TAKING CHARGE:

CANCER SCREENING UPDATES

EVERY WOMAN NEEDS TO KNOW

Wednesday, July 8, 2015

To listen to the presentation by phone,

Dial: 866-952-1906

Code: SHARSHERET

WELCOME

Shera Dubitsky, MEd, MA

Director of Navigation and Support Services

Sharsheret

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THANK YOU

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OUR MISSION

Sharsheret is a national not-for-profit organization supporting young Jewish women and their families facing breast cancer. Our mission is to offer a community of support to women, of all Jewish backgrounds, diagnosed with breast cancer or at increased genetic risk, by fostering culturally-relevant individualized connections with networks of peers, health professionals, and related resources.

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BACKGROUND

- 1 in 40 Ashkenazi Jews carries a BRCA gene mutation
- 80% risk of breast cancer
- 40% risk ovarian cancer

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SCREENING AND MONITORING OPTIONS FOR BREAST CANCER

Lisa Weinstock, MD
Diagnostic Radiologist
Women's Digital Imaging

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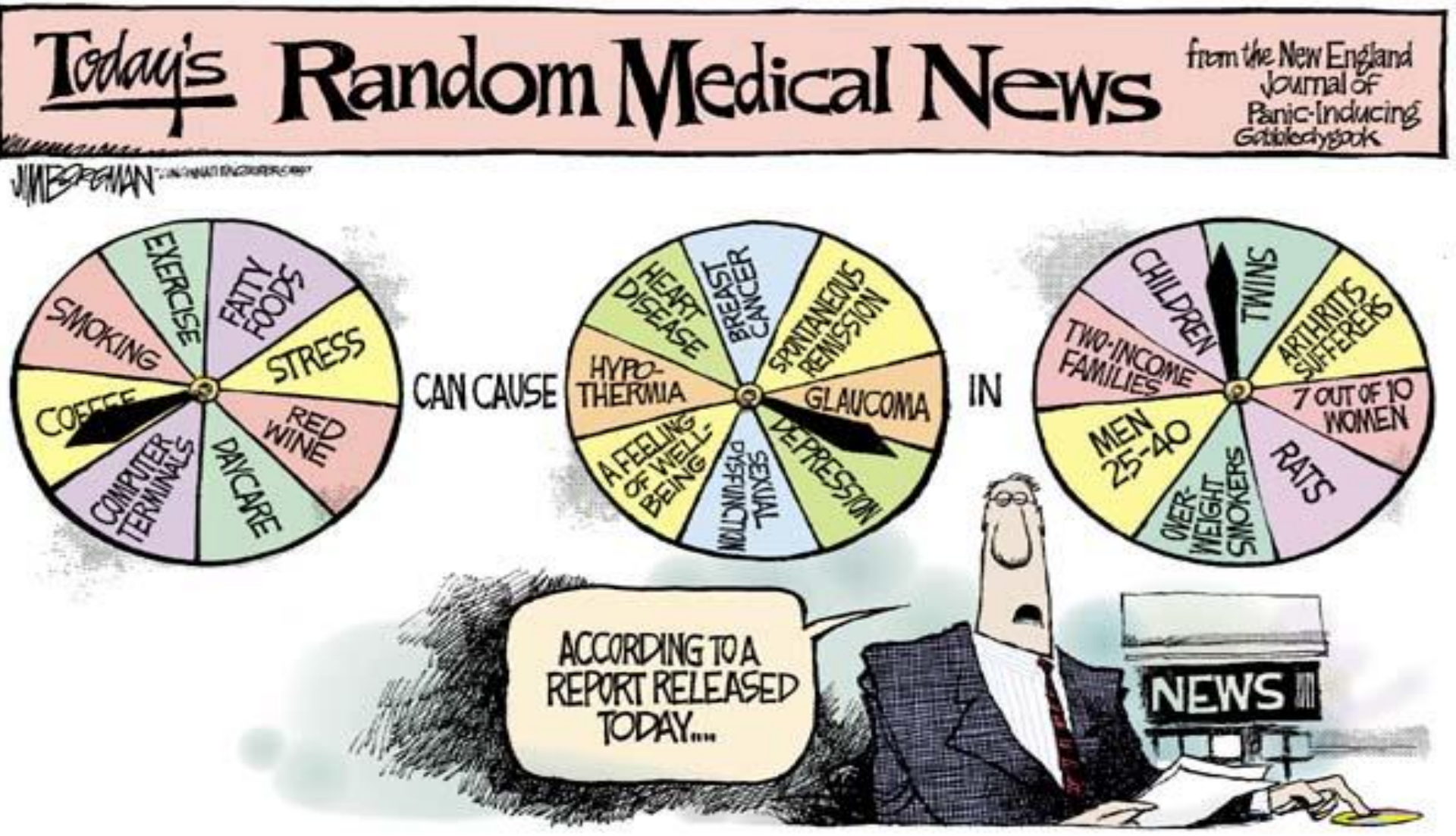
DECONSTRUCTING BREAST IMAGING OPTIONS

Dr. Lisa Weinstock
Founder and Medical Director,
Women's Digital Imaging

STUDIES CONFLICT



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CHALLENGES IN BREAST CANCER SCREENING

- Benefits vs. possible harms: what's worse – missed cancer or false positive?
- Is every cancer we find going to progress and do harm??? We have no way of knowing at this time.
- Many imaging options – and none of them are perfect.
- Screening modality and frequency depend on a woman's medical history and risk factors.
- Not the same for everyone.

