

What's New

And some of what's not

Sampling from a radiation oncologist

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Breast Cancer

- ▶ Scientifically researched since the 1960s
- ▶ Cure rates increasing.
- ▶ While minimizing risk of side effects.



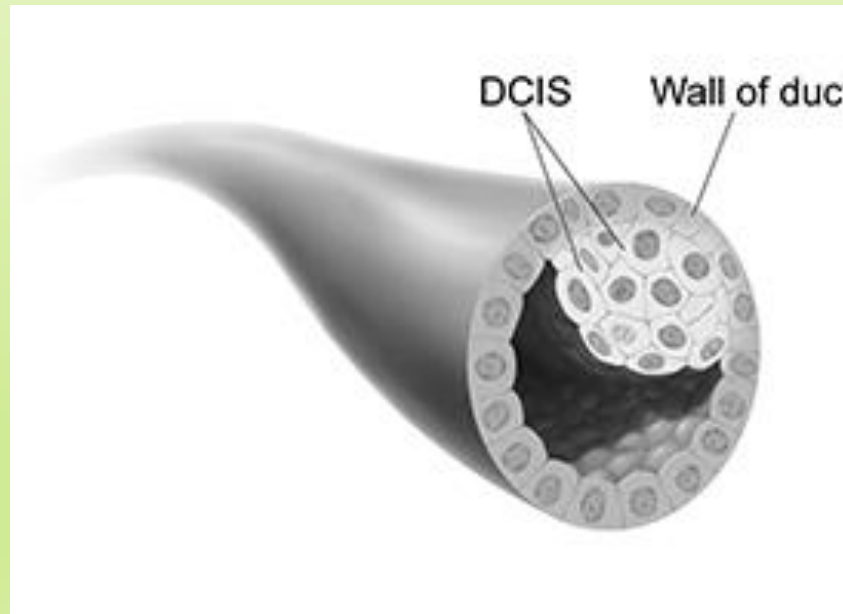
Stop Making Sense

Talking Heads

- ▶ Contradictory reports and endless media and internet chatter continue to cause excitement
- ▶ “Conclusions searching for data” is commonly confused with “research”
- ▶ Data leading to conclusion is the goal
- ▶ Assimilation of data takes years, YEARS!
- ▶ 10s of thousands of papers annually on breast cancer
- ▶ Objectivity REQUIRED

DCIS

- ▶ Ductal Carcinoma In Situ
 - ▶ Cancer cells in the duct but not invading through duct into breast.



DCIS Headlines

- ▶ DCIS over treated with mastectomy and radiation
- ▶ Radiation improves outcome, really?
- ▶ Personalized treatment for DCIS

DCIS History/Context

- ▶ Multiple Randomized Trials
 - ▶ US and Europe
- ▶ Lumpectomy vs. Lumpectomy and RT
 - ▶ Lumpectomy---20+ % local recurrence at 20 years
 - ▶ 50% of these invasive
 - ▶ Lumpectomy & RT—10% local recurrence at 20 years
 - ▶ Most Non invasive
- ▶ RT standard to reduce risk of INVASIVE recurrence
- ▶ BUT...the patients of yesterday are not patients of today so we have to factor this as we apply this data

Doubt Is Raised Over Value of Surgery for Breast Lesion at Earliest Stage

By **GINA KOLATA** NYTimes AUG. 20, 2015

“Like killing a mosquito with an elephant gun.”

Breast Cancer Mortality After a Diagnosis of Ductal Carcinoma In Situ

S A Narod, et al *JAMA Oncol.* 2015;1(7):888-896.

SEER analysis 108,196 women diagnosed with DCIS from 1988 to 2011

*At 20 years, the breast cancer-specific mortality was 3.3% and was higher for women diagnosed before age 35 years

*The risk of dying of breast cancer increased after experience of an ipsilateral invasive breast cancer (HR, 18.1)

*A total of 517(0.4%) patients died of breast cancer following a DCIS diagnosis **WITHOUT** experiencing an in-breast invasive cancer prior to death.

*Lumpectomy & radiotherapy was associated with a reduction in the risk of ipsilateral invasive recurrence at 10 years (2.5% vs 4.9%); but not of breast cancer-specific mortality at 10 years (0.8% vs 0.9)

Meaning: Do nothing or provocative?

