Analysis of inadequate follow up after abnormal endometrial ultrasound for postmenopausal bleeding

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Incorrect provider interpretation of endometrial ultrasound for postmenopausal bleeding is the **most common reason** patients **did not receive timely follow up**
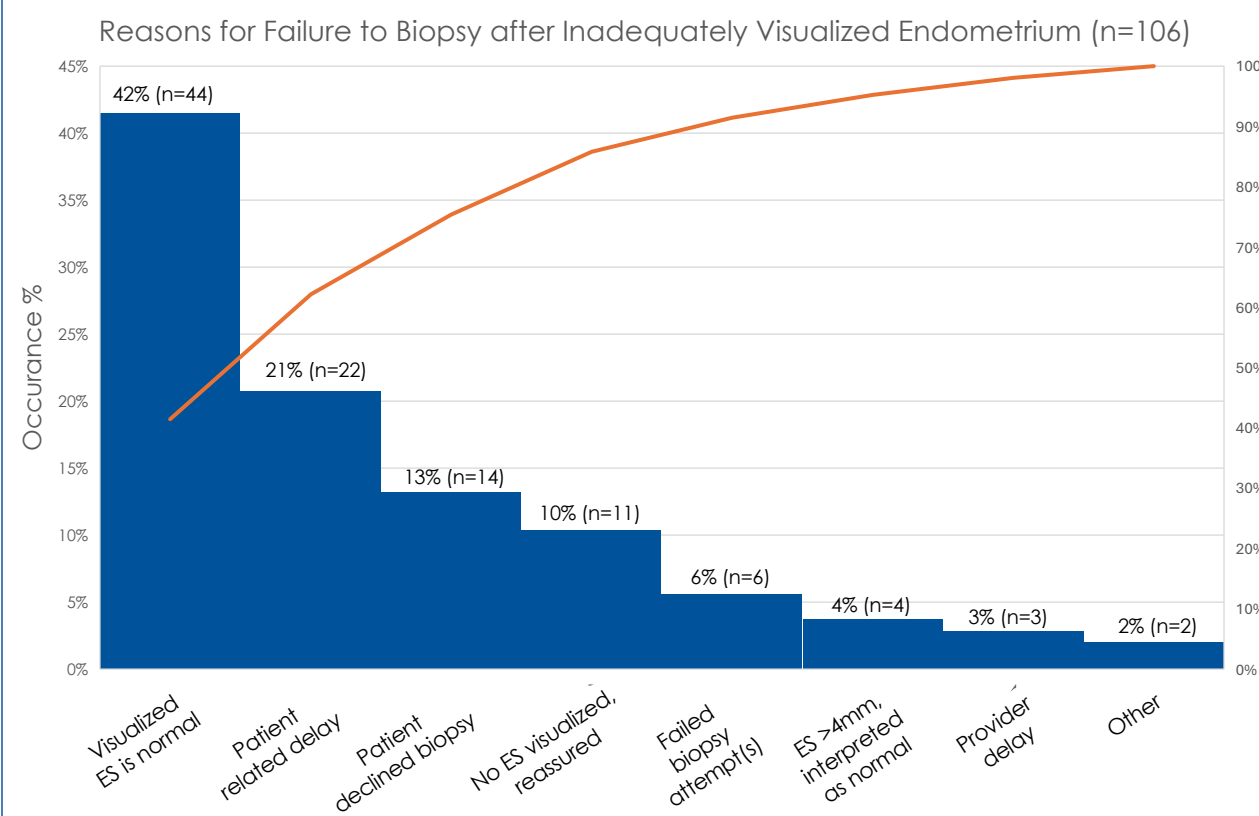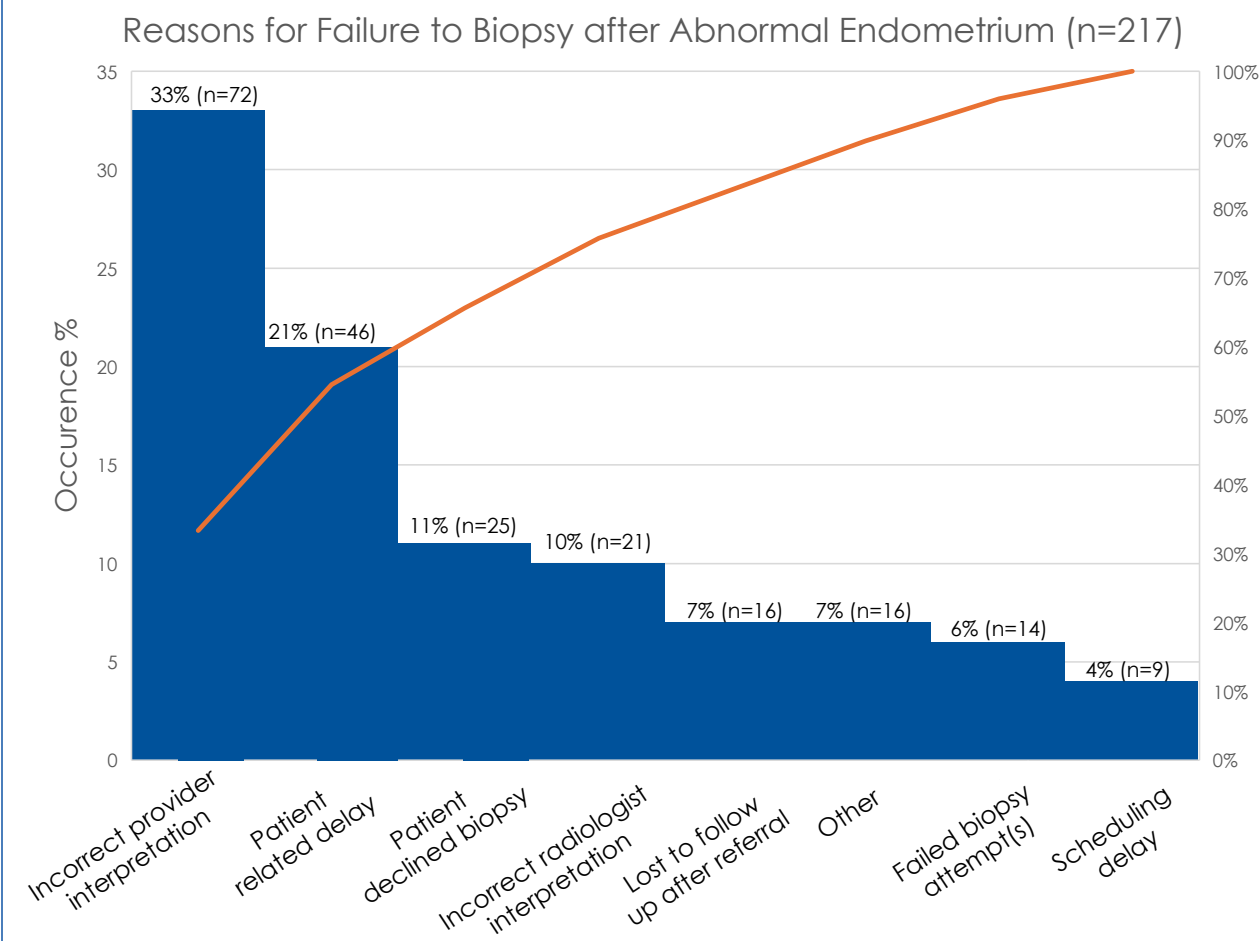
Introduction

