

Alliance A11104/ACRIN 6694:
Effect of Preoperative Breast MRI on
Surgical Outcomes, Costs and Quality
of Life of Women with Breast Cancer

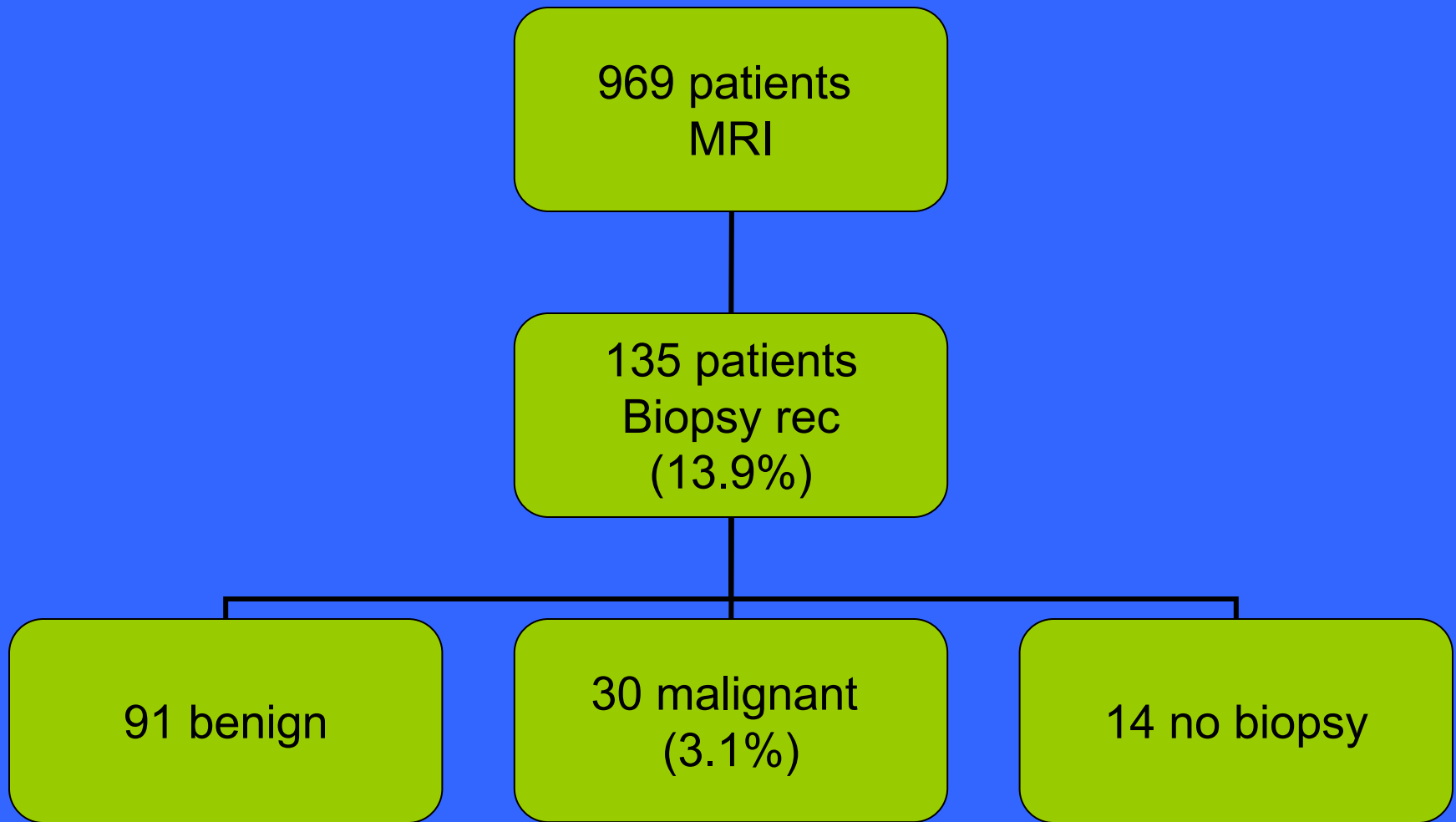
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Breast MRI detection of additional areas of cancer

