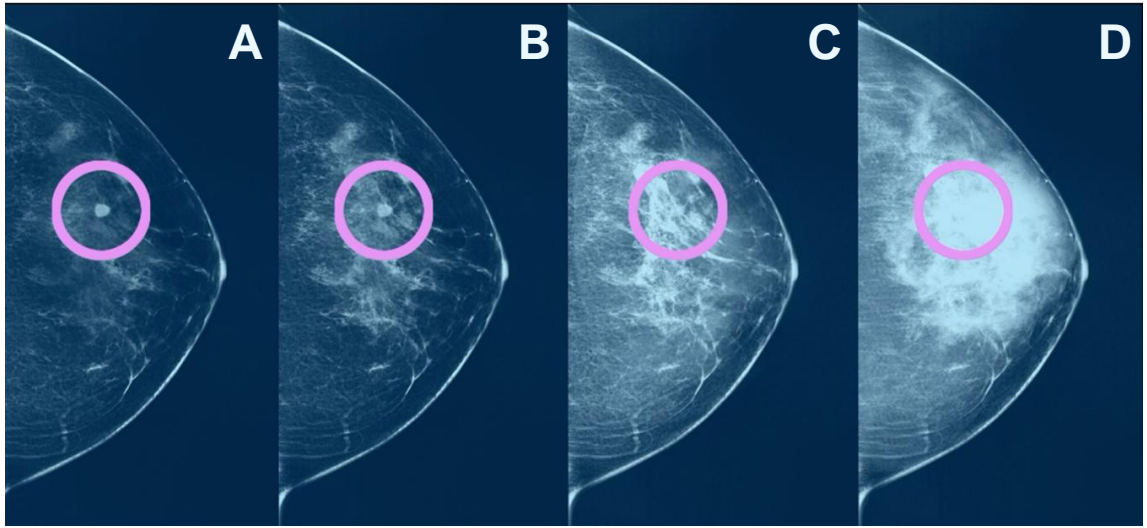


Deep Plasma Proteomics for Early-Stage Breast Cancer Detection

Mammography Sensitivity is Reduced in Women with Dense Breast Tissue

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A	B	C	D
Almost entirely fatty breast tissue	Scattered areas of fibroglandular tissue	Heterogeneously dense	Extremely dense

FDA U.S. FOOD & DRUG ADMINISTRATION

Important Information: Final Rule to Amend the Mammography Quality Standards Act (MQSA)

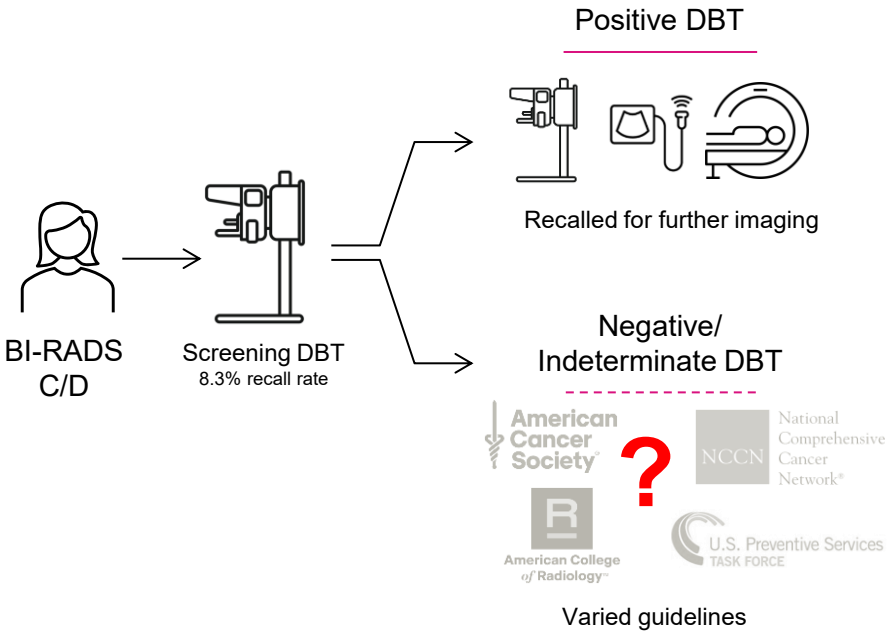
MQSA Final Rule began on September 10, 2024. Facilities subject to the MQSA, must now comply with all applicable requirements, including the **breast density notification**.