- Postmenopausal bleeding is the most common presentation of endometrial cancer

- Per ACOG, an abnormally thickened endometrial stripe (ES) >4mm should be evaluated with tissue sampling in the setting for postmenopausal bleeding

- We assessed reasons for delayed follow up for patients whose endometrium is abnormally thickened or inadequately visualized

Methods

- Retrospective cohort study of patients with postmenopausal bleeding that received transvaginal ultrasound

- Endometrial stripe thickness was classified as:
  - Normal (≤4 mm),
  - Abnormal (>4 mm), or
  - Inadequate (poorly or incompletely visualized)

- Adequate follow up defined as endometrial sampling within 3 months of abnormal or inadequate ultrasound

- Pareto chart analysis to identify most common reasons for delayed/absent follow up

Results

Reasons for Failure to Biopsy after Abnormal Endometrium (n=217)

- 33% (n=72) Incorrect provider interpretation
- 21% (n=46) Patient related delay
- 11% (n=25) Patient declined biopsy
- 10% (n=21) Incorrect radiologist interpretation
- 7% (n=16) Lost to follow up after referral
- 7% (n=16) Other
- 6% (n=14) Failed biopsy attempt(s)
- 4% (n=9) Scheduling delay

Reasons for Failure to Biopsy after Inadequately Visualized Endometrium (n=106)

- 42% (n=44) Visualized ES is normal
- 21% (n=22) Patient related delay
- 13% (n=14) Patient declined biopsy
- 10% (n=11) No ES visualized, reassured
- 6% (n=6) Failed biopsy attempt(s)
- 4% (n=4) ES >4mm, interpreted as normal
- 3% (n=3) Provider delay
- 2% (n=2) Other

