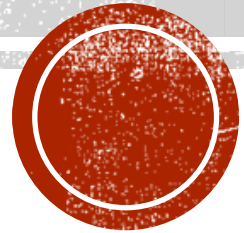
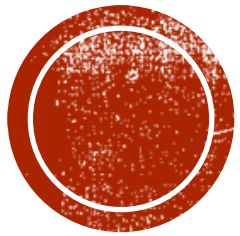
DEALING WITH "THE DENSITY LETTER"



Addie McClintock, MD

Washington Chapter ACP Meeting, Commuter Series

2020



DISCLOSURES: NONE

THE LETTER:

2019 Mandated text:

"Your mammogram indicates that you may have dense breast tissue. **Roughly half of all women have dense breast tissue which is normal**. Dense breast tissue **may make it more difficult to evaluate your mammogram**. We are sharing this information with you and your health care provider to help raise your awareness of breast density. We encourage you to **talk with our health care provider about this and other breast cancer risk factors.** Together **you can decide which screening options are right for you**."

COMMON QUESTIONS:

- What is breast density?
- Why is it "difficult to evaluate my mammogram?"
- How much more likely am I to get breast cancer?
- What are my "screening options?"

LEARNING OBJECTIVES:

At the end of this session, you will be able to answer the following questions:

- What is breast density?
- Why is it "difficult to evaluate my mammogram?"
- How much more likely am I to get cancer?
- What are my "screening options?"

FIRST OF ALL: WHAT *IS* DENSITY?!