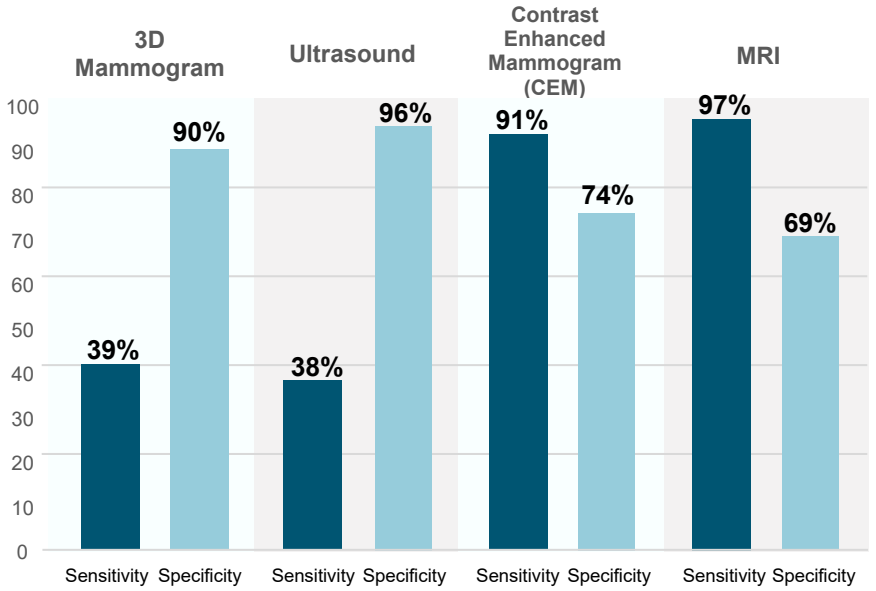
"Breast tissue can be either dense or not dense. Dense tissue makes it harder to find breast cancer on a mammogram and also raises the risk of developing breast cancer. Your breast tissue is dense..."

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Inconsistent and Unclear Guidance for Women with Dense Breast Tissue post Mammography

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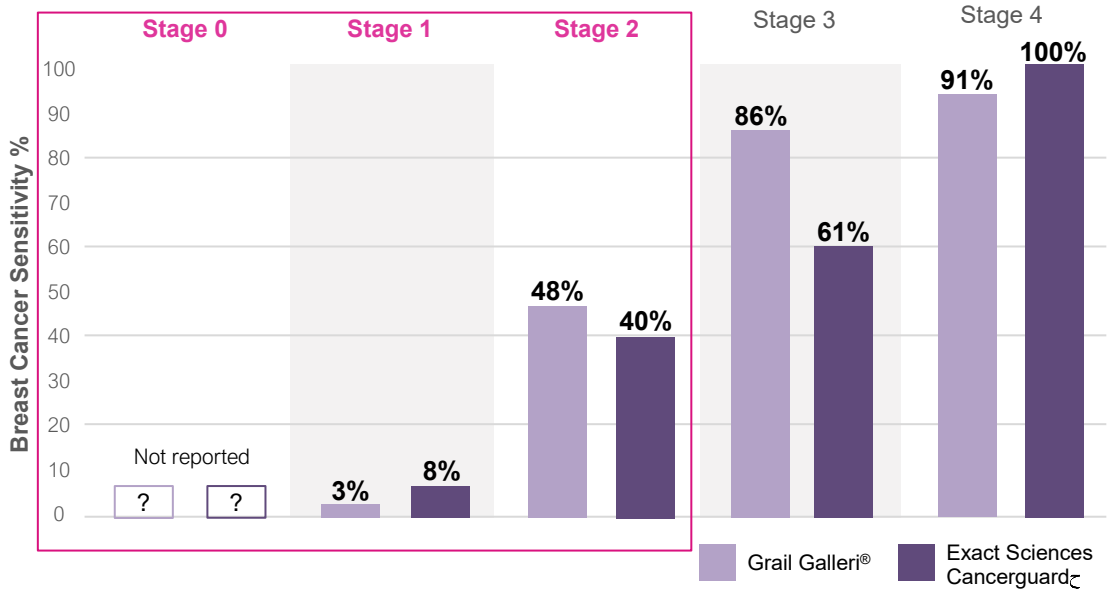
Sensitivity of imaging technologies as reported by Gilbert (Lancet 2025), Comstock (JAMA 2020), Patsch (Radiology 2020)