- Well established that breast MRI detects more disease and impacts surgical management
- Meta-analysis of 19 studies, 2610 women
- Additional foci of disease detected by MRI only in 16% (6-34%)
- MRI altered surgical therapy in 7.8-33% of women

MRI and detection of contralateral breast cancer (ACRIN 6667)



Lehman, NEJM, 2007

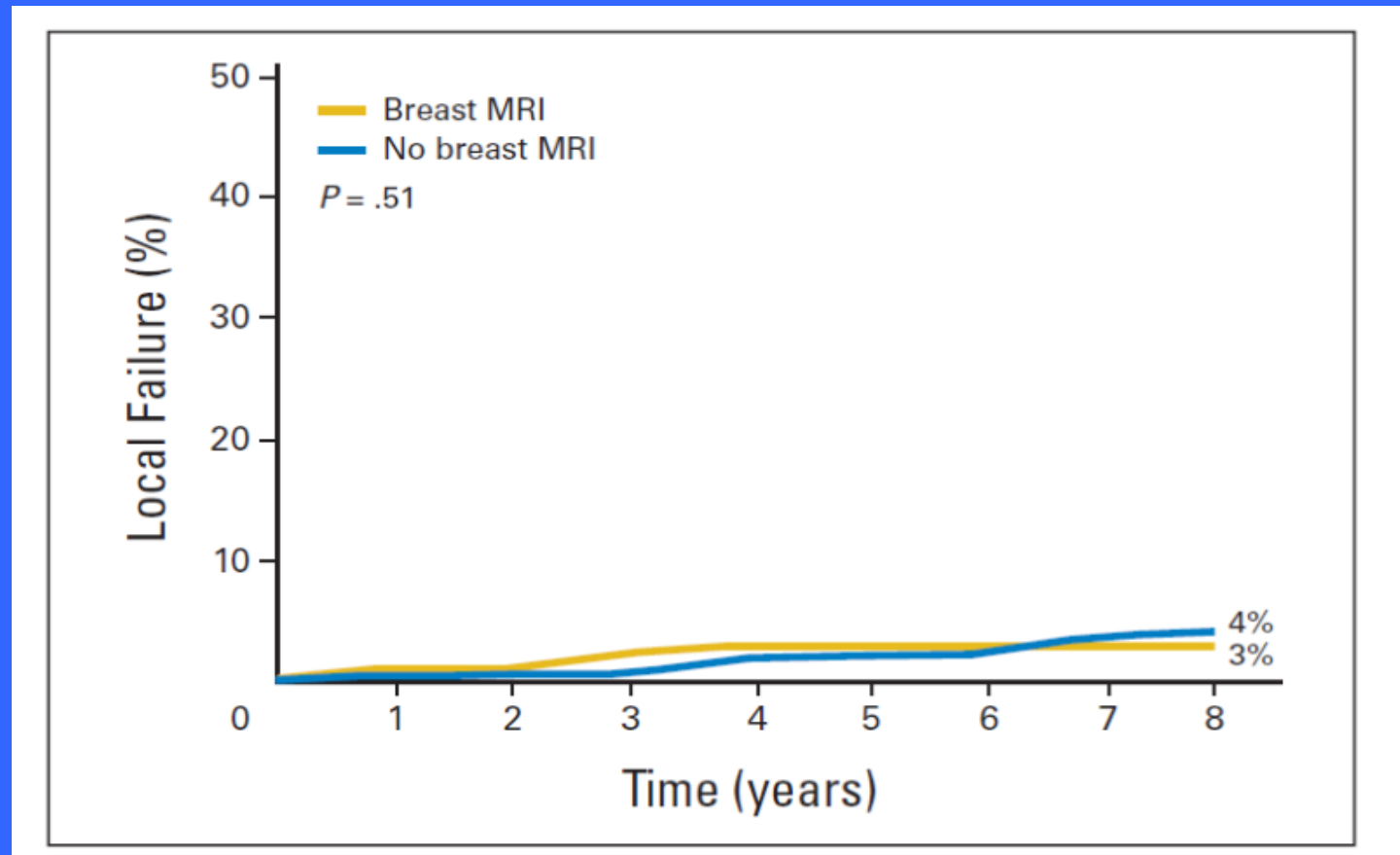
Does preoperative breast MRI have clinical utility?

