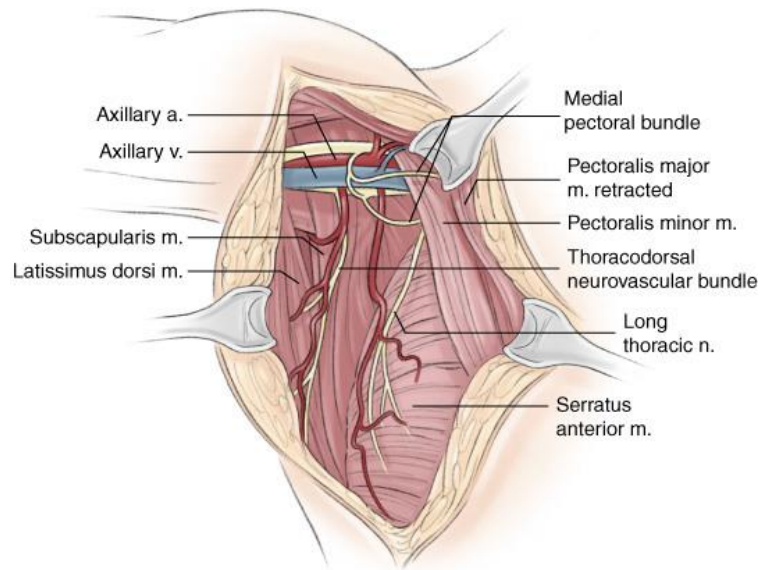


ADAM.

Evolution of Breast Cancer Surgery

1890s-2000s

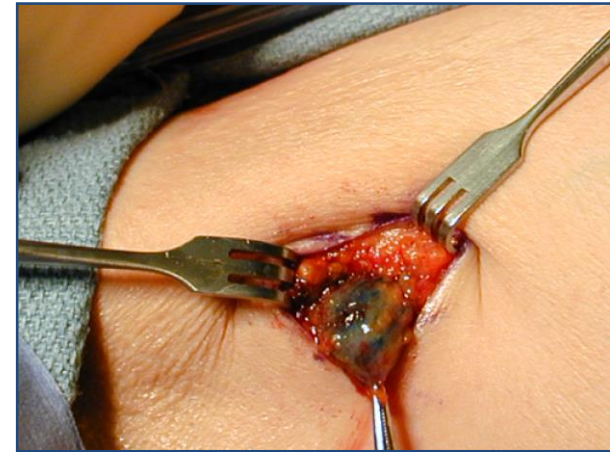
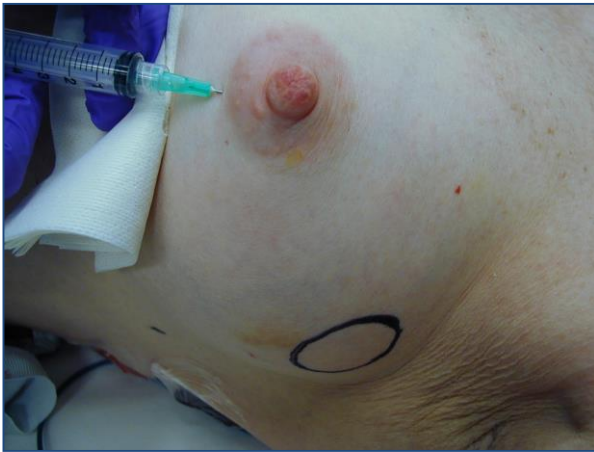
Axillary Node Dissection



Evolution of Breast Cancer Surgery

2000s-Today

Sentinel Lymph Node (SLN)



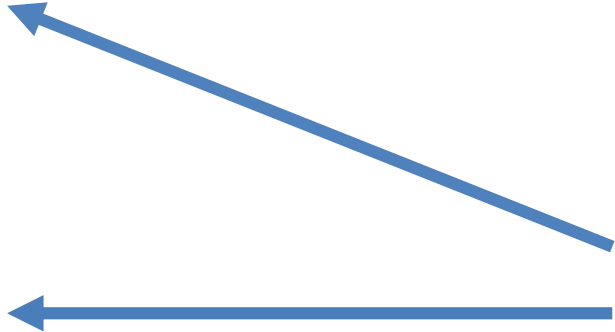
Treatment Today

Breast
Lump (+RT)
Mast (+/- Rec)