Unmet Need #1: A simple, cost-effective, sensitive test for women with dense breast tissue

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Low Sensitivity from other Blood Tests for Early-Stage Breast Cancer Detection

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Studies* have consistently shown breast cancer sheds less than 1/10th of the DNA as other cancers. It's the primary reason the promise of ctDNA has never been realized for early breast cancer detection.

The answer lies in **deep proteomics.**

Unmet Need #2: A sensitive test that can find cancers early

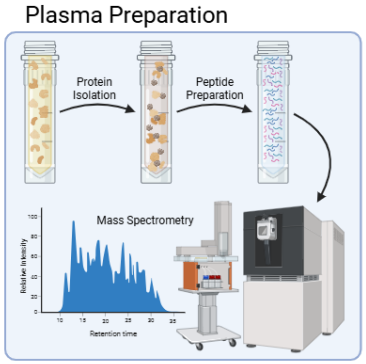
*Comparative ctDNA data from Bettegowda (Science Trans Med 2014). Stage-wise sensitivity of Grail from Shao 2021, of Cancerguard from Exact Sciences 2025.
Exact Sciences has removed breast and prostate cancer detection from the Cancerguard indication.

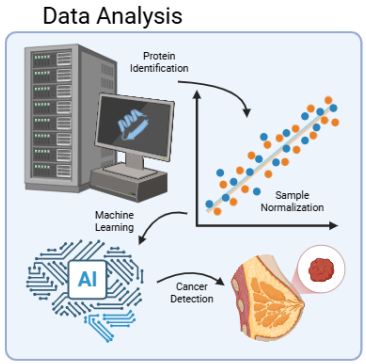
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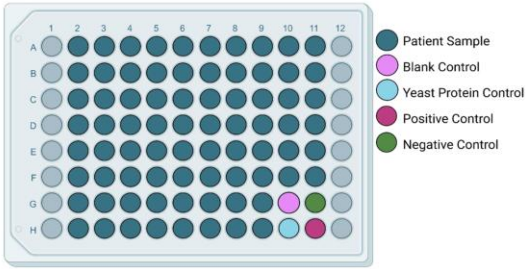
The Deep Proteomic Platform for Early Cancer Detection – An Overview

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Deep Proteomic Platform and Plate Layout



