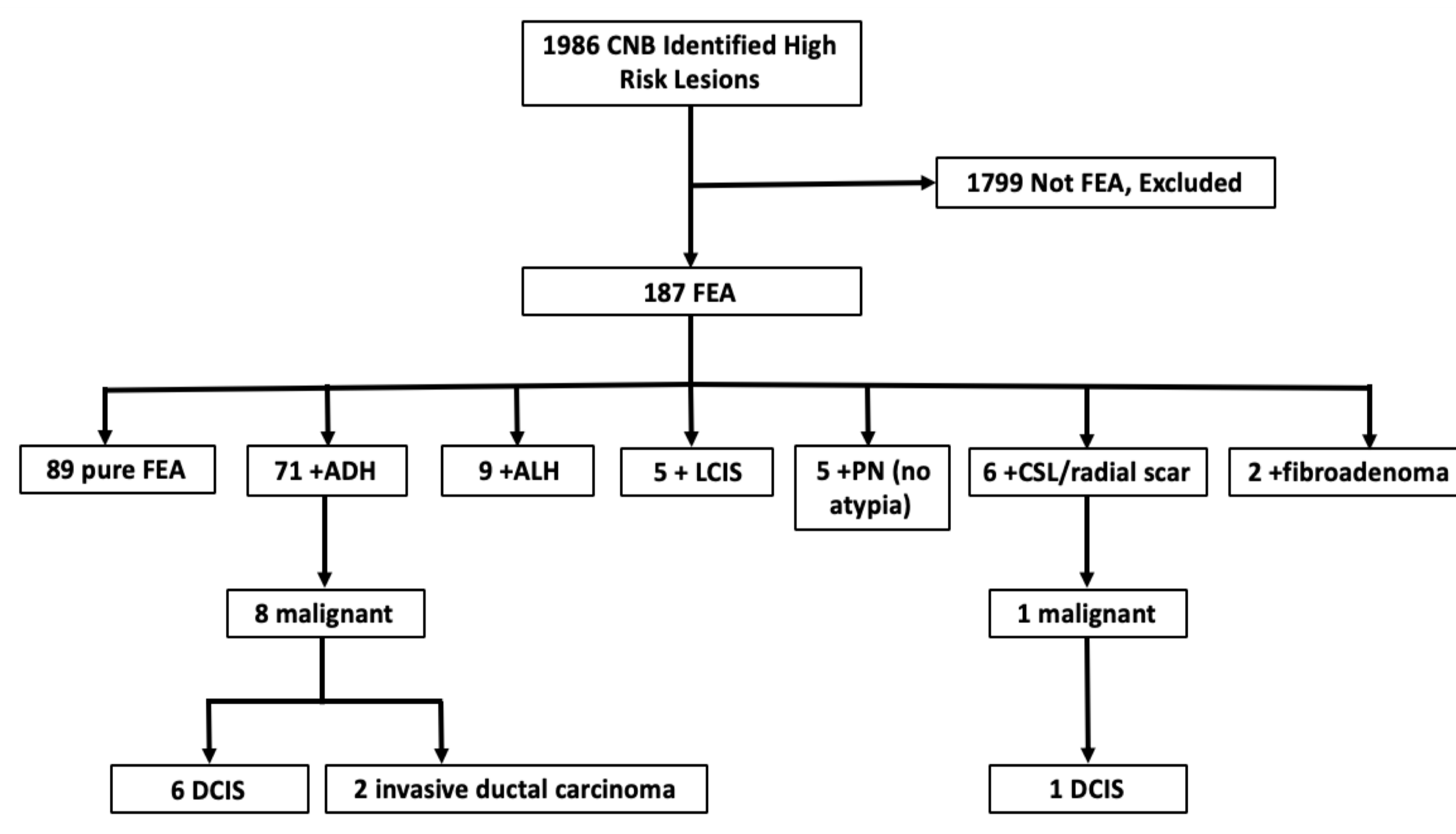


## INTRODUCTION

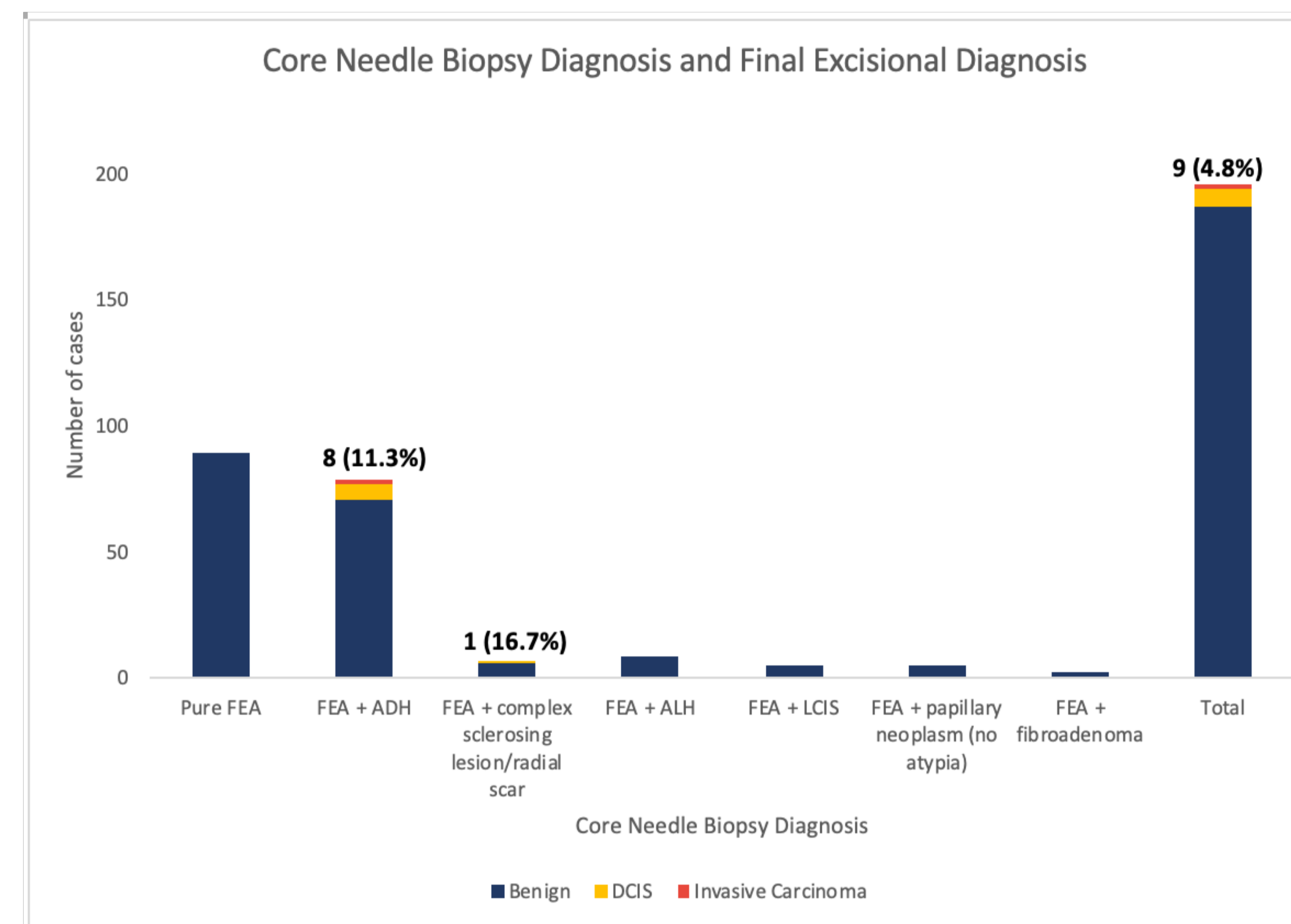
- Flat epithelial atypia (FEA, also known as “DIN1a”) diagnosed on core needle biopsy (CNB) have traditionally been excised due to risk of missing a cancer
- In recent years, routine excision of FEA has been called into question
- Current literature reports variable upstage to malignancy rates ranging from 4% to 30%, and most studies report data from single diagnostic centers which limits generalizability of results
- The aim of this study was to evaluate the upstage rates of CNB diagnosed FEA from multiple diagnostic centers across Metro Vancouver, and identify factors predictive of malignancy