Nodes
SLN BX

Body
Hormone Tx
Chemotherapy

Surgery



Treatment Today

Breast
Lump (+RT)
Mast (+/- Rec)

Nodes
SLN BX

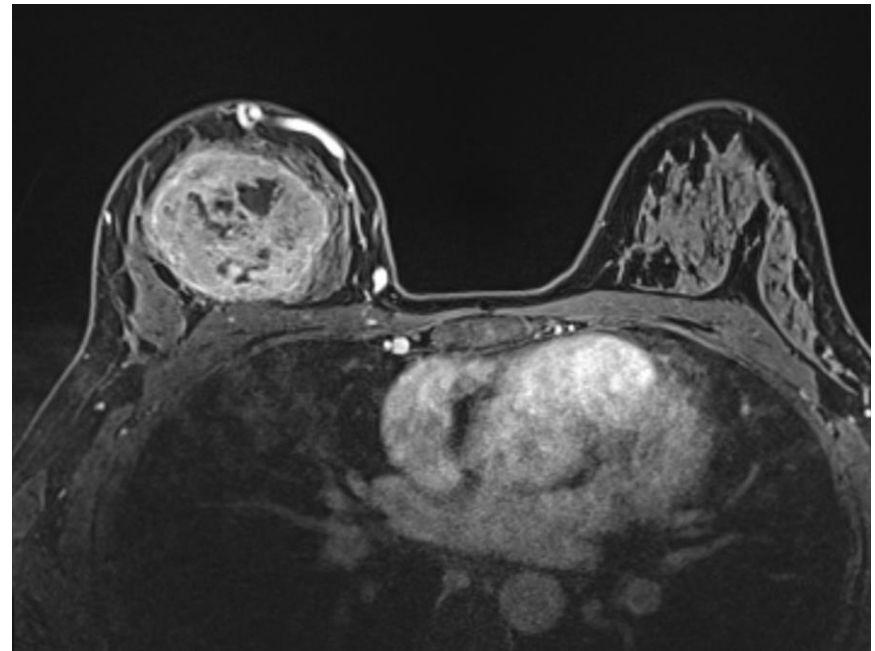
Body
Hormone Tx
Chemotherapy

Chemo

```
graph LR; Chemo --> Breast; Chemo --> Nodes; Chemo --> Body;
```

Chemotherapy First?