SORTING THROUGH BREAST IMAGING CONTROVERIES

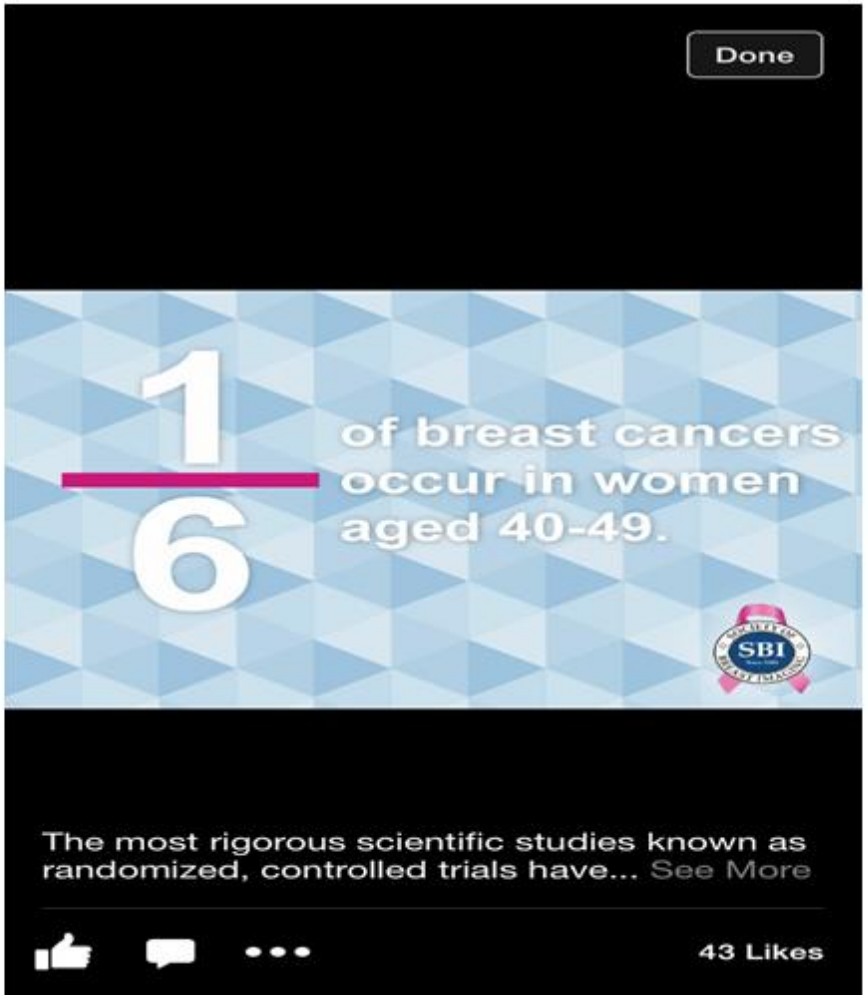
What is the best age to start screening?

Do I need more than a mammogram ?

Is early detection too early?

AGE AT BREAST CANCER DIAGNOSIS

- Lowest incidence rate: age 20-24
- Highest incidence rate: age 40 and older
- More than 250,000 women 40 and under in the US living **with** breast cancer



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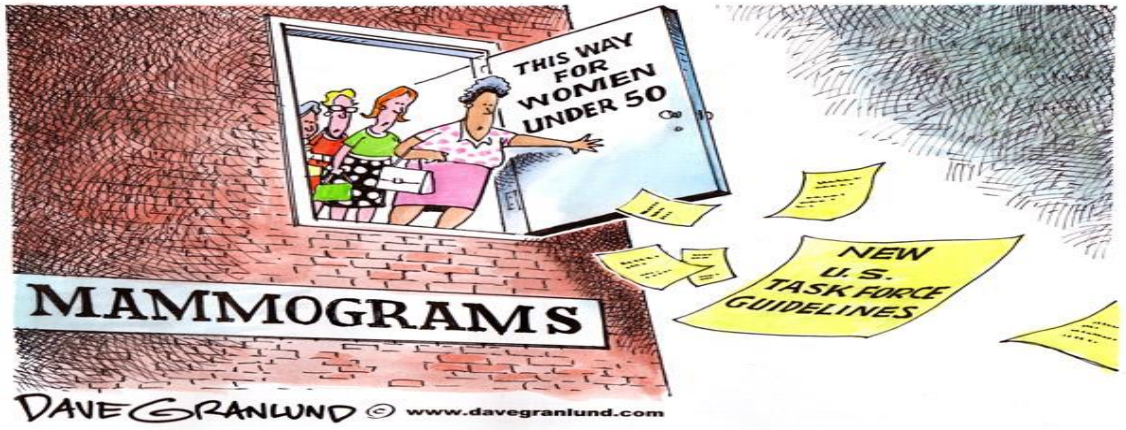
WHEN SHOULD YOU START SCREENING- ”GUIDELINES”

- American Cancer Society recommends women in their 20s and 30s have a clinical breast exam every three years and annually at 40.
- Consider first baseline mammogram at 35.
- Earlier screening not recommended in younger woman: radiation and “likelier” to have dense tissue-.
- Screening Ultrasound can be performed however no set guidelines for this.
- American Cancer Society and American College of Radiology (ACR) recommends mammography beginning at age 40, NOT 50.
- US Preventive Task Force: ``Biennial Screening with Mammography between ages 50-74”