- Appropriate selection for BCT
 - Reduce rates of re-excision
 - Reducing rates of conversion to mastectomy
- Decrease rates of local failure
- Decrease contralateral breast cancer rates

MRI and re-excision rates

- COMICE trial (UK)
 - Prospective randomized trial
 - MRI: 816, no MRI: 807
 - Primary endpoint
 - Reduction in re-operation rates in MRI arm
 - No difference in re-operation rates (18.75% vs. 19.33%)

Impact of MR on Local Recurrence



Probability of contralateral breast cancer

MRI ¹	Occult ² (CPM)	U Penn ³	SEER ⁴
3.1%	5%	6% at 8 years for both MRI and no MRI cohorts	3% at 5yrs

0.6-0.75%/year

1. Lehman, NEJM, 2007
2. Boughey, Cancer 2006

3. Solin, JCO, 2008
4. Gao, IJROBP, 2003

Does preoperative breast MRI have clinical utility?

- Reduce re-operation rates
 - MRI does not improve margin negative rates at first excision
- Reduce local recurrence rate
 - Retrospective data-mixed results
- Reduce contralateral breast cancer rate
 - Significance of MRI detected contralateral breast cancer?

Limitations to current data

- Paucity of studies
- Only 1 prospective trial (COMICE)
 - Did not control for MR quality and interpretation or MRI findings
- Does not incorporate tumor biology

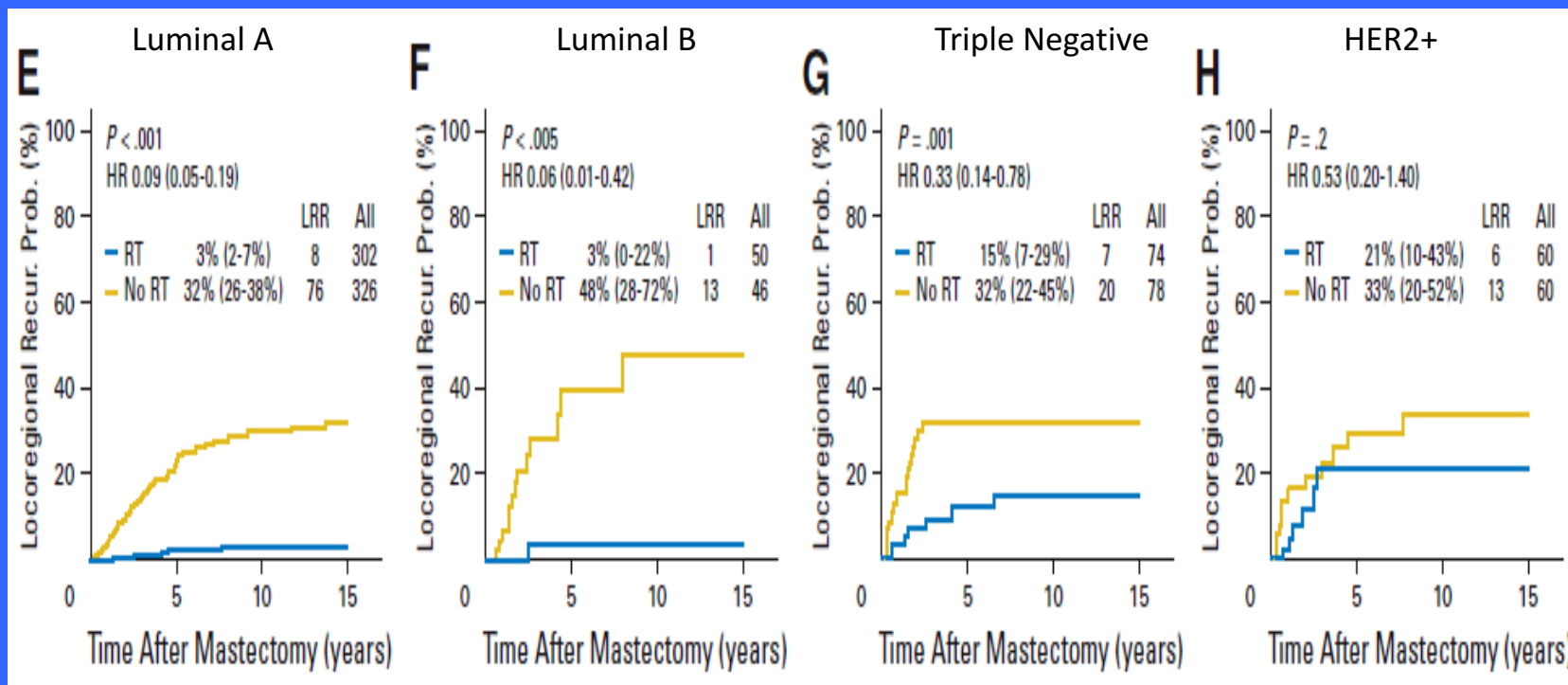
Tumor subtype and local recurrence rate following BCT