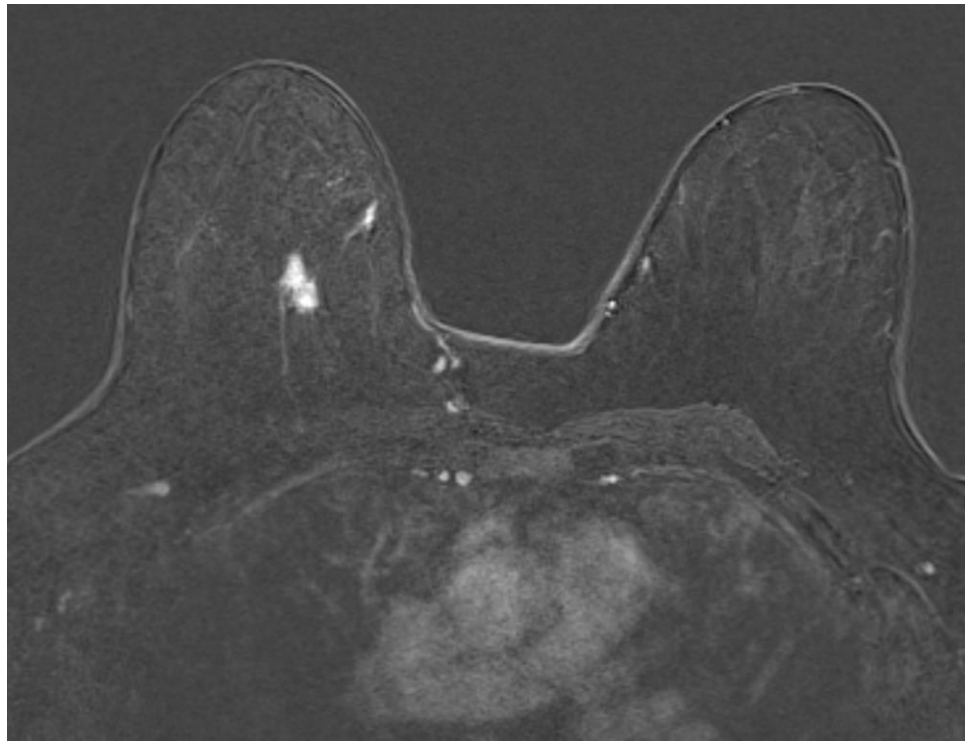
Advanced Breast Cancer



Chemotherapy First?

Non-Advanced Breast Cancer?

Yes!



Chemotherapy First?

Breast Cancer Types

ER+

ER+/PR_{any}/HER2-

TN

ER-/PR-/HER2-

HER2+

ER_{any}/PR_{any}/HER2+

Preop Chemotherapy

Complete Pathological Response
(pCR)