Milk ducts

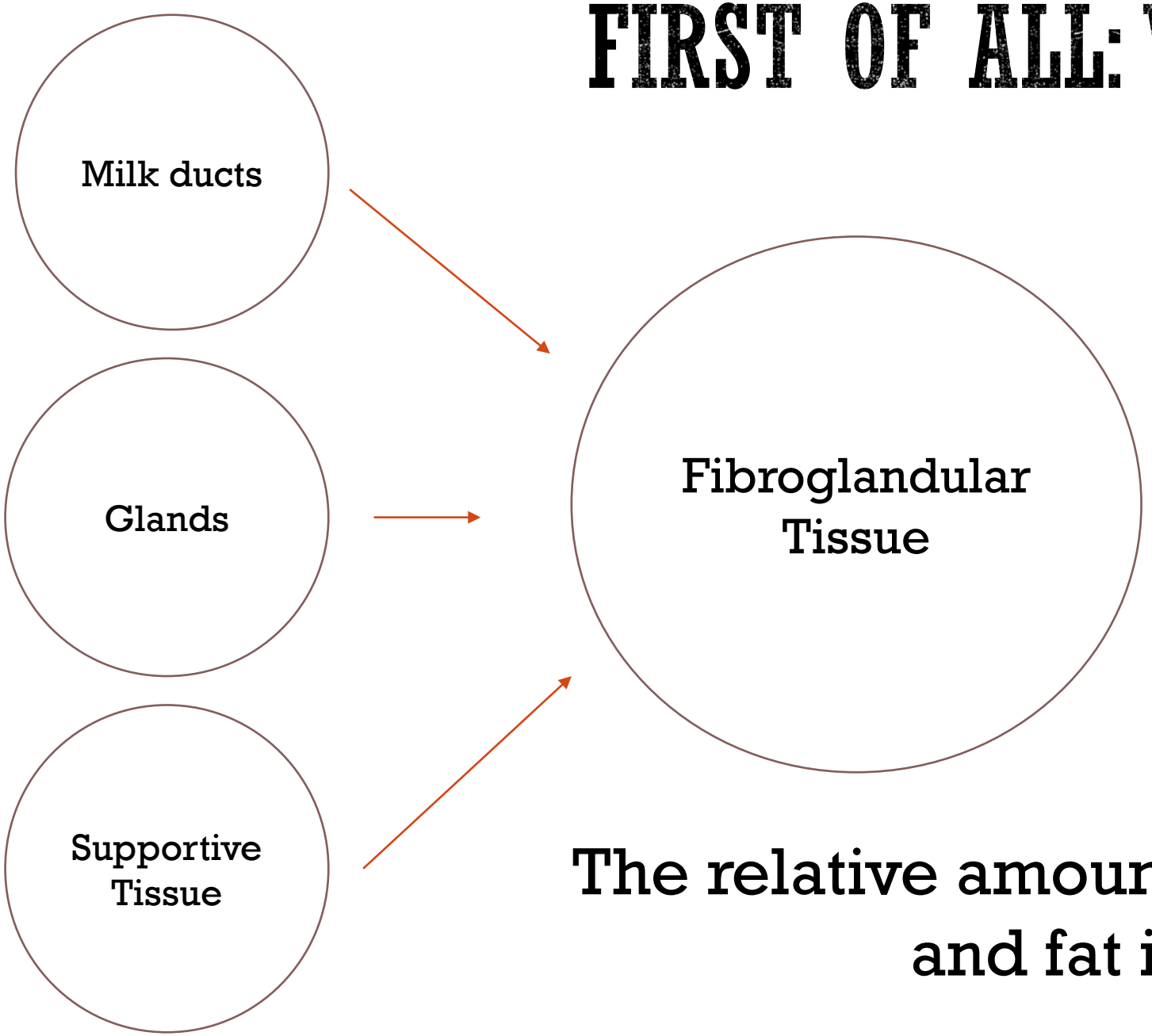
Glands

Supportive Tissue

Fibroglandular Tissue

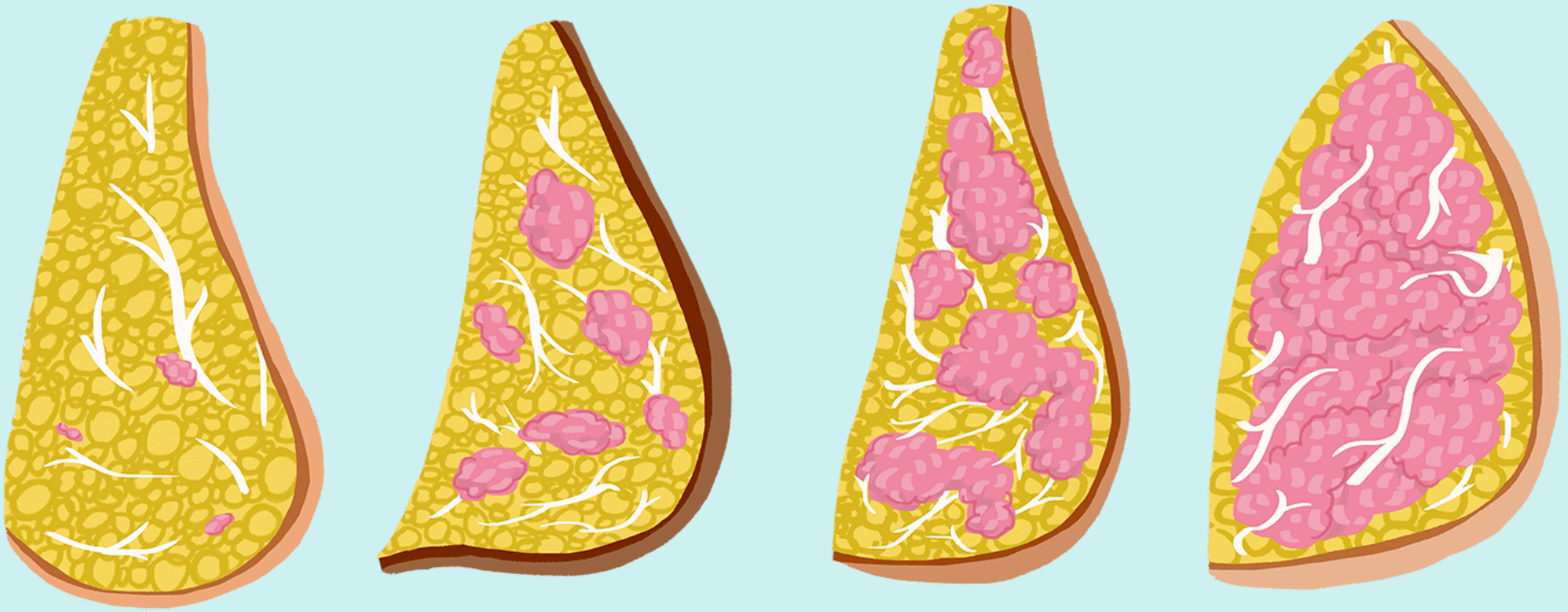
Fat

FIRST OF ALL: WHAT *IS* DENSITY?!