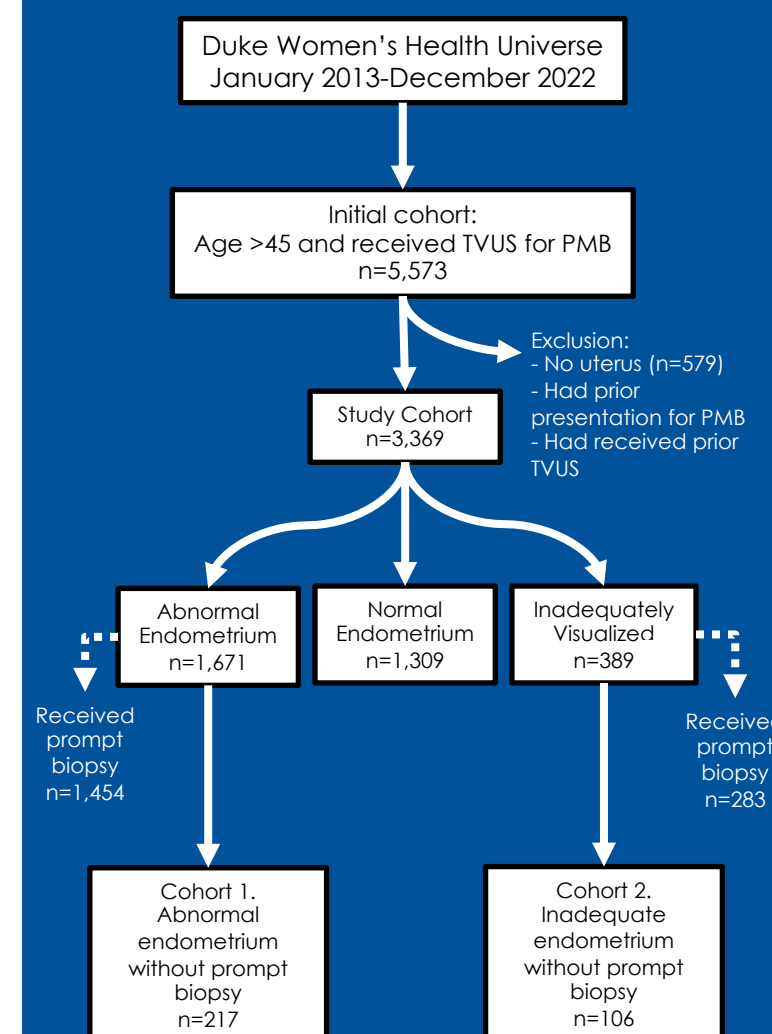## Discussion

- Provider familiarity with guidelines for management of postmenopausal bleeding could help reduce instances of inadequate follow up

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Table 1: Patient demographic and clinical characteristics

	Total (N=3,369)
Age	
Mean (SD)	60.3 (8.9)
Median	58.0
Q1, Q3	54.0, 66.0
Range	(45.0-100.0)
BMI	
Mean (SD)	32.3 (8.9)
Median	30.7
Q1, Q3	25.5, 37.7
Range	(14.5-82.4)
Race	
Caucasian/White	1,889 (56.1%)
Black or African American	1,136 (33.7%)
Asian	126 (3.7%)
American Indian or Alaskan Native	7 (0.2%)
Native Hawaiian or Other Pacific Islander	2 (0.1%)
Other	95 (2.8%)
Not reported/Declined	93 (2.8%)
Two or more races	21 (0.6%)
Ethnicity	
Hispanic	177 (5.3%)
Not Hispanic/Latino	3,090 (91.7%)
Not Reported/Declined	102 (3.0%)
Insurance Status	
Private	1,979 (58.7%)
Medicare	1,107 (32.9%)
Medicaid	104 (3.1%)
Uninsured	111 (3.3%)
Unknown	68 (2.0%)

Figure 1. Clinical Cohort Flowchart

Duke Women's Health Universe January 2013-December 2022

Initial cohort: Age >45 and received TVUS for PMB n=5,573

Exclusion:
- No uterus (n=579)
- Had prior presentation for PMB
- Had received prior TVUS

Study Cohort n=3,369

- Abnormal Endometrium n=1,671
- Normal Endometrium n=1,309
- Inadequately Visualized n=389

Received prompt biopsy n=1,454

Received prompt biopsy n=283

Cohort 1. Abnormal endometrium without prompt biopsy n=217

Cohort 2. Inadequate endometrium without prompt biopsy n=106