

# Utility of Pelvic Examination in Lower Abdominal Pain without Vaginal Complaints

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## ABSTRACT

Abdominal pain is the most common presenting ED complaint. ED texts advocate speculum bimanual pelvic exam to differentiate pathology of abdominal versus pelvic etiology in women of childbearing age. However, the exam is invasive and requires significant ED resources. We hypothesize that routine pelvic exams of females complaining of abdominal pain without vaginal complaints in the ED does not alter clinical management. We performed a retrospective observational study of ED patients in an urban Level 1 trauma center for all non-pregnant women seen from January 2013 to July 2013, aged 18-50, with a chief complaint of isolated lower abdominal pain without vaginal pain or other vaginal complaints. 487 patients were included. Our data shows that, despite frequent utilization, pelvic exams do not significantly alter the patient's diagnosis. We propose selectively performing the exam in those with risk factors.

## INTRODUCTION

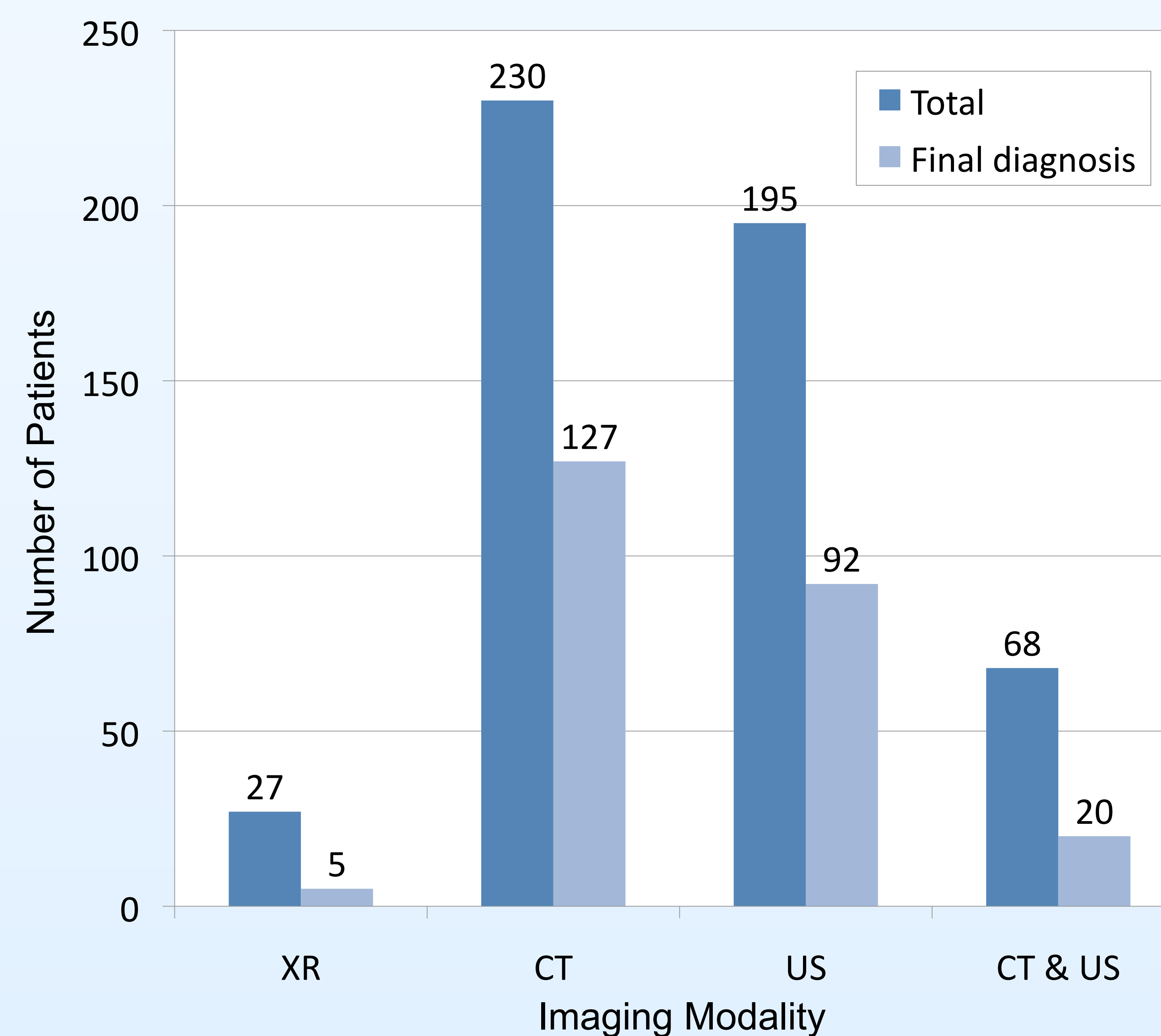
Abdominal pain is the most common presenting complaint to the emergency department in the USA<sup>1</sup>. Childbearing-aged women localizing pain to the lower abdominal quadrants without vaginal complaints of pain, discharge, or bleeding constitute a significant subgroup<sup>1</sup>. Respected emergency medicine texts advocate vaginal speculum examination with subsequent bimanual pelvic examination to differentiate pathology of abdominal versus pelvic etiology<sup>1</sup>. However, the invasive pelvic examination is uncomfortable to the patient; it also requires significant resources, including time of physicians and chaperoning staff<sup>2,3</sup>.