INDIVIDUALS VS POPULATIONS

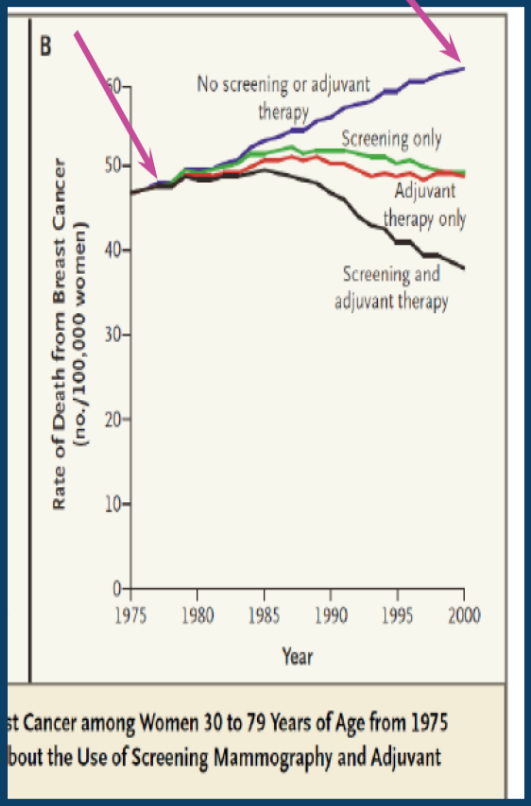
- Studies trying to understand populations, not individuals.
- Policy recommendations are being suggested knowing cancers will be missed.

BREAST IMAGING MODALITIES

- Mammography/Tomosynthesis/3D
- Ultrasound/Automated Breast Ultrasound
- MRI
- Molecular Imaging
- Coming up…contrast enhanced Mammography
- Thermography ……

SCREENING LOWERS BREAST CANCER MORTALITY

USA Female Breast Ca Mortality Rate is now declining



st Cancer among Women 30 to 79 Years of Age from 1975
bout the Use of Screening Mammography and Adjuvant

-2 % / yr

1990-2009 = 33.2%

Screening and Treatment

Greater decline if Mortality trend used

Berry et al N Engl J Med 2005;353:1784-92.

MAMMOGRAPHY SAVES LIVES!!!

Mortality rate is highest for women who have not been screened.

Mortality rate is lowest for women who have been screened and have received adjuvant therapy.

MAMMOGRAPHY

- Mammography is still the best tool we have, but not the only one we need.
- Shows calcifications and abnormalities, such as distortion of breast tissue, not seen on other modalities.
- Proven to save lives.

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TOMOSYNTHESIS – 3D MAMMOGRAPHY

- Tomosynthesis is an upgraded, 'prettier' mammogram.
- Like going from an iphone 5 to an iphone 6 – it's still a phone!! And Tomosynthesis is still Mammography.
- Takes images in thin slices, so it's like seeing the individual pages in a book and not looking at through the book cover to cover
- Radiation dose is an issue- Low-dose Tomosynthesis with C-View takes 3D images and combines them into 2D images(synthetic view); no additional radiation.
- Has same problem as 2D Mammography: Tissue and tumors are white; Cancer can still be hidden.
- Tomosynthesis is NOT a substitute for additional imaging.

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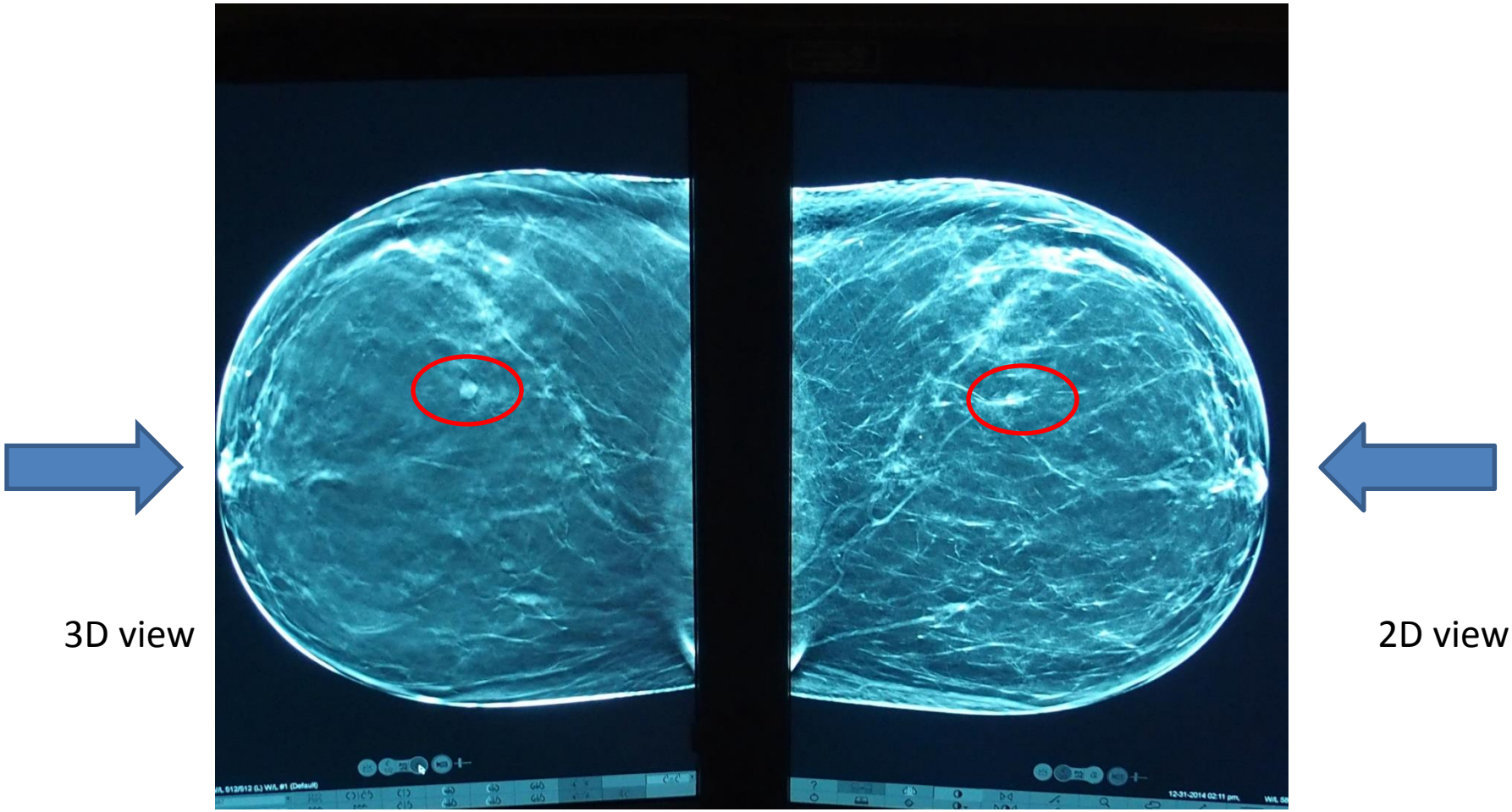
Comparison of 3-D and 2-D Images