## METHODS

- Patients having excision of FEA at Mount St. Joseph Hospital between 2013 and 2017 were identified from OR lists
- The primary endpoint was rate of upstage to malignancy
- The association of age, palpability, discharge, clinical exam size, imaging size, family history of breast cancer, type of CNB, and associated histology, with upstage to cancer was evaluated



## RESULTS



Characteristics		
Age (years)	Mean	52
	Median	50
	Range (min, max)	31, 85
Family history N (%)	Yes	28 (31.5)
	No	52 (58.4)
	Unknown	9 (10.1)
Clinical exam size (mm)*	Mean	27
	Median	20
	Range (min, max)	0, 40
Imaging size (mm)**	Mean	12.6
	Median	8.0
	Range (min, max)	2, 45
Location of CNB N (%)	A*	0
	B*	4 (4.5)
	C*	5 (5.6)
	D*	49 (55.1)
	E*	16 (18.0)
	F*	6 (6.7)
	G*	0
	H*	0
	I*	1 (1.1)
	Other/Unknown	8 (9.0)

\*of palpable lesions  
 \*\*largest imaging size of MMO, U/S, or MRI  
 †within Vancouver  
 ‡adjacent communities

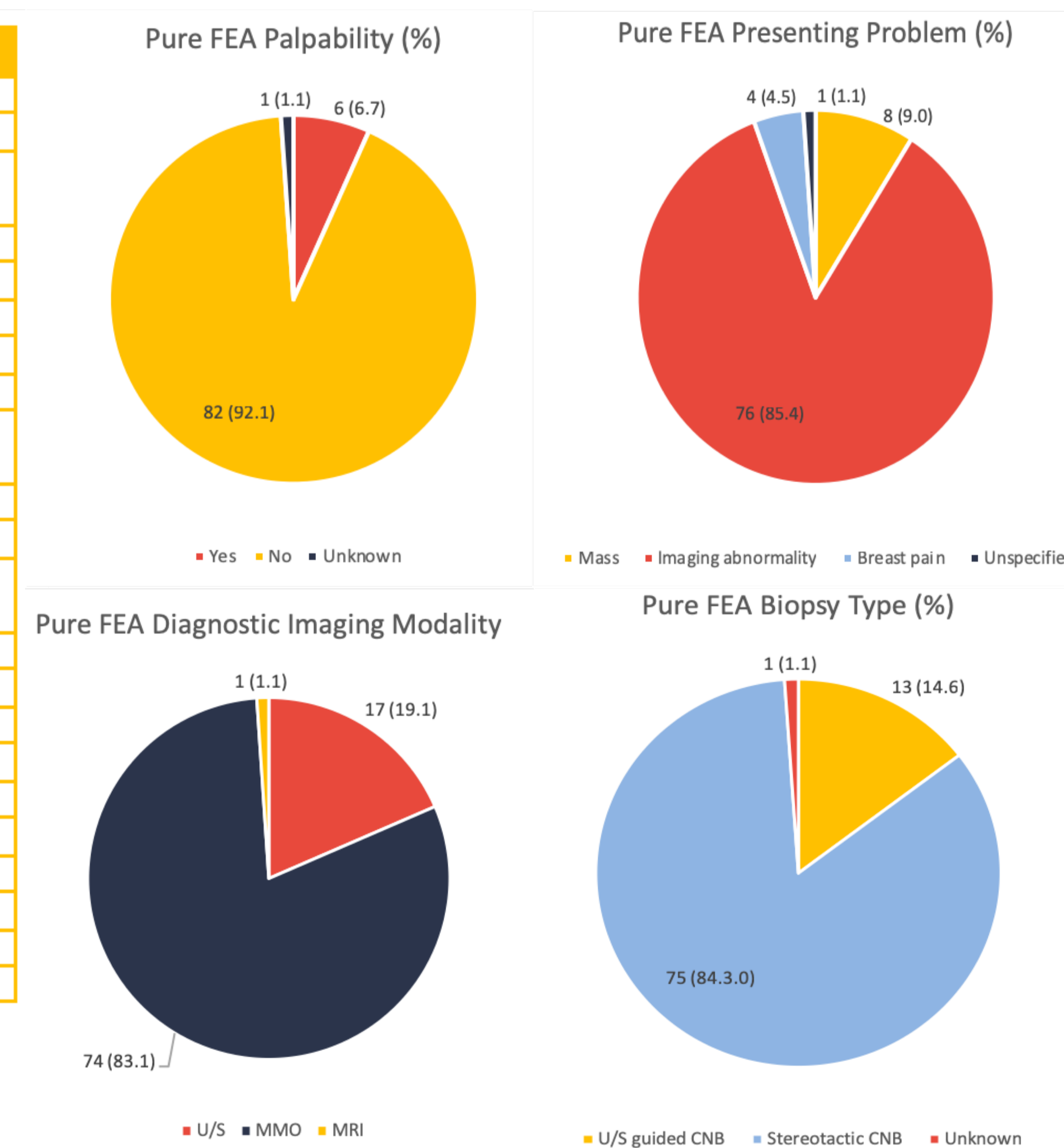


Table 2: Distribution of Clinical Exam and Imaging Size of Pure FEA Lesions

Size	0 mm	1 – 5 mm	6– 10 mm	11 – 20 mm	>20 mm	Unknown	Total
Clinical Exam (N)	82	1	0	3	2	1	89
Imaging (N)*	0	25	21	15	14	14	89

\*Largest imaging size of MMO, U/S, or MRI

## DISCUSSION

- These results are consistent with literature suggesting low upstaging of pure FEA lesions<sup>1-6</sup>
  - Becker *et al* (2013) reported 4.2% upstage rate and follow up of non-excised lesions showed no suspicious findings
  - Chan *et al* (2018) reported 0% upstage rate and noted presence of ADH was the only predictor of upstaging