The relative amounts of fibroglandular tissue and fat is the "Density"

Four Categories of Breast Density



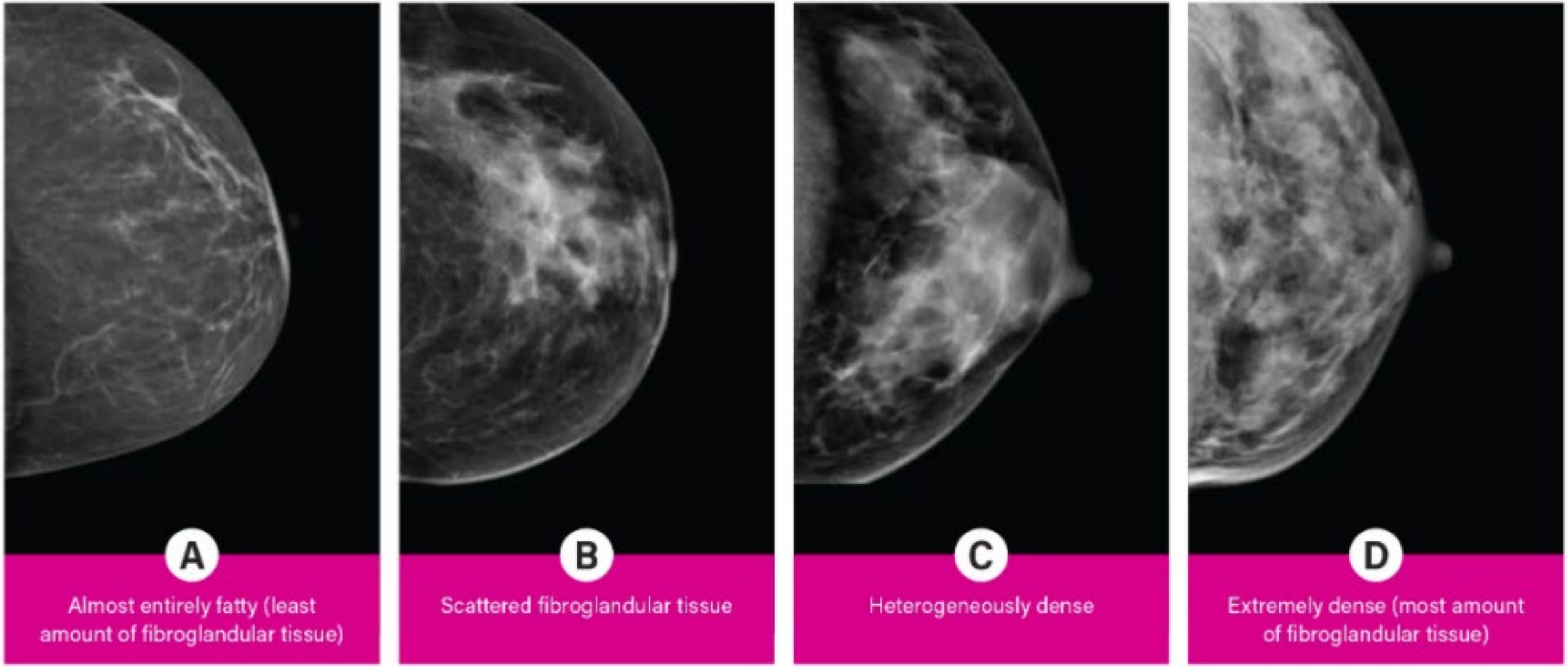
1. Breasts are almost entirely fatty
2. Breasts have scattered areas of fibroglandular density
3. Breasts have heterogeneous density
4. Breasts are almost entirely glandular and fibrous tissue