3D view

2D view

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MAMMOGRAPHY CAN MISS CANCER IN DENSE BREASTS

- Forty percent of dense breasted women who get cancer while in an annual mammography program have their cancers present as palpable lumps.

- The other sixty percent have cancers that present at about 17mm and almost always need radiation and chemotherapy.

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POSITIONING MATTERS: IF THE TISSUE IS MISSED, IT CAN'T BE SCREENED

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WHEN A MAMMOGRAM IS NOT ENOUGH

YOU MAY NEED MORE THAN A MAMMOGRAM WITH THESE RISK FACTORS:

1. Personal History of Breast Cancer
2. Strong family history of breast cancer
3. Genetic mutation
4. Dense breasts
5. Prior biopsy showing a high risk lesion such as ADH (Atypical ductal hyperplasia)
6. Chest radiation in childhood

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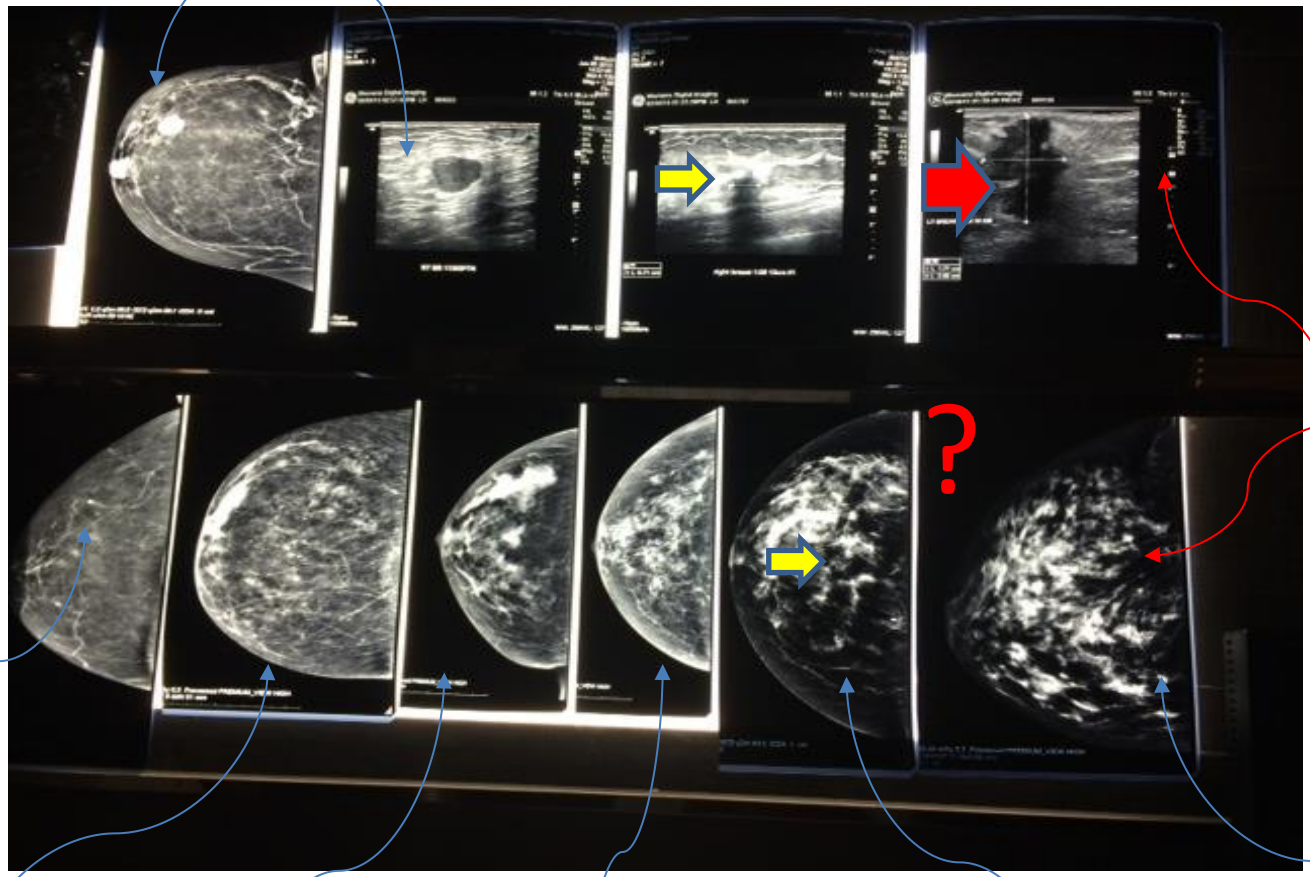
BREAST DENSITY