ER+
11%

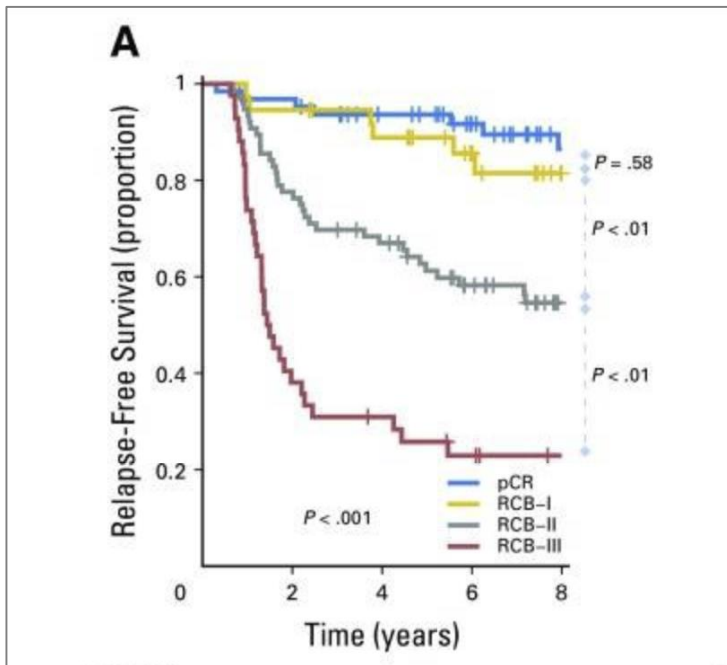
TN
38%

HER2+
45%

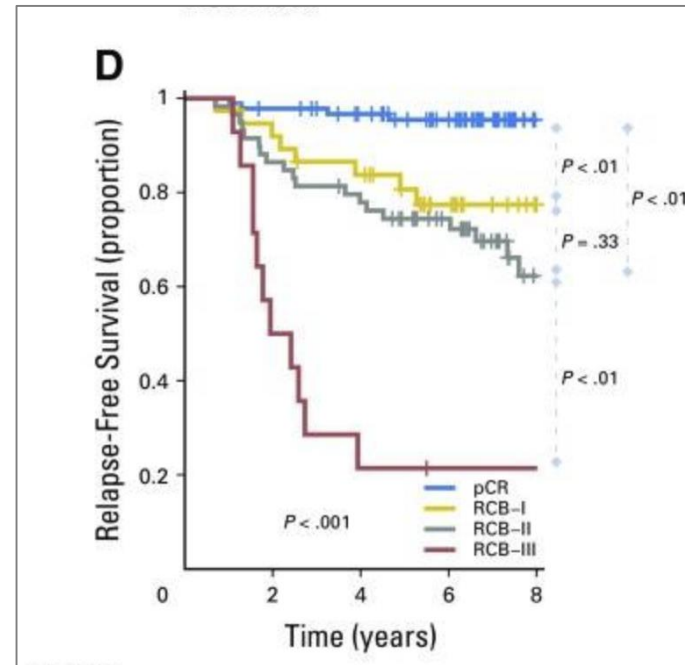
Boughey Ann Surg 2014

Survival and pCR

TN



HER2+



Symmans JCO 2017

Case 1

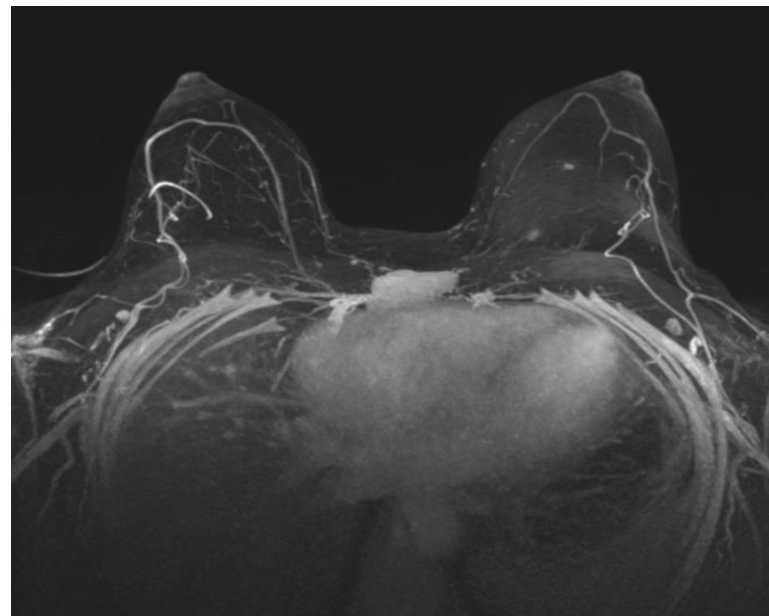
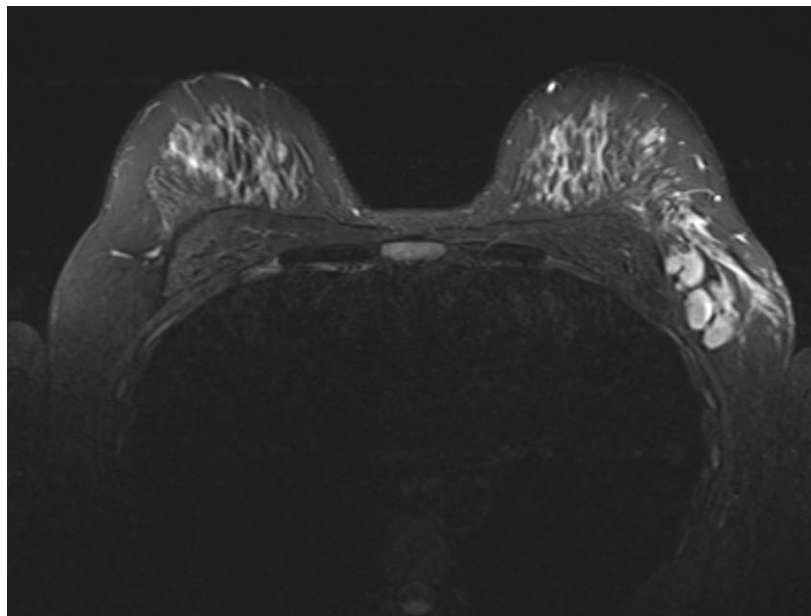
44 y/o