- Solorzano *et al* (2011) reported a higher upstage rate of 14% and concluded that mammographic and sonographic presentation of FEA is not specific and recommend surgical excision
- The presence of ADH or CSL in the biopsy were the only predictors of histological upstage to malignancy (p=0.001, p=0.0001)
  - The two invasive cancers were found in lesions associated with ADH, which is a lesion previously studied at our center and found to be high-risk for upstaging. Current literature also recommends excision of most cases of ADH for this reason
  - CSL is still a controversial lesion, with variable reported upstage rates. An on-going study at our center is evaluating upstage rates in our region to better inform management
- ASBS endorses observation with clinical and imaging follow up for pure FEA lesions and excision if concurrent ADH
- ASBS recommends surgical excision of most CSL
- Majority of published upstage rates for FEA are single-institutional studies limiting generalizability of results vs. this study represents a population-based sample from across our region

## CONCLUSION

- The upstage rate to malignancy after excision of CNB diagnosed pure FEA at our regional center is 0%
- Therefore, we recommend that pure FEA with radiology and pathology concordance does not require surgical excision, and can instead be followed with serial imaging
- Patients with FEA in association with other high-risk lesions should be managed as per indicated for the other high-risk lesion due to the variable associated upstage rates
- We specifically recommend the excision of FEA lesions found in association with ADH due to the higher rates of upstaging

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