- Density obscures cancer on a mammogram.
- Tissue is white and tumors are white. A tumor may be there, but hidden in dense tissue.
- Breast density has recently been proven to be a cancer risk in itself.
- Studies have shown a cancer risk of as much as 4x-6x higher compared to women with fatty breasts.
- Women with dense tissue are also 17 times more likely to develop an interval cancer.

Cancer in Fatty Tissue



Cancer in Dense Tissue

Fatty

Scattered Fibro glandular tissue

Mild

Mildly heterogeneous Dense

Heterogeneously Dense

Extremely Dense

BREAST DENSITY LEGISLATION

- 24 States have Breast Density Notification laws.
- Varies by state – Most require radiologists to notify women if they have dense tissue.
- Some include requirement for insurance to cover supplemental Ultrasound screening.
- New Jersey letter says “you ***may*** have dense breasts.”

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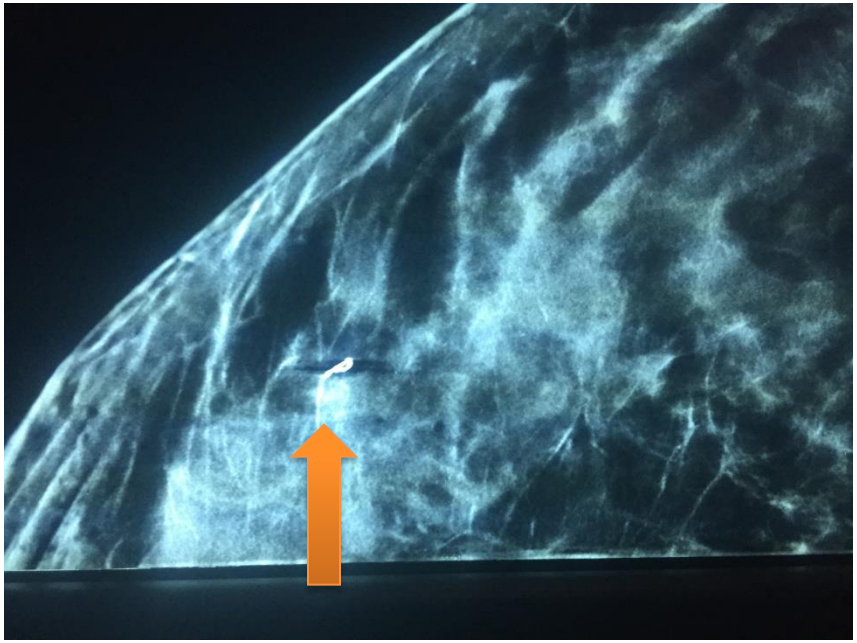
ULTRASOUND

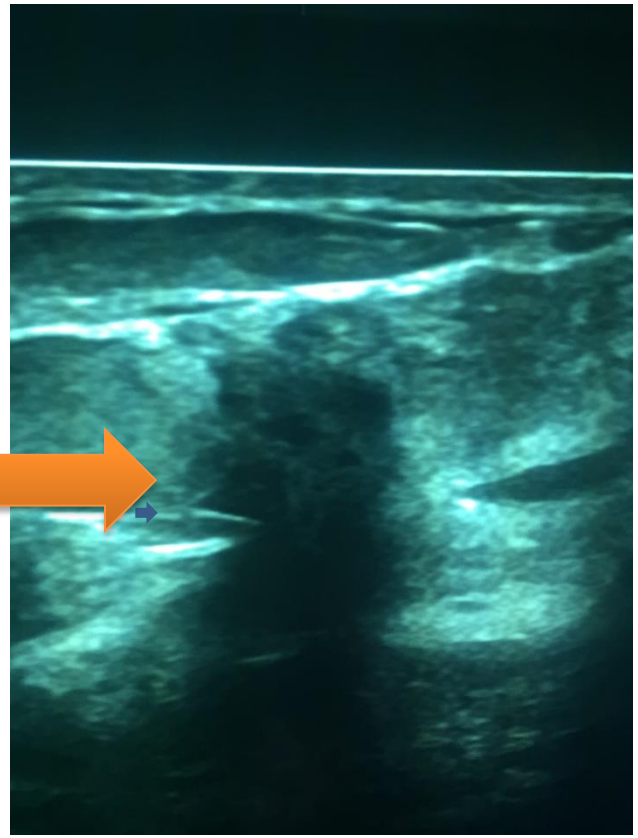
- ULTRASOUND Finds 2-4 additional cancers per 1,000 women screened.
- No radiation or contrast, extremely accessible
- No large scale population studies on lives saved however we can extrapolate that we find the same number of cancers on ultrasound in fact more invasive cancers therefore at least the same number of lives saved as mammography.
- Many false positives but rate declining with experience and training.