	ER +		ER -	
	ER or PR+, her-2 -	ER or PR +, her-2 +	ER/PR -, her-2 +	ER/PR/ Her-2 -
LR rate at 5 years	0.8%	1.5%	8.4%	7.1%

Impact of PMRT on Outcomes by Subtype

HR +

HR -



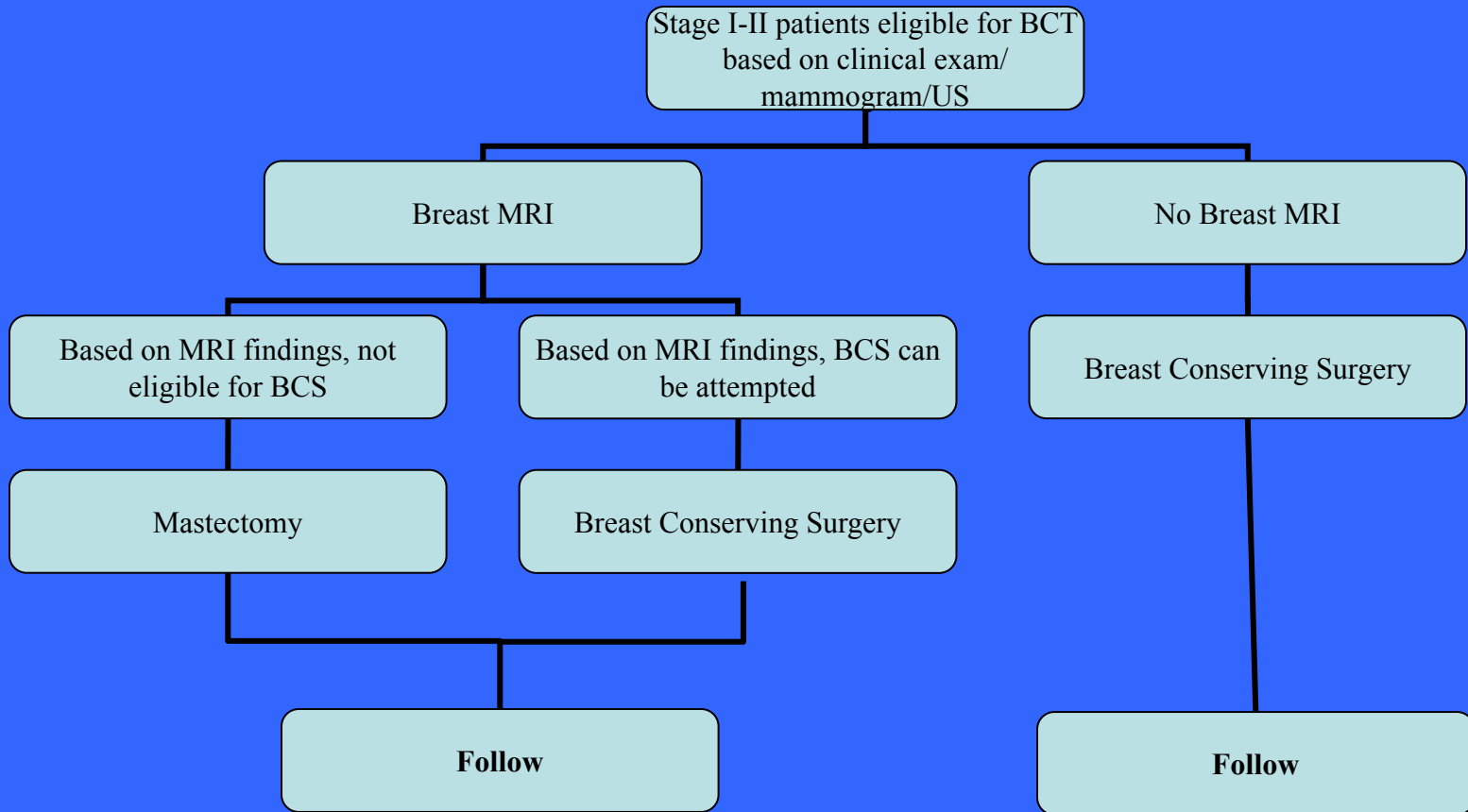
Rationale

- Breast MRI may be particularly important for ER/PR negative disease which is shown to be relatively radioresistant with higher rates of local failure after BCT
 - Detecting and surgically removing additional foci of disease may be particularly important for this group of patients.

Hypothesis

Preoperative breast MRI improves staging and selection of patients with ER/PR negative tumors for BCT, thus lowering rates of local regional recurrence.