verywell

https://www.verywellhealth.com/dense-breasts-430657

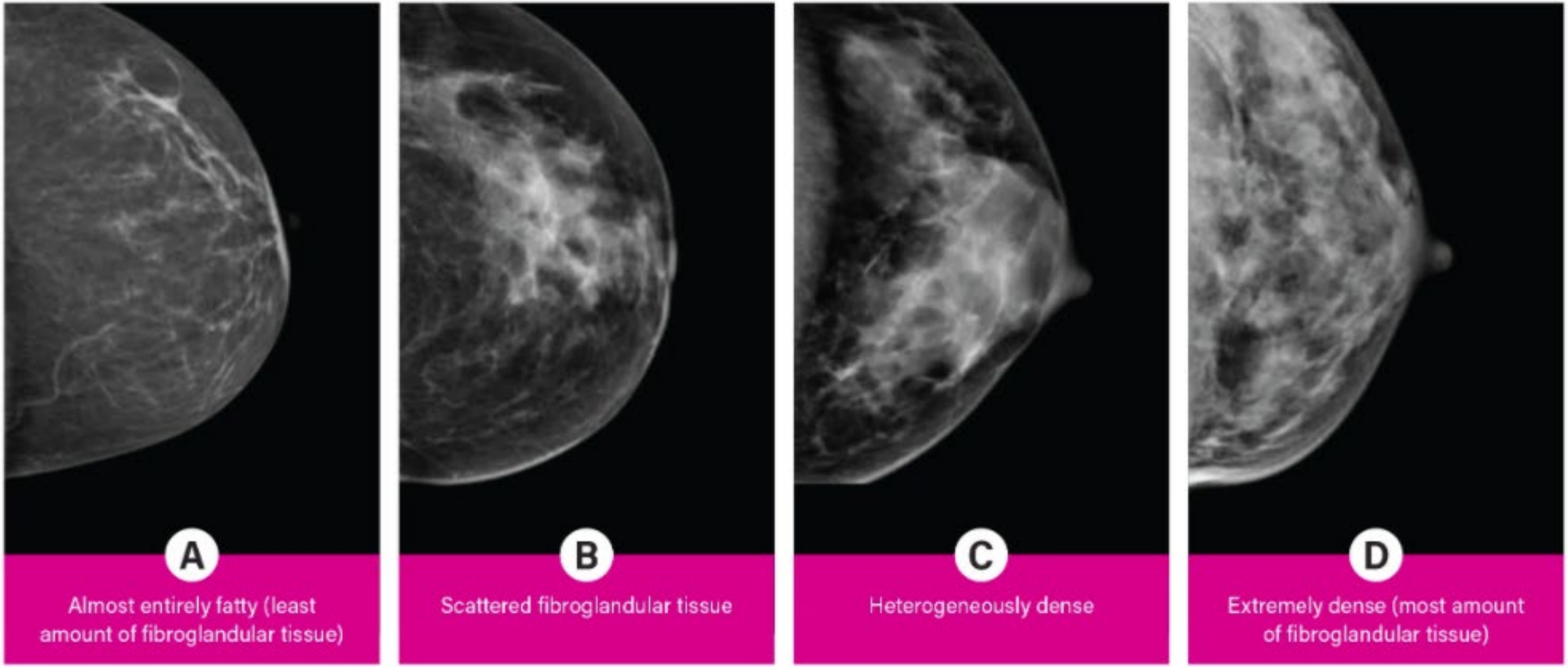
HOW IS DENSITY DETERMINED?

https://time.com/5754183/google-ai-mammograms-breast-cancer/



”Roughly half of women have dense breast tissue, which is normal”

https://www.itnonline.com/article/breast-density-explained



50%

50%

10%

40%

40%

10%

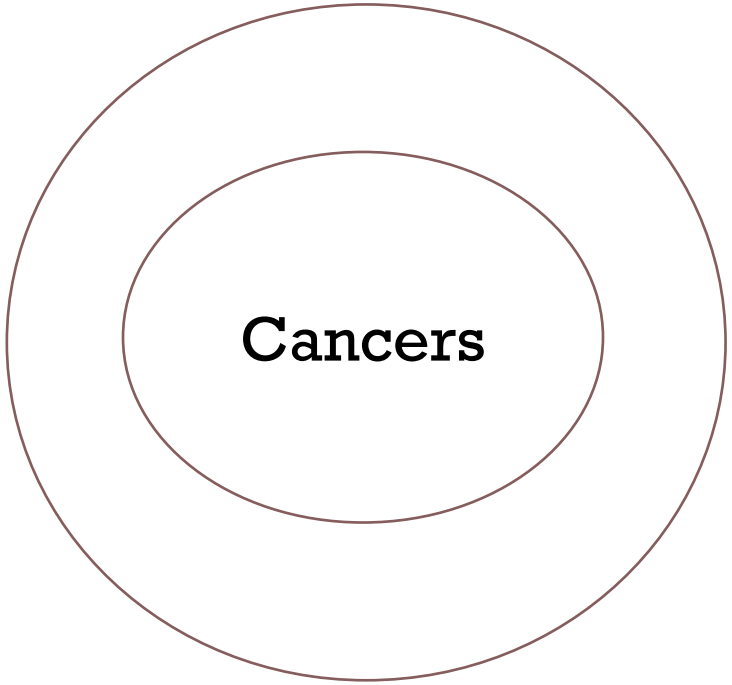
https://www.itnonline.com/article/breast-density-explained

WHY IS IT "DIFFICULT TO EVALUATE MY MAMMOGRAM?"

