



Self-Report of Uterine Leiomyoma Size Versus Ultrasound Evidence



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METHODS

Background

Studies of uterine leiomyomata (fibroids) conducted within large cohorts, such as the Black Women's Health Study, compare new clinically diagnosed cases with women who have not yet been diagnosed with fibroids. Because fibroids can develop for many years before clinical diagnosis, fibroid cases in such studies are a mix of women with new and old tumors. The ability to distinguish between old and new tumors in analyses could help identify factors that affect tumor onset versus factors that affect tumor growth, and could clarify issues of reverse causation. Size of the largest fibroid could serve as a crude marker for fibroid age.

Research Question

Can self-report of uterine fibroid size be used to approximate actual fibroid size for research purposes?

Study Population

Women enrolled in the NIEHS Uterine Fibroid Study (UFS):

- ✓ Randomly selected 35-49 year old women in an HMO in the Washington, DC area in 1996-1999
- ✓ Contacted again in 2001-2002 with retrieval of medical records of subsequent ultrasounds

Analysis Sample

Women who had:

- ✓ A fibroid diagnosis either before or during the study
- ✓ An ultrasound between their baseline interview (1996-1999) and their follow-up interview (2001-2002)
- ✓ Data from both sonogram report and self-report of fibroid size (n=63)

Data

Interview Question: "About what size was the largest (fibroid)?"

If women answered ...

- in centimeters, that number was recorded.
- by giving a comparison object (e.g., size of a golf ball, grapefruit, etc.), the interviewer categorized tumor size into:
 - Small (\leq size of a quarter),
 - Medium (\leq tennis ball), or
 - Large ($>$ tennis ball)
- in gestational weeks (size of uterus), the weeks were recorded
- "Don't know", they were asked: "Did the doctor mention if it was small, medium or large?"

The Uterine Fibroid Study

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Main Study Aims:

1. To determine the prevalence of uterine fibroids,
2. To explore potential risk factors for uterine fibroids.

Type of Response	Number of Responders (%)
Centimeters	11 (17%)
Weeks Gestation	5 (8%)
Small/Medium/Large	47 (75%)

RESULTS (n=63)

Size in Centimeters (n=11)

- ✓ 8 of 11 Women reported the size of their largest fibroid within 2 cm
- ✓ 3 of 11 Women misreported size by >2 cm

Reported Size in cm	Ultrasound Size in cm
1	2.8
2	2.2
3	3.3
4	3.7
4	3.8
4	7.1
5	6
5	8.7
6	5.3
6	6.6
14	3.7

Size in Weeks Gestation (n=5)

- ✓ Few women used this measure
- ✓ These women tended to have medium to large fibroids

Uterine Size Reported in Weeks Gestation	Ultrasound Size of Largest Leiomyoma in cm
12	4
14	7.5
14	9.6
22	3
26	9.6

Size in Relative Terms (n=47)

- ✓ The majority of the women used relative terms (small, medium, large) or compared size to a common object (e.g., golf-ball sized) to report the size of their fibroids.
- ✓ There was little difference between self-report of "Medium" and "Large" with respect to ultrasound measurement.

Size	Ultrasound Range (cm)	Ultrasound Median (cm)	Ultrasound Mean (SD) (cm)	Ultrasound Mode (cm)*
Small (n=18)	0.8-6.0	2.2	2.5 (1.3)	2
Medium (n=12)	2.5-9.7	4.3	5.2 (2.6)	4
Large (n=17)	2.5-9.8	5.1	5.5 (2.3)	4

*Rounded to the closest integer.

CONCLUSIONS

- Women who provide size in centimeters usually provide reasonably good data.
- Women who report size in gestational weeks probably have medium to large fibroids.
- Categorizing fibroid size (small, medium, large) is useful, and "medium" and "large" may be best grouped together.
- Variability of self-report may be unacceptably large for studies with small samples, but it may be useful in large studies to provide a crude distinction between new and old fibroids.

NEXT STEPS

- Further epidemiological methods for studying uterine fibroids are needed. Steps to adding size information to the outcome measure include:
- More data comparing self-report of size with objectively measured size.
 - A standardized system for reporting fibroid size that is easily recalled by patients and is implemented by clinicians.