Alliance A11104 Phase III trial

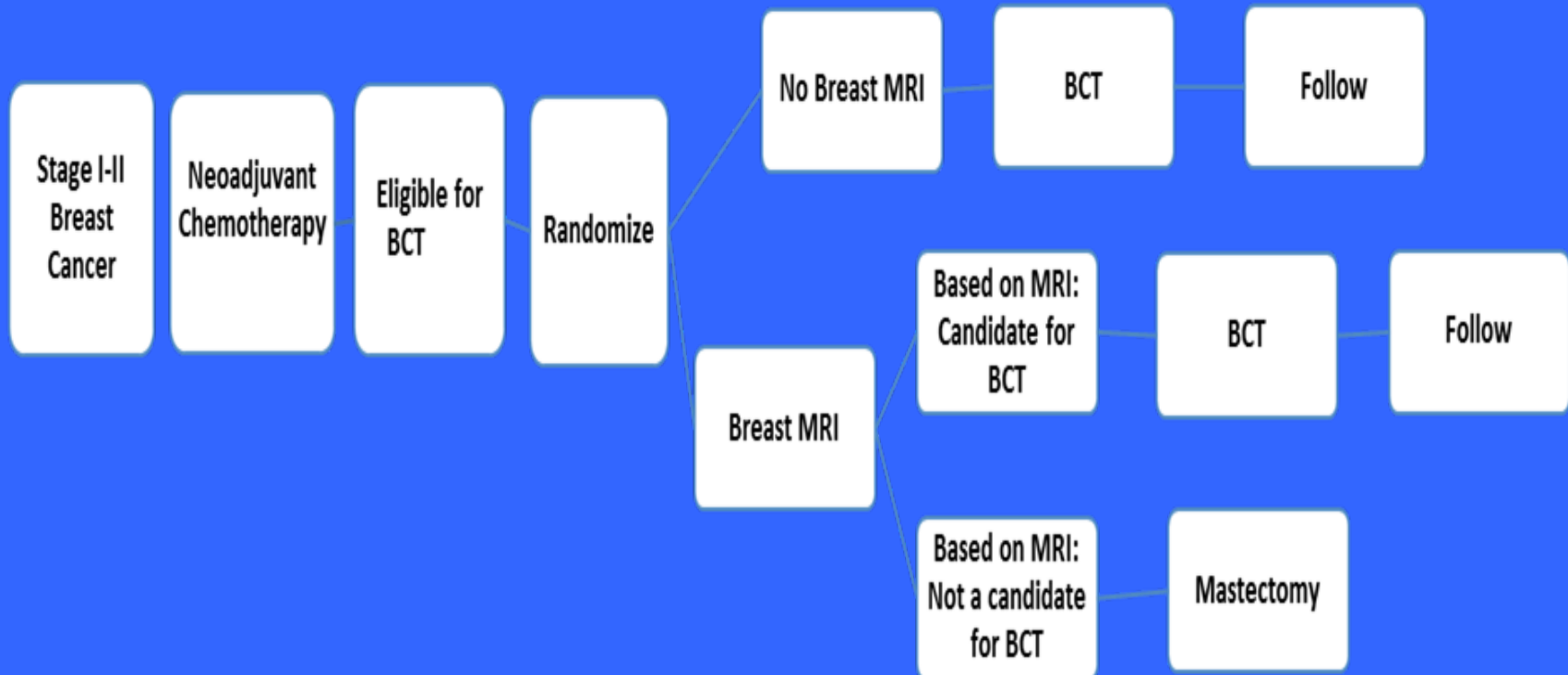


Sample size: 144 patients/arm

Eligibility criteria

- Women with
 - ER/PR <10%, any Her2 status
- Stage I-II, unilateral cancer
- No previous breast cancer history
- No plans for partial breast irradiation following lumpectomy
- Preoperative chemotherapy allowed (as of 10/16/2017)
- No previous breast MRI within prior 12 months
- No known BRCA carriers

Study Schema for enrollment after neoadjuvant chemotherapy



Trial endpoints

- Primary
 - LRR rates at 5 years between the MRI and no MRI arm
- Secondary
 - Rates of re-excision, including conversion to mastectomy
 - Contralateral breast cancer rates
 - Time to local recurrence
 - Overall and disease specific survival
 - MRI technical performance (sensitivity, specificity, PPV)

Study Calendar

	Prior to Registration	After Registration	At Surgery	Post-Op Visit(s)*	Follow-up**
TESTS & EVALUATIONS					
History and Physical (including weight), Performance Status	X(1)			X	X
Blood creatinine	X(2)				
Pregnancy test (for women of childbearing potential)	X(4)				
Bilateral Mammogram	X				
Breast biopsy	X				
Adverse event assessment				X	
Fatigue/Uniscale assessment	X(3)				
QOL questionnaires	A			A	A
Medical care costs data		X		B	X
MRI		C			
Image submission to ACRIN		X			
Whole blood***		X			
Tissue submission***		X	X		D