Density and imaging

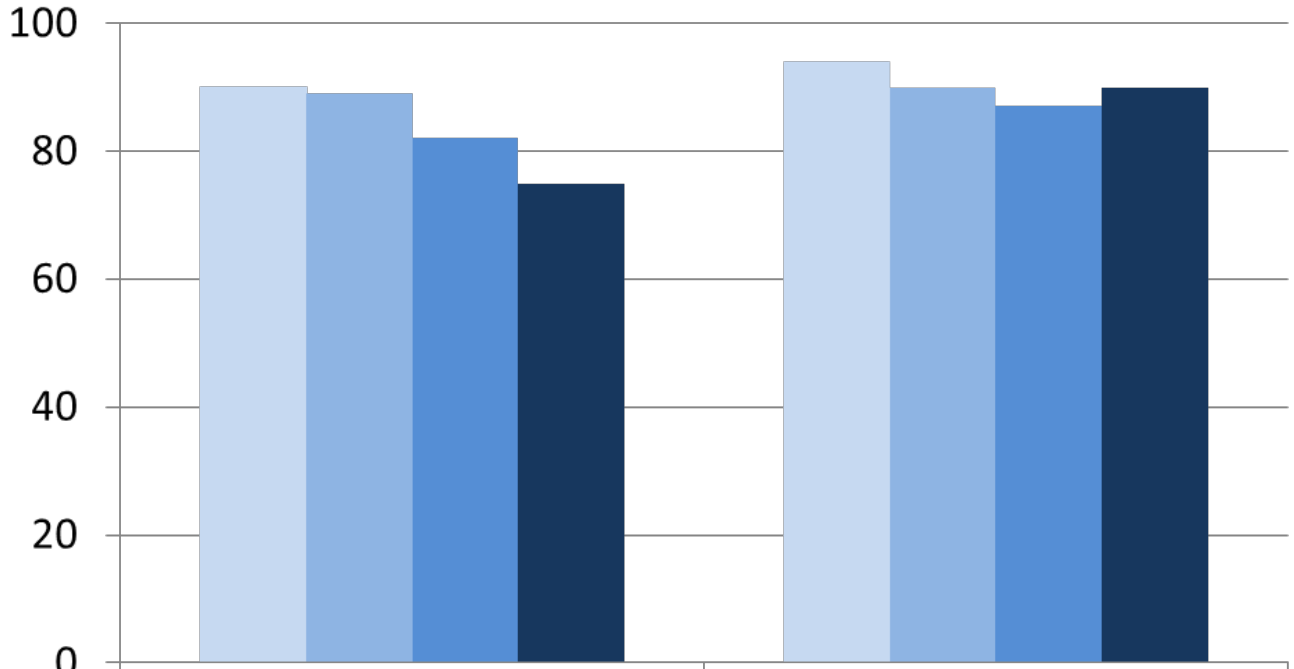
MALIGNANCY ALSO APPEARS WHITE ON MAMMOGRAPHY

Dense breasts make it harder to "see" malignancy on mammography



DIGITAL MAMMOGRAPHY PERFORMANCE

Women 40-74 years, 2003-2011



	Sensitivity %	Specificity %
Almost entirely fat (10%)	90	94
Scattered (42%)	89	90
Heterogeneously dense (40%)	82	87
Extremely dense (7%)	75	90

http://www.bcsc-research.org/publications/newsletters/201309.newsletter.html#stat

HOW MUCH MORE LIKELY AM I TO GET BREAST CANCER?

