# Accessory Cavitated Uterine Mass (ACUM): Systematic Review Protocol

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## Institutional Declaration

This systematic review protocol was developed within the Gynecology and Obstetrics Department of the Hospital Israelita Albert Einstein (São Paulo, Brazil). The protocol has not yet been registered on PROSPERO or the Open Science Framework (OSF). It represents an independent academic initiative designed to synthesize clinical, imaging, and surgical data on Accessory Cavitated Uterine Mass (ACUM). The document complies with PRISMA 2020 and Joanna Briggs Institute (JBI) methodological standards for case-based reviews.

## Abstract

Accessory Cavitated Uterine Mass (ACUM) is a rare congenital Müllerian anomaly characterized by a non-communicating accessory uterine cavity lined by functional endometrium. It is often misdiagnosed as adenomyosis or degenerating leiomyoma, leading to delayed management. This systematic review aims to synthesize all published clinical, imaging, and surgical data to improve recognition and management of ACUM.

## 1. Introduction / Background

ACUM represents an underrecognized Müllerian anomaly that typically affects young women with severe dysmenorrhea and chronic pelvic pain. Given its rarity and frequent diagnostic confusion with adenomyosis or rudimentary uterine horn, an evidence synthesis is essential to clarify its clinical and imaging characteristics, and to inform minimally invasive management approaches.

## 2. Objectives

To systematically review and describe the clinical presentation, imaging findings, differential diagnoses, and surgical management of ACUM.

## 3. Methods

**3.1 Databases:** PubMed, Scopus, and Web of Science.
**3.2 Search strategy:** ('Accessory cavitated uterine mass' OR 'ACUM' OR 'Juvenile cystic adenomyoma') AND ('Laparoscopic tumorectomy' OR 'Minimally invasive surgery') AND ('Hormonal therapy' OR 'GnRH agonists').
**3.3 Inclusion criteria:** Case reports, case series, and observational studies with imaging or histopathological confirmation of ACUM.
**3.4 Exclusion criteria:** Reviews, editorials, letters without new cases, conference abstracts, animal studies, or uncertain diagnoses.

## 4. Population

Women of any age diagnosed with ACUM confirmed by imaging (MRI, ultrasound) and/or histopathology, presenting with cyclic pelvic pain or severe dysmenorrhea.

## 5. Interventions / Exposures

Eligible interventions include surgical excision (laparoscopic, robotic, or open), minimally invasive diagnostic procedures, and hormonal or conservative management. Diagnostic exposures include pelvic MRI, transvaginal ultrasound, hysterosalpingography, and intraoperative findings.

## 6. Outcomes

Primary outcomes: diagnostic methods, clinical presentation, imaging features, and therapeutic results. Secondary outcomes: diagnostic delays, recurrence, and associated Müllerian anomalies.

## 7. Data Extraction and Synthesis

Two independent reviewers will extract data using Rayyan software. A descriptive synthesis will be performed summarizing clinical, imaging, and surgical findings. No meta-analysis will be performed due to the heterogeneity of included cases.

## 8. Risk of Bias Assessment

The methodological quality of each case report or series will be assessed using the Joanna Briggs Institute (JBI) checklist for case reports.

## 9. Ethical Considerations

As this study involves secondary analysis of published data, no ethics approval is required.

## 10. Dissemination and Authorship

The review will be submitted to a peer-reviewed journal in gynecology, preferably the Journal of Minimally Invasive Gynecology (AAGL).

## 11. Key References

1. Acién P et al. The cavitated accessory uterine mass: a Müllerian anomaly in women with an otherwise normal uterus. Obstet Gynecol. 2010;116(5):1101–9.
2. Peyron N et al. Accessory cavitated uterine mass: MRI features and surgical correlations. Eur Radiol. 2019;29(3):1144–52.
3. Hu Q et al. ACUM, an easily underdiagnosed cause of dysmenorrhea: case series and review. Front Med. 2024.