Not picked up by media

- ▶ Trends in Treatment Patterns and Outcomes for Ductal Carcinoma in Situ
- ▶ [Mathias Worni](#), et al. JNCI J Natl Cancer Inst (2015) 107(12): djv263
- ▶ 121,080 women treated in US 1991-2010 SEER analysis

	% Treated	Disease Specific Survival	Overall Survival @ 10 years
LPX & RT	43 %	98.8%	89.6 %***
LPX alone	26.5 %	98.5 %	80.6 %
MSTX Uni/bilat	23.8 %	98.4 %	85.9%

***This does **NOT** mean RT caused improvement!!

What to think, both SEER analysis

- ▶ How and what questions asked matters
- ▶ Not news, DCIS is over treated and we've been working on it
 - ▶ BTW lots of diseases are over treated,
 - ▶ # to treat
- ▶ We have to balance all data and dissect out the good vs. the bad DCIS.
- ▶ How?
 - ▶ Size, grade, risk factors
 - ▶ Genes: *Oncotype DX*®

GENOMIC evaluation Oncotype DX[®] for DCIS

- ▶ A population-based validation study of the DCIS Score predicting recurrence risk in individuals treated by breast-conserving surgery alone

▶ Eileen Rakovitch et al Received: 20 April 2015/Accepted: 8 June 2015/Published online: 29 June 2015

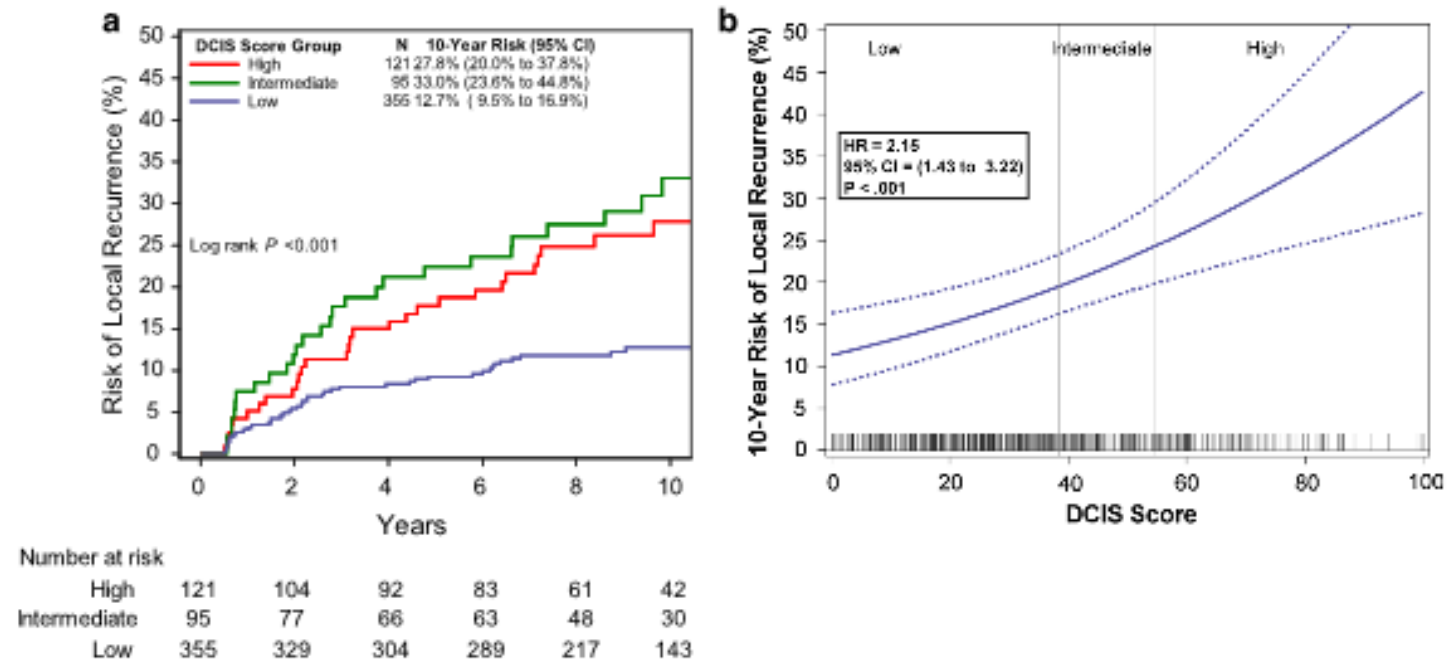


Fig. 2 Kaplan–Meier estimates of the 10-year risk of local recurrence by DCIS Score Group (a) and Cox model estimates of 10-year local recurrence risk according to the continuous DCIS Score (b), in patients treated with BCS alone and negative margins. The number of patients at risk is included for each pre-specified risk group based on

the DCIS Score of low (<39), intermediate (39–54) and high (>55). The risk based on continuous DCIS Score assumes a monotone incremental risk as DCIS Score increases. Although formal statistical tests for non-linearity were negative, the Kaplan–Meier estimates suggest that a non-linear effect is plausible