Density and Malignancy

Four Categories of Breast Density

verywell

Cummings SR, et al. JNCI 2009; 101: 384-398
Sprague BL, et al. 2014; 106: dju255

https://www.verywellhealth.com/dense-breasts-430657

Relative risk

from increase in density category B ➔ C

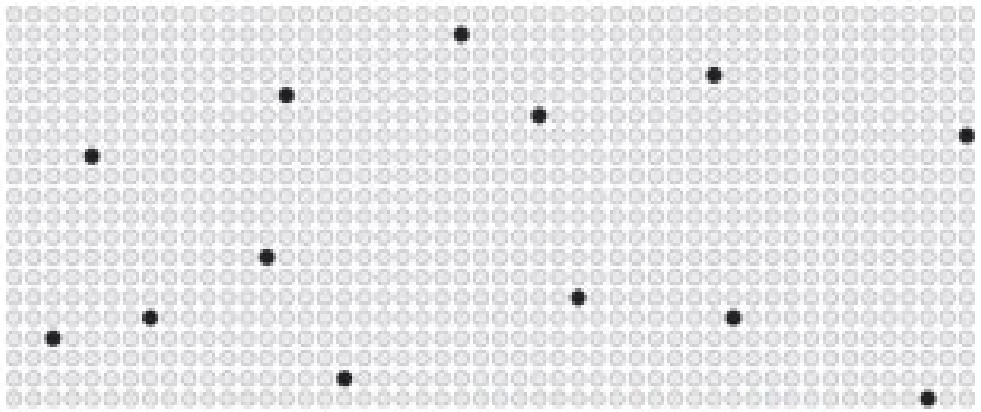
1.5

Absolute risk

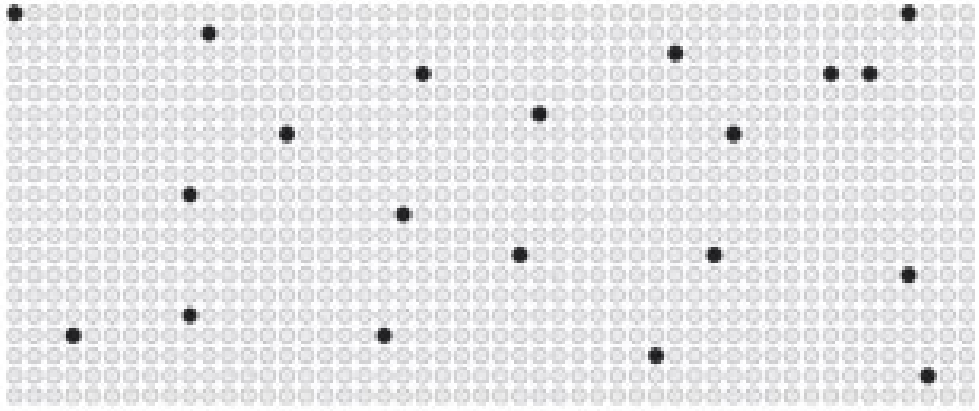
13 cases/1,000 women per year

20 cases/1,000 women per year

Seven more breast cancers per 1,000 women with increase in density category

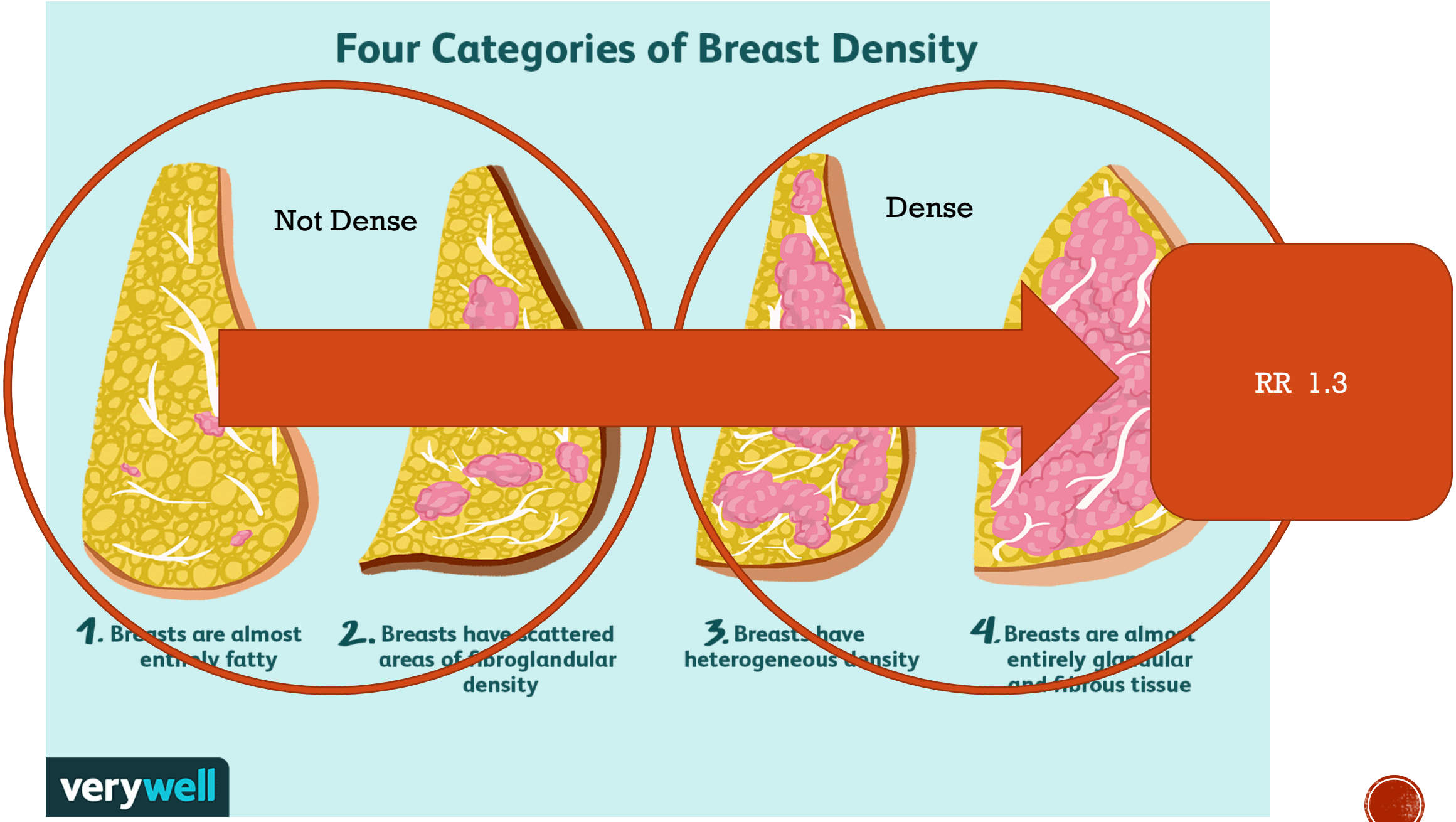


Breast Density Category b (*n* = 13 diagnosed)