ER+/PR+/HER2+

Preoperative Chemo

Bilateral Mastectomy

pCR



Case 2

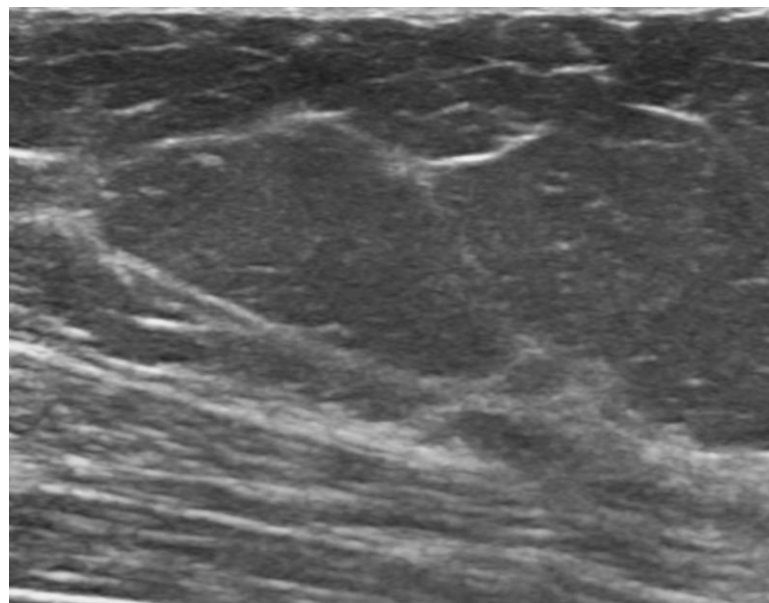
54 y/o

6 mm ER-/PR-/HER2- (TN)

Preoperative Chemo

Lumpectomy + SLN

pCR



No Surgery?

Potential Advantages

Less pain?

Decreased complications?

Better cosmetic outcomes?



No Surgery?

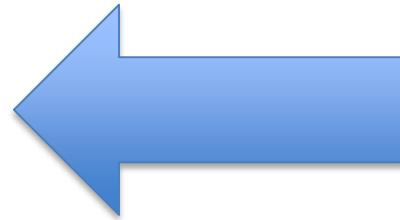
Other cancers

Esophageal

Laryngeal

Anal

Cervical



Chemotherapy

Radiation

Breast?

Previous Limitations

Poorly selected groups (ER+/HER2-)

Suboptimal imaging

No biopsy AFTER preop chemo:

pCR

MD Anderson Feasibility Trial

Selected groups: **TN** or **HER2+**

Preoperative chemotherapy

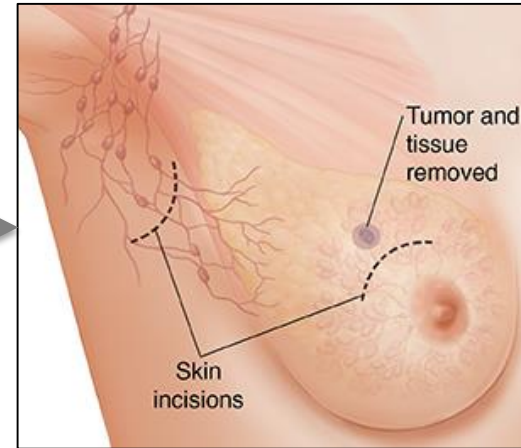
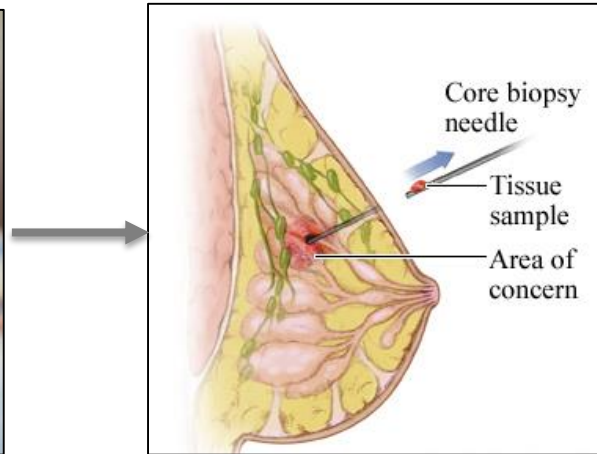
MG and US before and after chemo