ABNORMALITY MISSED ON TOMOSYNTHESIS BUT SEEN ON ULTRASOUND

Tomosynthesis



Ultrasound



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WHY NOT ULTRASOUND FOR ALL?

Until recently has not been a “covered” exam by insurance!!!

Presently covered under NJ law ~ Why are facilities not embracing the opportunity?

- Requires more skilled manpower
- Time Consuming
- Criticized for having too many false positives, thus adding costs

THE PHYSIOLOGIC MODALITIES

- MRI and Molecular Imaging look at physiology, not anatomy.
- MRI looks at vascular flow.
- Molecular Imaging looks at cell metabolism.
- Mammography and Ultrasound look at anatomy!
- Current Risk Assessment models suggest that any woman with a 20 % or higher lifetime risk of developing breast cancer should undergo additional imaging such as breast MRI or molecular imaging.

MRI

- Breast MRI finds the most cancers, but has high rate of false positives.
- In premenopausal women it is crucial to time the exam with your menstrual cycle or many more false positives.
- Can be expensive as well as claustrophobic.
- Some studies find contrast agent (Gadolinium) is deposited permanently in the basal ganglia, a section of the brain.

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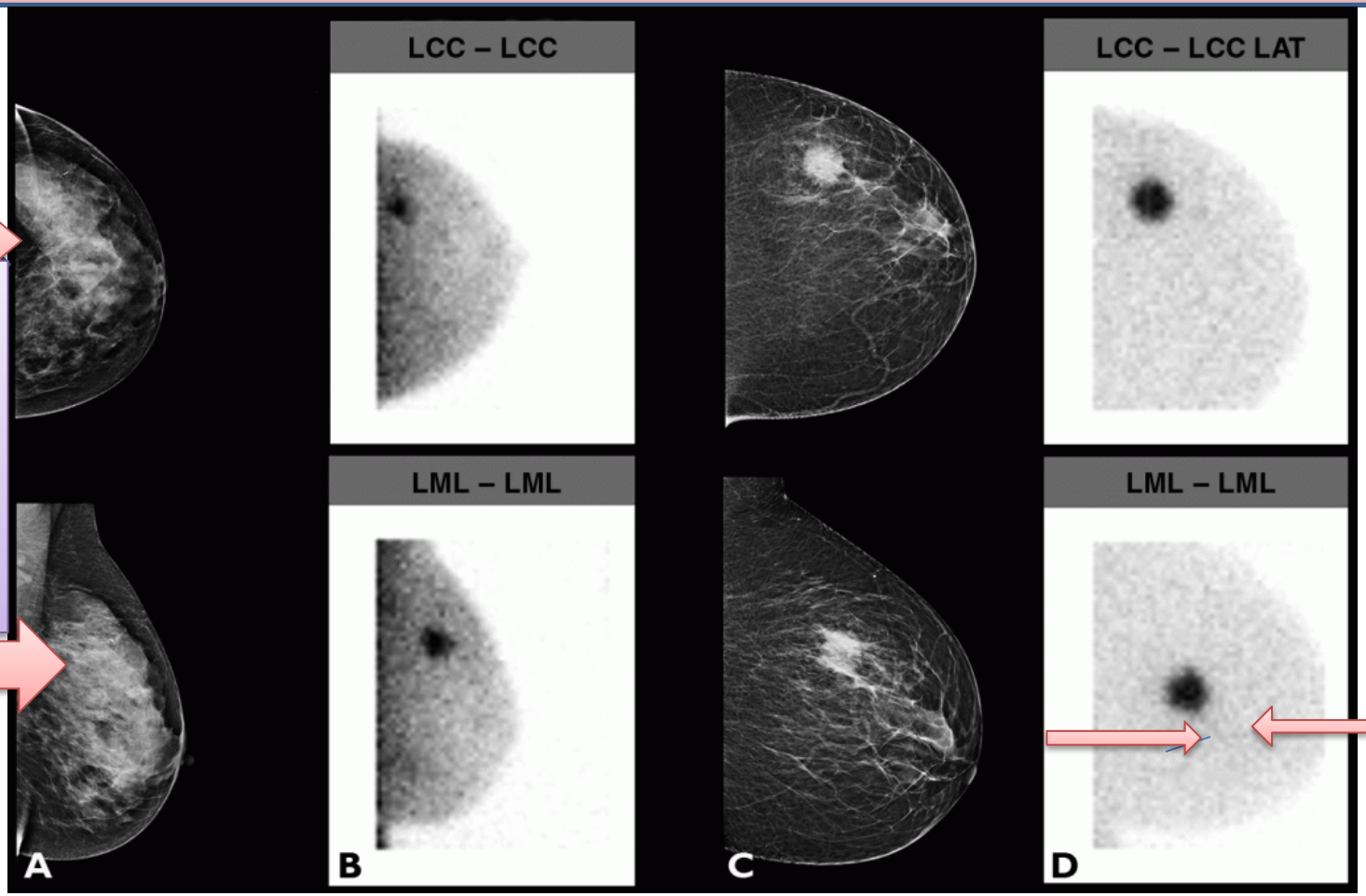
MOLECULAR IMAGING

- Molecular Imaging looks at activity of cells.
- Abnormal cells light up on the images so they are more visible.
- Excellent for women who can't tolerate MRI.
- Also many more false positives in premenopausal women- important to time study with menstrual cycle.
- Has an undeserved bad reputation for using a radioactive tracer. The dose of tracer has been decreased to less than half the original dose.
- Same one used in cardiac stress tests but much lower dose.