Breast Density Category c (*n* = 20 diagnosed)

Smetana, 2018



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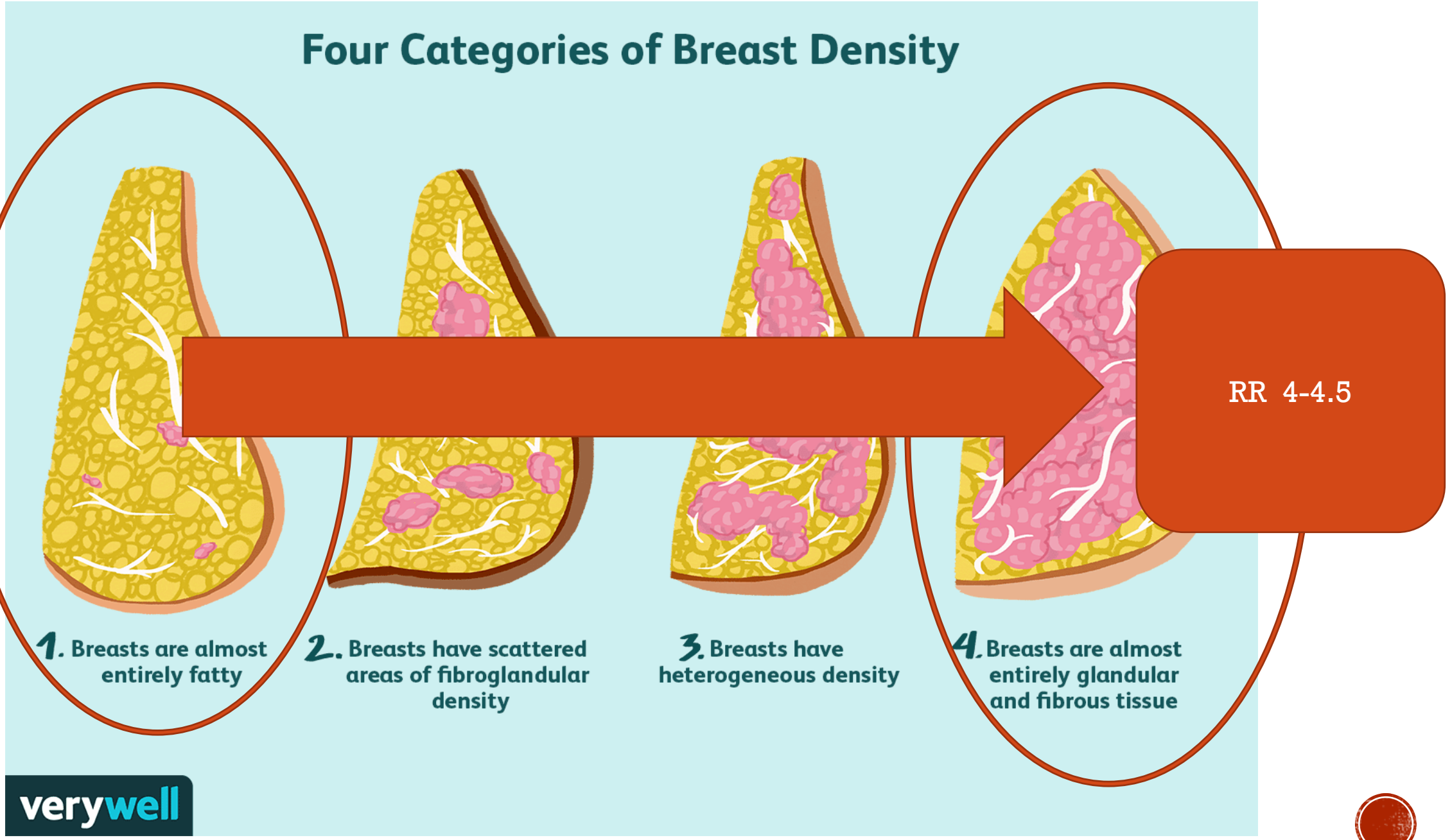


https://www.verywellhealth.com/dense-breasts-430657

Breast Cancer Surveillance Consortium

BCSC

Working together to advance breast cancer research

Breast Cancer Surveillance Consortium Risk Calculator

Risk Factor Form

Risk Calculator V2

1.	Does the woman have a history of breast cancer or of ductal carcinoma in situ (DCIS), breast augmentation, or mastectomy?	Select
2.	What is the woman's age?	Select
3.	What is the woman's race/ethnicity?	Select
4.	Have any of the woman's first-degree relatives (mother, sister or daughter) been diagnosed with breast cancer?	Select
5.	Has the woman had prior breast biopsies (positive or negative)?	Select Explain these biopsy result terms in a new window
6.	What is the woman's BI-RADS® breast density (radiologic assessment of the density of breast tissue by radiologists who interpret mammograms)?	Select