Core needle bx and removal of original clip

Standard surgery

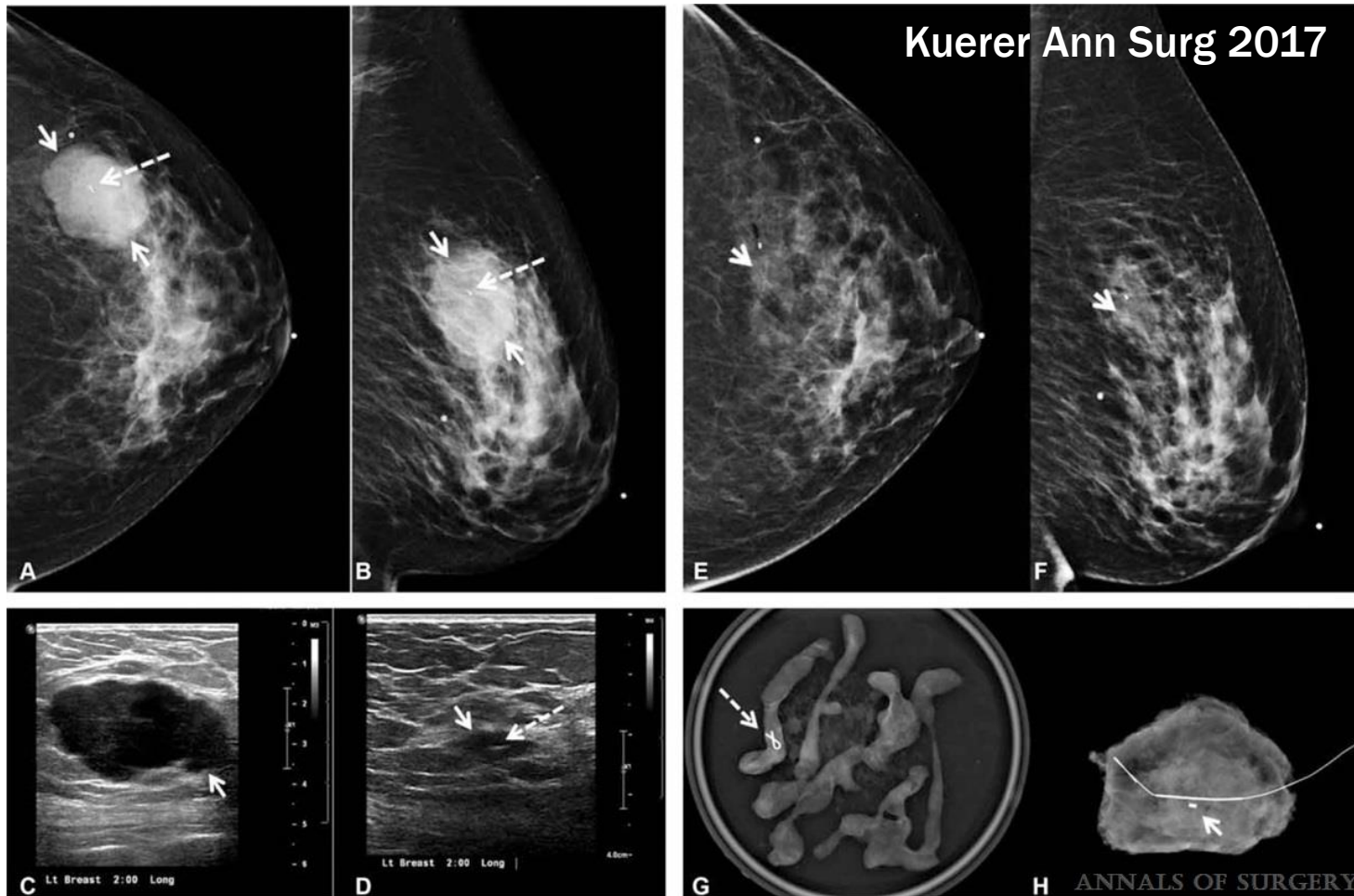
Kuerer Ann Surg 2017

MD Anderson Feasibility Trial



pCR?