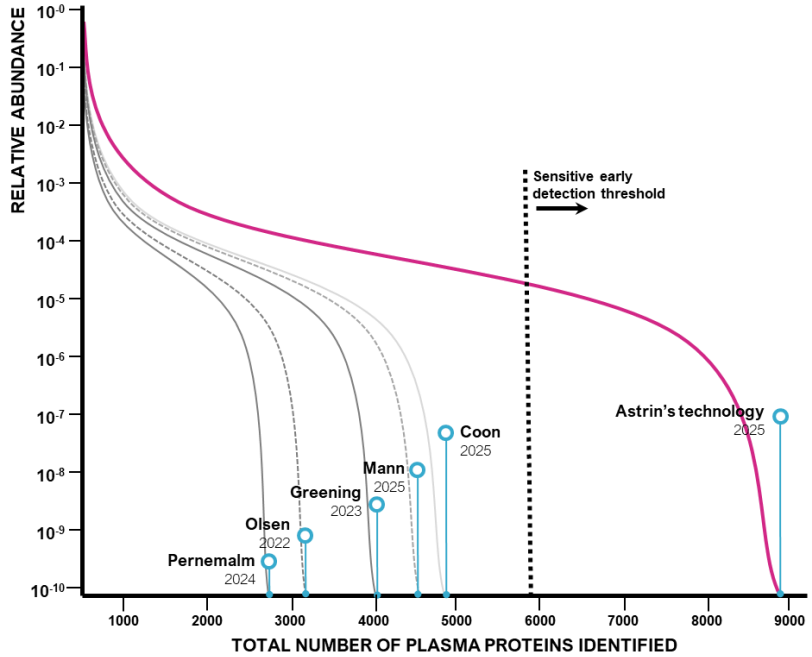




	2	3	4	5	6	7	8	9	10	11
A	6873	7135	6772	6210	7066	7159	6857	6764	7280	6787
B	7070	7054	6983	5965	7355	6304	7080	7093	7209	6469
C	6176	6621	7230	6830	4726	7029	6584	7256	7052	6484
D	7165	6741	6775	6753	7017	6057	7243	6548	6851	6621
E	7113	7196	7180	6623	6675	6800	7080	7094	7114	5975
F	7352	5796	6688	3161	2166	6270	7328	6898	7153	6410
G	6900	7434	6683	7195	6935	5566	6027	7169		
H	5107	6910	7407	6909	4917	6769	7138	7644		

Randomized & Blinded

Proteome Depth and Coverage over Several Orders of Magnitude



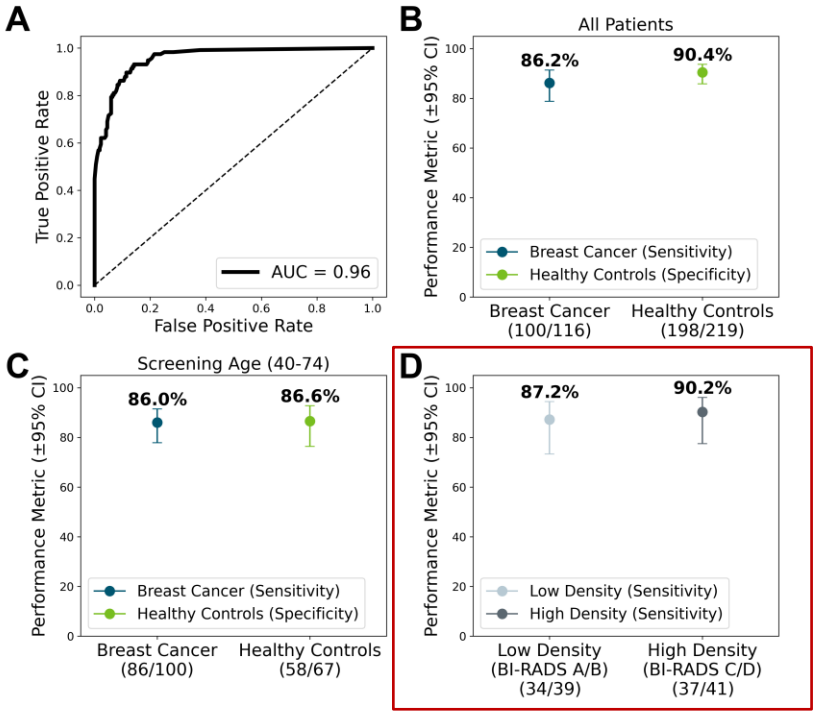
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High Sensitivity for Early-stage Breast Cancer Detection in a Case-Controlled Study, Including in Women with Dense Breast Tissue