Conclusion

- ▶ DCIS not a life threatening disease and the treatment recommendation is not based on one report/study.
- ▶ Culmination
 - ▶ Oncologic principles
 - ▶ History of data in context
 - ▶ Use of new prognosticators
 - ▶ In the CONTEXT of the individuals goals and medical situation
 - ▶ Take time for decision, avoid fly by recommendations

Invasive Breast Cancer

the mystique of local control and its effect on survival

- ▶ 2 Landmark trials published simultaneously New England Journal of Medicine, Volume 373, 2015
 - ▶ [EORTC-22922](#) and [MA.20](#) trials showed regional node irradiation improved disease free survival (DFS). Regional Nodal RT added 3-5% improvement in DFS and 1-1.6% (not statistically significant) improvement in overall survival.
- ▶ DBCG-IMN
 - ▶ Overall survival @ 9 years 75.9 vs 72.2 %
- ▶ Danish PMRT and BC PMRT 1-3LN + improvement in OS
- ▶ EBCTG LPX with RT resulted in OS benefit over LPX alone
- ▶ The current challenge is deciphering the details of the data for the individual

Mastectomy + Reconstruction Carries Higher Complication Rates and Cost than Lumpectomy + Radiation. B Smith, San Antonio Texas, Dec 10, 2015

- ▶ Complications with in 2 years of therapy based on coding
 - ▶ Wound infection
 - ▶ Wound seroma
 - ▶ Wound hematoma
 - ▶ Fat necrosis
 - ▶ Breast pain
 - ▶ Pneumonitis
 - ▶ Rib Fracture
 - ▶ Graft Failure
 - ▶ Implant removal

Mastectomy + Reconstruction Carries Higher Complication Rates and Cost than Lumpectomy + Radiation.

B Smith, San Antonio Texas, Dec 10, 2015

- ▶ 2000-2011, 44,344 patients MarketScan database <65, and 60,867 patients from the SEER-Medicare,

	Complications, Young	Complications, Older
LPX RT	30%	38% (31% no RT)
MSTX	25%	37%
MSTX + RECON	56%	69%
	Cost, Young	Cost, Older
LPX RT	\$66,000	\$34,000
MSTX + RECON	\$89,000	\$36,000
	Young	Older
LPX RT	\$66,000	\$34,000
MSTX + RECON	\$89,000	\$36,000

Questions sent in

What about all the radiation exposure from follow-up testing?

- ▶ **ASCO's 2013 Top Five List in Oncology** [part of the American Board of Internal Medicine's \(ABIM\) Choosing Wisely® Campaign](#)

Avoid using PET or PET-CT scanning as part of routine follow-up care to monitor for a cancer recurrence in asymptomatic patients who have finished initial treatment to eliminate the cancer unless there is high-level evidence that such imaging will change the outcome.

- PET and PET-CT are used to diagnose, stage, and monitor how well treatment is working. Available evidence from clinical studies suggests that using these tests to monitor for recurrence does not improve outcomes and therefore generally is not recommended for this purpose.
- False positive tests can lead to unnecessary and invasive procedures, overtreatment, unnecessary radiation exposure, and incorrect diagnoses.
- Until high-level evidence demonstrates that routine surveillance with PET or PET-CT scans helps prolong life or promote well-being after treatment for a specific type of cancer, this practice should not be done.

How should I be followed?

- ▶ Depends on Stage, treatment received and individual risk factors.
 - ▶ 80 years old DCIS treated with mastectomy
 - ▶ 40 years old Stage III invasive breast cancer treated with lumpectomy, chemotherapy but declined radiation therapy
- ▶ Recommendations continue to evolve

Summary



- ▶ Safe treatment de intensification is occurring for DCIS
- ▶ Nodal radiation seems to improve outcomes for some patients
- ▶ All treatments have toxicity

- ▶ Conflicting information normative as data develops and treatment paradigms evolve
- ▶ Treatments more tailored today than ever before
- ▶ Decision making will become more complex for every aspect of breast cancer from screening to surveillance