MD Anderson Feasibility Trial



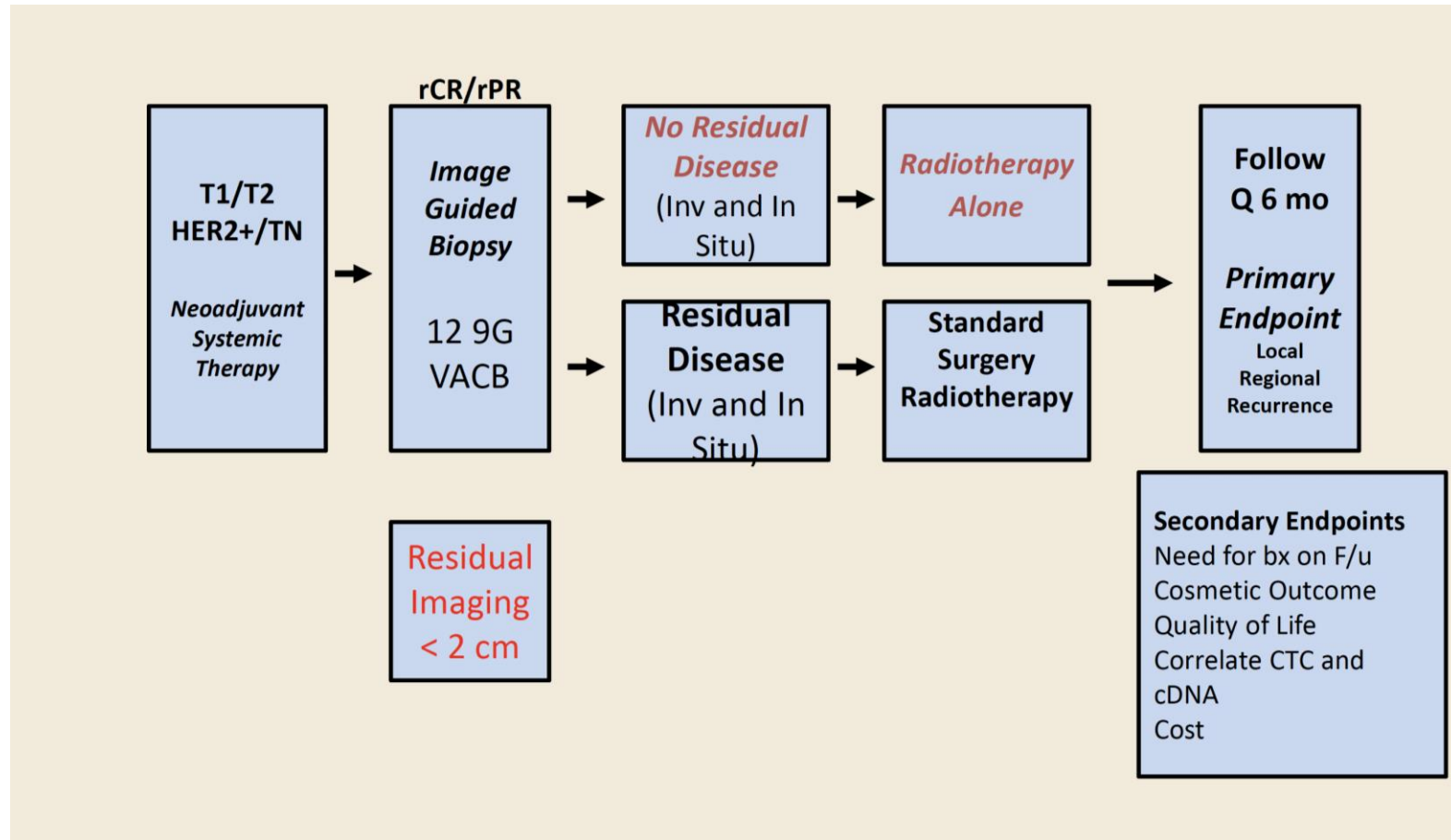
MD Anderson Feasibility Trial

40 pts

19 pts (**47.5%**) had **pCR**

Accuracy: **98%**

MD Anderson 2016-0046



Other Feasibility Studies

- Netherlands Cancer institute
- German Breast Group/University of Heidelberg
- UK
- NRG BR005

Next Steps

Ensure safety

More feasibility studies

Studies comparing:

Surgery vs. No Surgery



2018
**Breast Cancer Treatment
Without Surgery?!**

Not Yet!