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Characteristic	Breast Cancer Patients n = 116	Healthy Controls n = 219	Total n = 335
Age			
Overall			
n (%)	116 (100.0%)	219 (100.0%)	335 (100.0%)
Mean (SD)	61 (12)	36 (14)	44 (18)
Median (Q1-Q3)	64 (52-70)	32 (25-34)	43 (29-60)
Screening Age-Restricted (40-74)			
n (%)	100 (86.2%)	67 (30.6%)	167 (49.9%)
Mean (SD)	59 (10)	54 (9)	57 (10)
Median (Q1-Q3)	61 (51-68)	53 (47-60)	57 (49-65)
Min, Max	40, 74	40, 72	40, 74
Race, n (%)			
White	98 (84.5%)	155 (70.8%)	253 (75.5%)
Black	5 (4.3%)	20 (9.1%)	25 (7.5%)
Asian	3 (2.6%)	5 (2.3%)	8 (2.4%)
American Indian	2 (1.7%)	0 (0.0%)	2 (0.6%)
Other	0 (0.0%)	7 (3.2%)	7 (2.1%)
Not Specified	8 (6.9%)	32 (14.6%)	40 (11.9%)
Ethnicity, n (%)			
Non-Hispanic	105 (90.5%)	154 (70.3%)	259 (77.3%)
Hispanic	10 (8.6%)	53 (24.2%)	63 (18.8%)
Not Specified	1 (0.9%)	12 (5.5%)	13 (3.9%)
Cancer Stage, n (%)			
Healthy	--	219 (100.0%)	219 (65.4%)
Stage 0	30 (25.8%)	--	30 (8.9%)
Stage 1	72 (62.1%)	--	72 (21.5%)
Stage 2	14 (12.1%)	--	14 (4.2%)
Breast Density, n (%)			
High	41 (35.4%)	--	41 (12.2%)
Low	39 (33.6%)	--	39 (11.7%)
Not Specified	36 (31.0%)	219 (100.0%)	255 (76.1%)



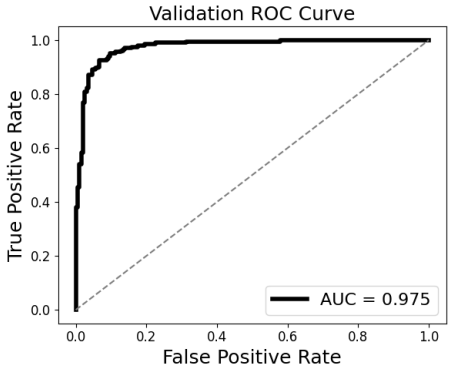
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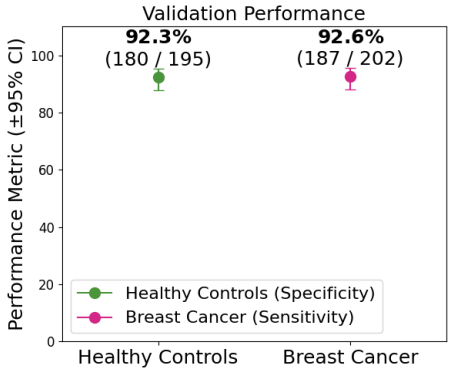
Horrmann et al., 2025, *Endocrinology*

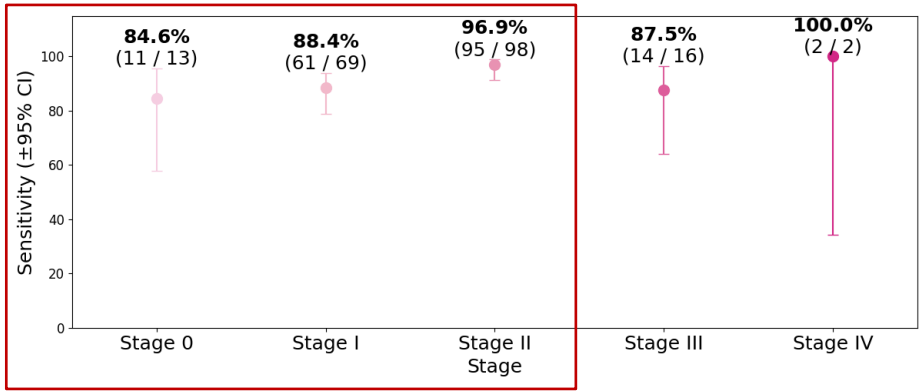
High Sensitivity and Specificity in Detecting Early-stage Breast Cancer from a Large Biobanked Cohort of 1,250 Women