TUMORS ‘LIGHT UP’ ON BSGI



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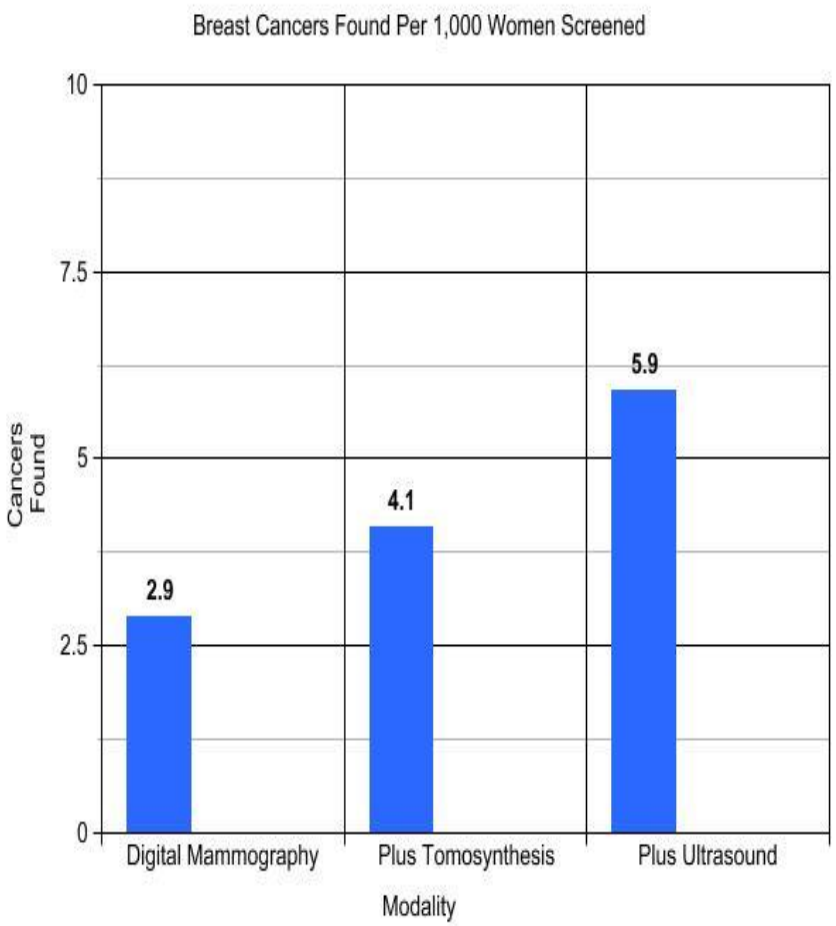
SUPPLEMENTAL IMAGING IMPROVES CANCER DETECTION



- Tomosynthesis finds more cancers than 2D Mammography - **41% as reported in June 2014 JAMA study result of skewed formula.**
- Using same formula, Ultrasound finds 103% - 138% more.
- Modalities working together improve cancer detection.

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Supplemental Screening

- To supplement screen or not?
- Individual Risk Assessment crucial in the area of “precision medicine”
- Shared decision making
- Evidence based vs Evidence Informed

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Supplemental Screening: Conclusions

- For all women – digital mammography with tomosynthesis??
- For average risk women with dense tissue-add ultrasound
- For low-intermediate risk woman with dense tissue- add ultrasound possible MRI /Molecular Imaging
- For intermediate-high risk woman-consider breast MRI/Molecular Imaging
- Consider staggering imaging studies in intervals a few months apart to try to catch the “interval cancers”

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OVERCOMING CHALLENGES: WHAT CAN YOU DO?

- Know your risks: Personal and family history.
- Know your breast density.
- Have your screening done by radiologist fellowship trained in breast imaging and/or experienced in breast imaging.
- Ask about supplemental imaging and interval screening.

Update Your Genetic Risk Profile

- BRCA negative diagnosis does not give you a free pass.
- MY RISK includes BRACA 1 and 2 testing plus new genes including testing for Lynch Syndrome syndrome / CHEK2, PALB2, ATM
- Identifying specific genetic risks may affect medical management.

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Non-Modifiable Risk Factors	Modifiable Risk Factors
Gender	Radiation exposure
Age	Reproduction
Personal breast cancer	Breastfeeding
History	Hormone replacement therapy
Family History	Oral Contraceptives
Proliferative breast conditions	Body Weight
Breast density	Physical Activity
Early Menstruation	Alcohol use
Late menopause	Tobacco smoke

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REMEMBER:

- Breast cancer is a puzzle and we need all the tools we have to put that puzzle together – Each modality adds to the picture.
- Nothing is as good as it sounds or as bad as it sounds –there is no panacea.

QUESTIONS?

- womensdigital.com
- drlisa@womensdigital.com

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SCREENING AND MONITORING OPTIONS FOR OVARIAN CANCER

Elizabeth Poynor, MD, PhD, FACOG
Gynecologic Ongcologist
Private Practice

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Screening Options and Challenges for Women at Risk for Ovarian Cancer

Elizabeth Poynor MD PHD

POYNOR HEALTH

NEW YORK

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Outline

- Who is at elevated risk?
- What is the risk?
- The challenge of the early diagnosis of ovarian cancer.
- Screening techniques for ovarian cancer.
- Who should be screened?
- The challenges with ovarian cancer screening.
- What are the options for risk reduction?
- On the horizon, new screening techniques and risk reduction strategies.