Certain pelvic conditions may threaten patient life and fertility. However, existing data suggest there is no definitive combination of history and physical exam findings that confirm or exclude ectopic pregnancy. Additionally, pelvic examinations performed upon women under general anesthesia revealed extremely poor examiner ability to detect adnexal masses, despite such optimal examination conditions. When utilized for detecting ovarian torsion, the pelvic examination is uncomfortable and low yield for palpable masses.

Little current data exists on the sensitivity of pelvic examinations in detecting clinically significant pelvic pathology that would not otherwise been detected or worked up by other means<sup>4,5</sup>.

## METHODS

- This is a retrospective observational study of a convenience sample of ED patients performed in an urban Level 1 trauma center, approved by the institutional review board.
- Researchers trained in the experimental protocol evaluated all ED charts for all patients seen in the ED from January 2013 to July 2013 complaining of lower quadrant abdominal pain, regardless of disposition.
- Inclusion criteria: female gender, age 18-45, not pregnant, and chief complaint of isolated lower abdominal pain without any vaginal pain/bleeding/discharge.
- Exclusion criteria: pregnancy, complaints of vaginal pain, bleeding, itching, discharge, or foreign body, reported history of hysterectomy, or male-to-female transsexual status.
- Patients were sorted per radiographic studies ordered. Final diagnoses were listed and reported.



**Types of imaging performed and imaging modality that led to final diagnosis.** This chart is not inclusive of all final diagnoses.

## RESULTS

487 total patients met study criteria. The mean patient age was 37.80±17.46 years. 474 patients (97%) ultimately had diagnoses unrelated to gynecologic origin towards which the pelvic examination contributed little. Of the remaining 13 cases (3%), pelvic examination alone without adjuvant testing resulted in the empiric treatment of 2 patients for presumptive PID, in which subsequent GC cultures were not confirmatory of infection. 214 patients were subjected to pelvic examination (43.94%). Nearly half of all patients received a CT scan of the abdomen and pelvis (230 patients, 47.23%), and 195 patients (40.12%) received a pelvic ultrasound. CT imaging and ultrasound (US) respectively led to the final diagnosis in 26.08% and 18.89% of patients. History and physical examination alone (with no pelvic done) confirmed the final diagnosis (hemorrhoid) in only one patient case (0.21%).

## CONCLUSION

Despite frequent performance of the pelvic examination, ED pelvic examinations do not significantly alter the clinical ED course. Our evidence suggests clinicians frequently utilize CT or US to evaluate undifferentiated abdominal pain. Without specific vaginal complaints, the pelvic examination is of little diagnostic utility.

Caution must be made not to over-extrapolate our limited data. We do not advocate elimination of the pelvic examination from the assessment of abdominal pain. However, if confirmatory testing will be performed in any event of concerning history/physical examination findings, it may make more sense to selectively perform the pelvic examination only in those with identified risk factors (e.g., PID [requiring cultures]) or omit it (e.g., for suspected torsion [obtaining immediate US]) regardless of whether the chief complaint strictly involves the reproductive system or not.

## REFERENCES

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