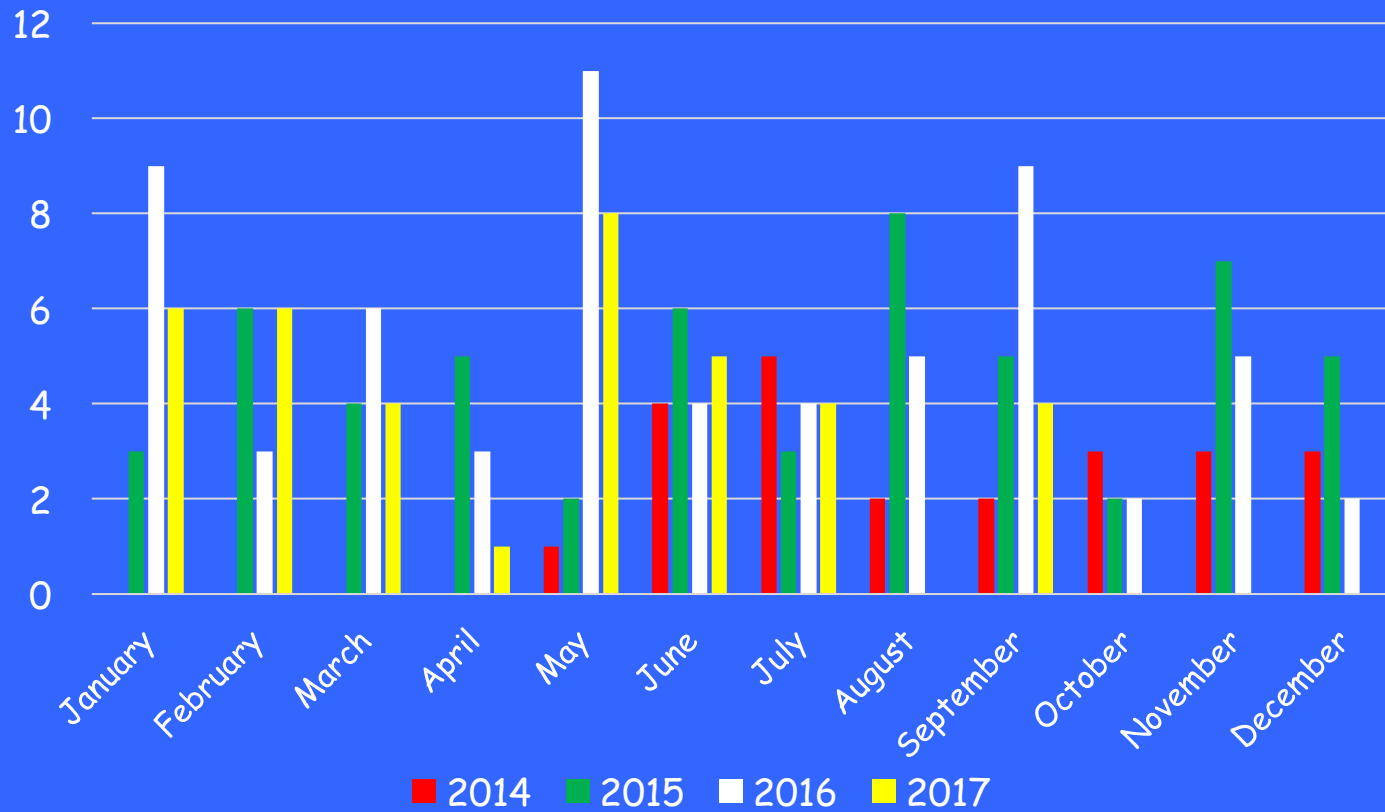
Correlatives

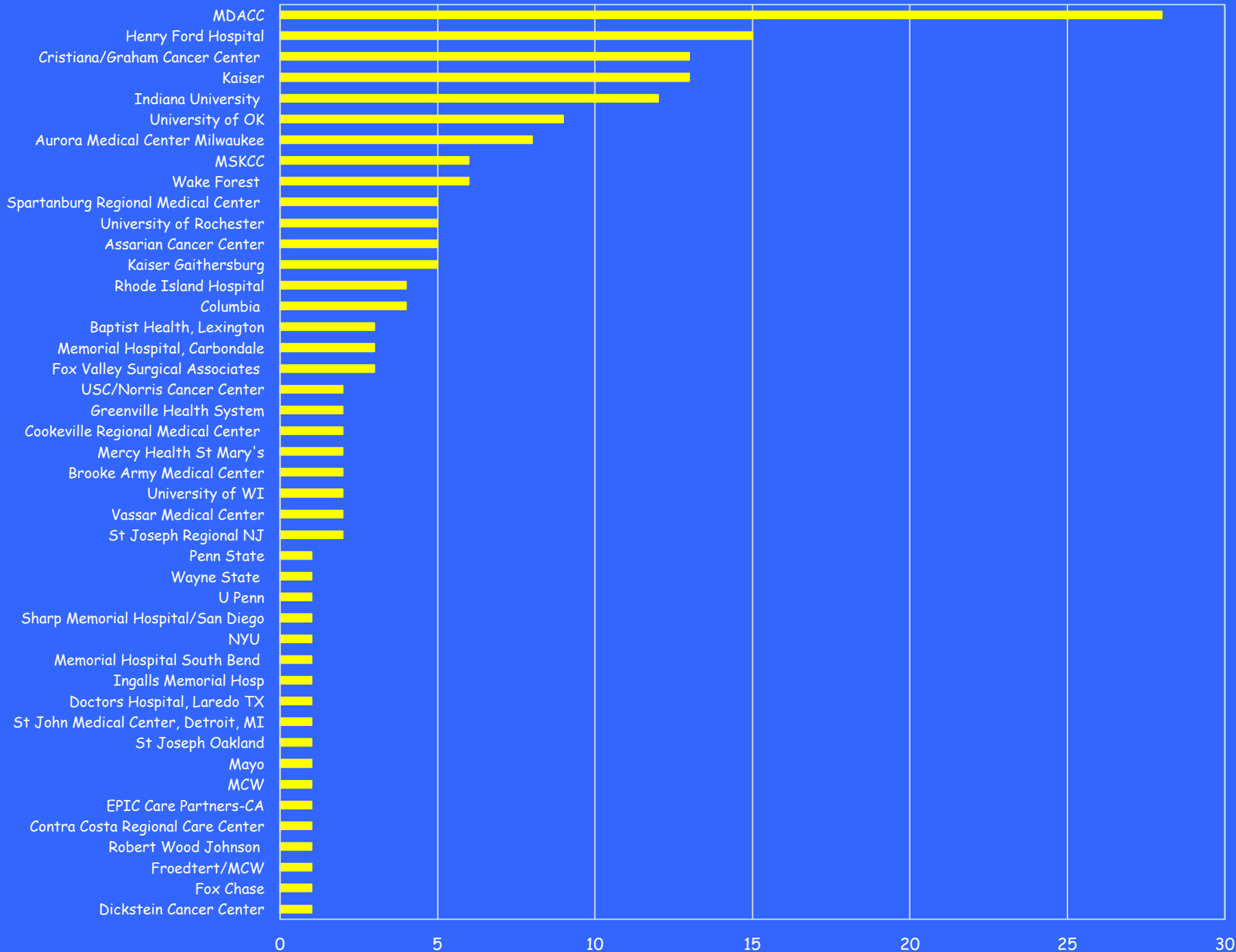
Study	Requirement	Material request
Medical care costs	Required	CRFs with patient status and test data
QOL	Required	questionnaire
Molecular predictors	optional	Tissue

FAQs

- **BRCA testing**
 - Not required to enroll
 - If pt referred for testing, can still enroll into trial. If later found to be BRCA +, can come off study.
- **MRI reimbursement**
 - For patients randomized to MRI arm, additional \$900 will be paid by ACRIN to support image data collection and transmission
 - MRI can be billed to insurance as per institutional guidelines/standards
- **Is prior history of contralateral breast cancer an exclusion?**
 - Yes
- **Can Spanish speaking patients enroll?**
 - Yes, Spanish forms available for all aspects EXCEPT "Assessment of Survivor Concerns" form which will require translation to patient
- **Is there a patient education brochure?**
 - Yes, available on Alliance website (and will be on CTSU soon)

Monthly Accrual





Questions	Contact
Patient Eligibility, Treatment	Isabelle Bedrosian ibedrosian@mdanderson.org Heather Becker hpbecker@uchicago.edu
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ACRIN accreditation, image acquisition, radiology data reporting	Sharon Mallett smallett@acr.org

Monthly CRA calls: 1st Thursday of month, 11:30 CST