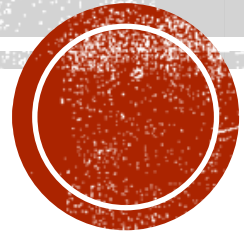
** You can click a question number for a brief explanation of the risk factor.*

Calculate Risk

https://tools.bcsc-scc.org/BC5yearRisk/calculator.htm

WHAT SCREENING OPTIONS ARE RIGHT FOR ME?

What to do with your data?



WHO HAS AN OPINION?

- USPSTF
- ACOG
- American Cancer Society
- National Comprehensive Cancer Network
- American College of Radiology

SUMMARY OF RECOMMENDATIONS

Society	Year	Start	Stop	Interval
USPSTF	2009	50, ok to consider at 40	75	Biennial
ACOG	2017	40 (offer, SDM) 50 (start)	75	Annual or Biennial
ACS	2015	40 (offer, SDM) 45 (start)	Life expect <10 years	40-54 annual 55+ Biennial (annual OK)
NCCN	2018	40	No recommendation	Annual
ACR	2017	40	No recommendation	Annual

WHAT ABOUT ULTRASOUND?

- Generally, recommend against ultrasound as a screening modality (but you may still see it commonly offered)

- Most important limitation: operator dependent
  - Also varies by breast size (larger breasts are harder to make sure the tissue has been fully evaluated)

SO WHAT ARE MY "OPTIONS"?

- If you want to do "more screening" for someone who is above average risk, consider screening with mammography at age 40, and doing it yearly instead of every other

- Women with 8% ten-year risk or 20% lifetime risk are candidates for screening with MRI

Risk Category	Risk of Developing Breast Cancer	Screening Recommendations
Average	<15% lifetime <1.66% 5 year	Offer routine mammography per average risk screening guidelines.

McClintock, 2020

Risk Category	Risk of Developing Breast Cancer	Screening Recommendations
Intermediate	15-20% lifetime 1.67-2.49% 5 year	Emphasis on shared decision-making given lack of high quality data to guide screening in this group. Consider screening mammography starting at age 40 if "higher than average risk" (USPSTF Grade C). • ACOG, ACS, NCCN, and ACR recommend or suggest clinicians "offer" screening mammography starting at 40. • Most organizations also recommend yearly rather than biennial screening in this group. For women with intermediate risk of developing breast cancer based on family history and personal risk factors, NCCN and ACS guidelines agree that there is insufficient evidence to recommend for or against MRI for screening. For women who have intermediate risk due to breast density alone, without other risk factors USPSTF, ACS, NCCN, ACOG and ACR do not support routine use of ultrasound or MRI for supplemental screening (either recommend against, believe there is insufficient evidence, or believe it may find more cancer but increase recall and benign biopsies). McClintock, 2020

Risk Category	Risk of Developing Breast Cancer	Screening Recommendations
High	≥20% lifetime ≥2.5% 5 year	ACS, NCCN, ACR and all recommend offering annual mammography and annual breast MRI starting at 10 years prior to the age of diagnosis of youngest affected family member, but not before the age 30.

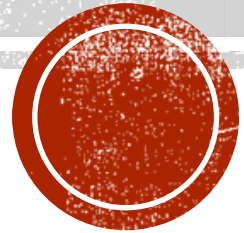
McClintock, 2020

IN SUMMARY:

- What is breast density?
- Why is it "difficult to evaluate my mammogram?"
- How much more likely am I to get breast cancer?
- What are my "screening options?"

IN SUMMARY:

- Breast Density is determined by a radiologist and is based on the amount of fat vs glandular tissue is in your breast
- It is difficult to detect cancer because both glandular tissue and cancer can appear white and it is hard to tell the difference
- Let's use a risk calculator to determine your personal risk (in a separate appointment!)
- Screening options vary by risk, but can consider screening yearly instead of every other year for women at above average risk. If you are very high risk, we can consider using MRI to screen in addition to mammography. We don't recommend using ultrasound to screen for breast cancer.

THANK YOU!

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