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Demographics		Training Set		Validation Set	
		Healthy	Cancer	Healthy	Cancer
Sample size	Count, n	466	379	195	202
Age	Mean (SD)	55.4 (10.8)	57.2 (12.4)	56.4 (8.8)	59.8 (13.0)
BMI	Mean (SD)	26.2 (4.4)	27.8 (6.3)	26.2 (4.3)	26.7 (5.4)
pStage	0, n (%)		45 (11.9%)		13 (6.4%)
	I, n (%)		130 (34.3%)		69 (34.2%)
	II, n (%)		152 (40.1%)		98 (48.5%)
	III, n (%)		35 (9.2%)		16 (7.9%)
	IV, n (%)		14 (3.7%)		2 (1.0%)
	Unknown, n (%)		3 (0.8%)		4 (2.0%)
Pathology	LCIS, n (%)		1 (0.3%)		1 (0.5%)
	DCIS, n (%)		38 (10.0%)		10 (5.0%)
	ILC, n(%)		33 (8.7%)		20 (9.9%)
	IDC, n(%)		270 (71.3%)		153 (75.7%)
	Mixed, n(%)		4 (1.0%)		1 (0.5%)
	Other / Unknown, n(%)		33 (8.7%)		17 (8.4%)
Subtype	HR+/HER2-		190 (50.1%)		121 (59.9%)
	HR-/HER2-		35 (9.2%)		16 (7.9%)
	HR+/HER2+		27 (7.1%)		6 (3.0%)
	HR-/HER2+		19 (5.0%)		3 (1.5%)
	Unknown		108 (28.6%)		56 (27.7%)
Race	White, n (%)	429 (92.1%)	355 (93.6%)	176 (90.3%)	197 (97.5%)
	Black/African American, n (%)	12 (2.6%)	8 (2.1%)	4 (2.1%)	1 (0.5%)
	Asian, n (%)	21 (4.5%)	15 (4.0%)	10 (5.1%)	4 (2.0%)
	Other/Unknown, n (%)	4 (0.8%)	1 (0.3%)	5 (2.5%)	0 (0.0%)
Source	ProteoGenex, n (%)	316 (67.8%)	240 (63.3%)	105 (53.8%)	129 (63.9%)
	BioIVT, n (%)	150 (32.2%)	139 (36.7%)	90 (46.2%)	73 (36.1%)