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Ovarian Cancer: The Facts

- 1 out of 70 women will develop ovarian cancer in their lifetime.
- It is the fifth most common cause of cancer death in women.
- It is the leading cause of death from gynecologic malignancies.
- Each year, approximately 22,000 women will be diagnosed, and 15,000 will die.

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Ovarian Cancer Risk Factors

- Age
- Reproductive history
- Surgical history
- Oral contraceptives
- Personal health history
- Family history including inherited cancer genes

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Risk of Ovarian Cancer

- Population risk: 1 out of 70 women
- Personal history of breast cancer
- Family history of breast cancer
- Family history of ovarian cancer
- BRCA1 mutation
- BRCA2 mutation
- HNPCC mutations
- Family history of breast and ovarian cancer

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Population Risk (to less than three fold elevated risk)

- A history of breast cancer diagnosed at age 41 or older and no family history of breast or ovarian cancer.
- A history of breast cancer diagnosed at age 41 or older and not of of Ashkenazi Jewish heritage.
- A history of infertility and/or use of assisted reproductive therapies, such as in vitro fertilization (IVF).
- A history of endometriosis .
- A history of hormone replacement use for the management of symptoms related to menopause.

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Elevated Risk of 3 to 6 Fold

- A first degree relative (mother, sister, or daughter) with ovarian cancer.
- A personal history of breast cancer prior to age 40.
- A personal history of breast cancer diagnosed prior to age 50, and one or more close relatives diagnosed with breast or ovarian cancer at any age.
- Two or more close relatives diagnosed with breast cancer prior to age 50 or with ovarian cancer diagnosed at any age.
- Ashkenazi Jewish heritage and a personal history of breast cancer prior to age 50.
- Ashkenazi Jewish heritage and a first- or second-degree relative diagnosed with breast cancer prior to age 50 or with ovarian cancer at any age.

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Elevated Risk Greater than 6 Fold

- BRCA1 or BRCA2 mutation.
- Presence of a mismatch repair gene mutation associated with a hereditary cancer syndrome known as Hereditary Non-Polyposis Colon Cancer (HNPCC)/Lynch syndrome.

Risk of Ovarian Cancer
Lesser Penetrant Genes

- CHEK 2
- RAD51
- P53
- Others
  - *ATM, BARD1, BRIP1, CDH1, EPCAM, MLH1, MRE11A, MSH2, MSH6, MUTYH, NBN, NF1, PALB2, PMS2, PTEN, RAD50, SMARCA4, STK11.*

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The Risk of Ovarian Cancer with a Personal History of Breast Cancer

- No family history
- Family history of breast cancer only
  - BRCA1/2 negative
- Family history of breast and ovarian cancer
  - BRCA1/2 negative

Quantifying the Risk of Ovarian Cancer

- Myriad “My Risk”
- Ambry “Cancer Next”
- Academic panels

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“Red Flags” for Hereditary Breast and Ovarian Cancer

- Breast cancer before age 50
- Ovarian cancer at any age
- Male breast cancer at any age
- Multiple primary cancers
- Ashkenazi Jewish ancestry
- Relatives of a *BRCA* mutation carrier

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The Problem with Ovarian Cancer

- Early diagnosis is difficult
- Symptoms are subtle
- Usually diagnosed at advanced stages

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Ovarian Cancer: Early Diagnosis

Stage	Percent	Survival
I	24	95%
II	6	65%
III	55	15-30%
IV	15	0-20%
Overall		50%

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Ovarian Cancer Symptoms

- A swollen or bloated abdomen, increased girth. Some women notice that their pants or skirts are getting tight around the waist. The bloating is a sign that fluid, called ascites, is building up in the abdominal cavity in later stage disease
- Persistent pressure or pain in the abdomen or pelvis
- Difficulty eating or feeling full quickly
- Urinary concerns, such as urgency or frequency
- Change in bowel habits with new onset constipation and/or diarrhea
- Unexplained vaginal bleeding

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Screening for Ovarian Cancer

- The problem
  - Once the cancer is detected it has already spread
  - Limited “pre-clinical” phase – controversial
  - Subtle warning signs and symptoms
- The technique
  - Ultrasound, CA125
- The data
  - PLCO trial – no benefit in general population
- The newer data
  - Rate of rise of CA125 over time may be better when combined with ultrasound imaging
- Solutions?
  - Additional tumor markers
  - Experts in pelvic imaging

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Screening for Ovarian Cancer

- NCCN Guidelines – start at ages 30-35 or 10 years earlier than the earliest age of first diagnosis in the family
- Each 6 months
  - Concurrent trans vaginal ultrasound with color doppler
  - CA-125
  - Pelvic exam

Risk Reduction for Ovarian Cancer

- Screening
- Chemoprevention
- Risk reducing surgery

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The Future

- Screening
- Risk Reduction

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PERSONAL STORY

A Sharsheret Link shares her personal story about her genetic history and screening.

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QUESTION & ANSWER SESSION

To ask a question, please dial *1 or enter your question into the chat box.

Questions will be addressed in the order received.

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Your feedback is important to us.

Please complete the online evaluation that will be sent to you.

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You can access the transcript and audio of the webinar at:

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