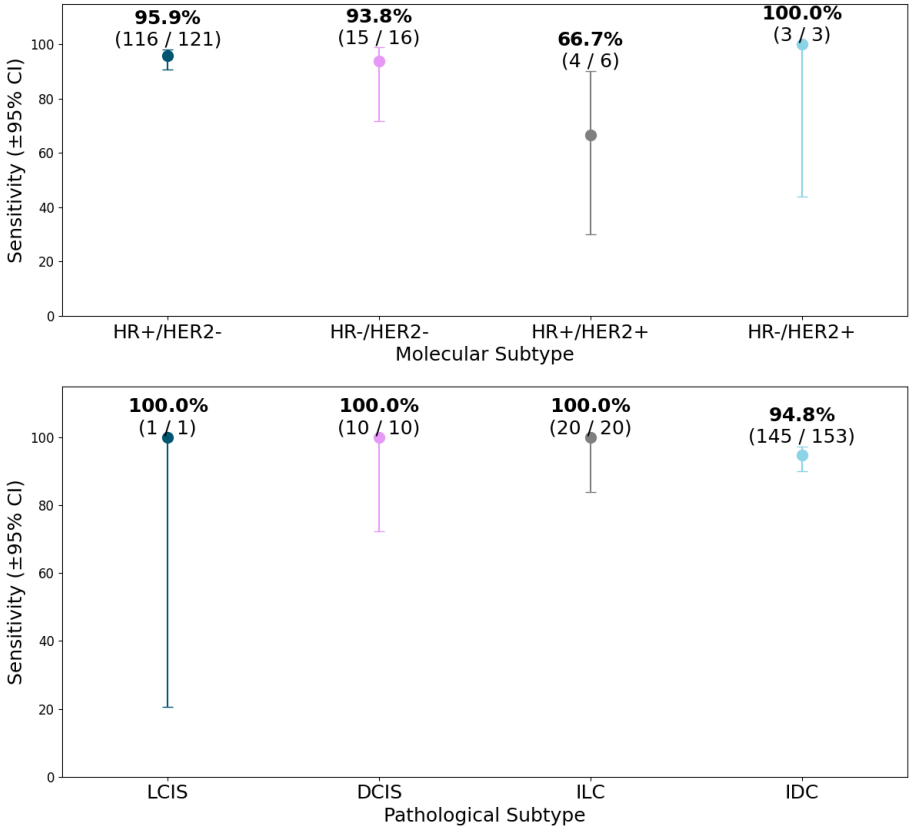


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High Sensitivity was Independent of Pathological and Molecular Subtypes

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Ongoing and Future Trials

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Ongoing Trials

- Prospective trials underway with Mayo Clinic, Advocate, Baptist MD Anderson

- Assessment of early breast cancer detection via the PRISM study of ~4,500 women at the time of screening (with Mayo Clinic)

Future Trials

- Future studies will focus on validation in women with dense breast tissue

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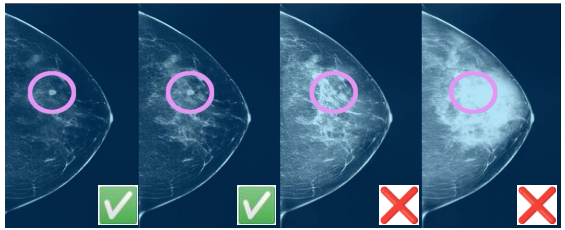
Summary Across Three Independent Studies

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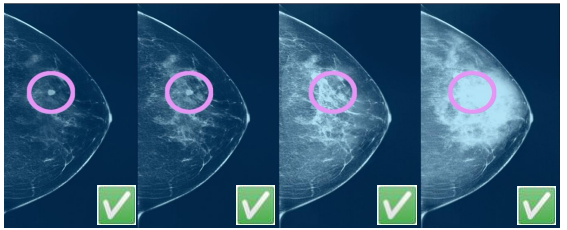
Unmet Need #1: A simple, cost-effective, sensitive test for women with dense breast tissue

- Robust performance on women with dense breast tissue

Traditional Method: DBT Screening



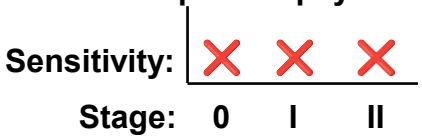
New Liquid Biopsy Test



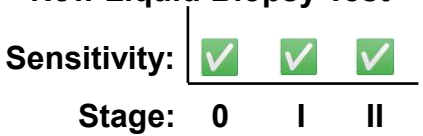
Unmet Need #2: A sensitive test that can find cancers early

- High sensitivity, especially at early-stages 0-I, with a high NPV

MCED – Liquid Biopsy Test



New Liquid Biopsy Test



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Astrin Biosciences Team

A very special thanks to the brave women who participated in our clinical studies

THANK YOU!

Technical Questions?
Contact: Justin Drake, PhD, Chief Science Officer
Email: justin.drake@astrinbio.com

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