

# Emergency imaging trends in pediatric vs. adult patients for abdominal pain

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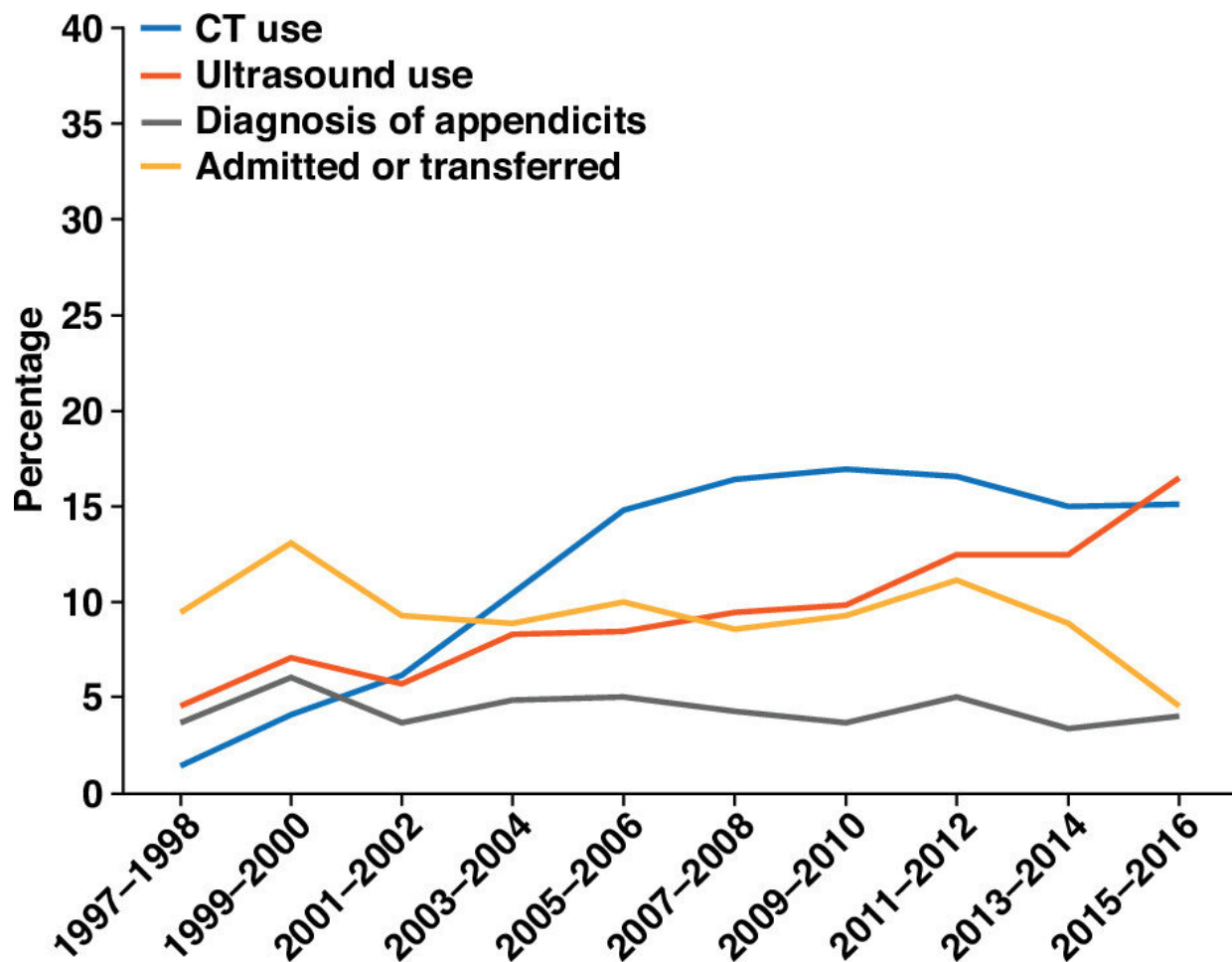


Chart shows trends among pediatric patients in use of imaging in emergency department visits for abdominal pain. Credit: American Roentgen Ray Society (ARRS), American Journal of Roentgenology (AJR)

According to an article in ARRS' *American Journal of Roentgenology* (*AJR*), although pediatric CT use has decreased for the evaluation of abdominal pain (perhaps due to implementing an ultrasound-first strategy for suspected appendicitis), CT use has continued to increase among adults with abdominal pain in U.S. emergency department (ED) visits.

"Although trends in CT use have previously been reported for [children](#) and adults, our study is the first, to our knowledge, to contrast the two cohorts in the ED setting in a nationally representative sample," wrote first author Ralph C. Wang of the University of California, San Francisco.

Analyzing data from the National Hospital Ambulatory Medical Care Survey (1997-2016), CT and ultrasound usage was measured over time in visits for [abdominal pain](#) and visits in which appendicitis was diagnosed. Predictors of CT use were identified by means of regression analysis.

For children, CT use increased from 1.2% in 1997, peaked in 2010 at 16.6%, and decreased slightly in 2016. In adults, CT use increased steadily from 3.9% in 1997 to 37.8% in 2016.

CT use increased for both pediatric and adult ED visits with a diagnosis of appendicitis—from 5.2% to 71.0% for children and 7.2% to 83.3% for [adults](#). Children with abdominal pain and a diagnosis of appendicitis evaluated in a pediatric ED were at decreased odds (pain odds ratio, 0.6; appendicitis odds ratio, 0.2) of receiving CT than were those evaluated in general EDs.

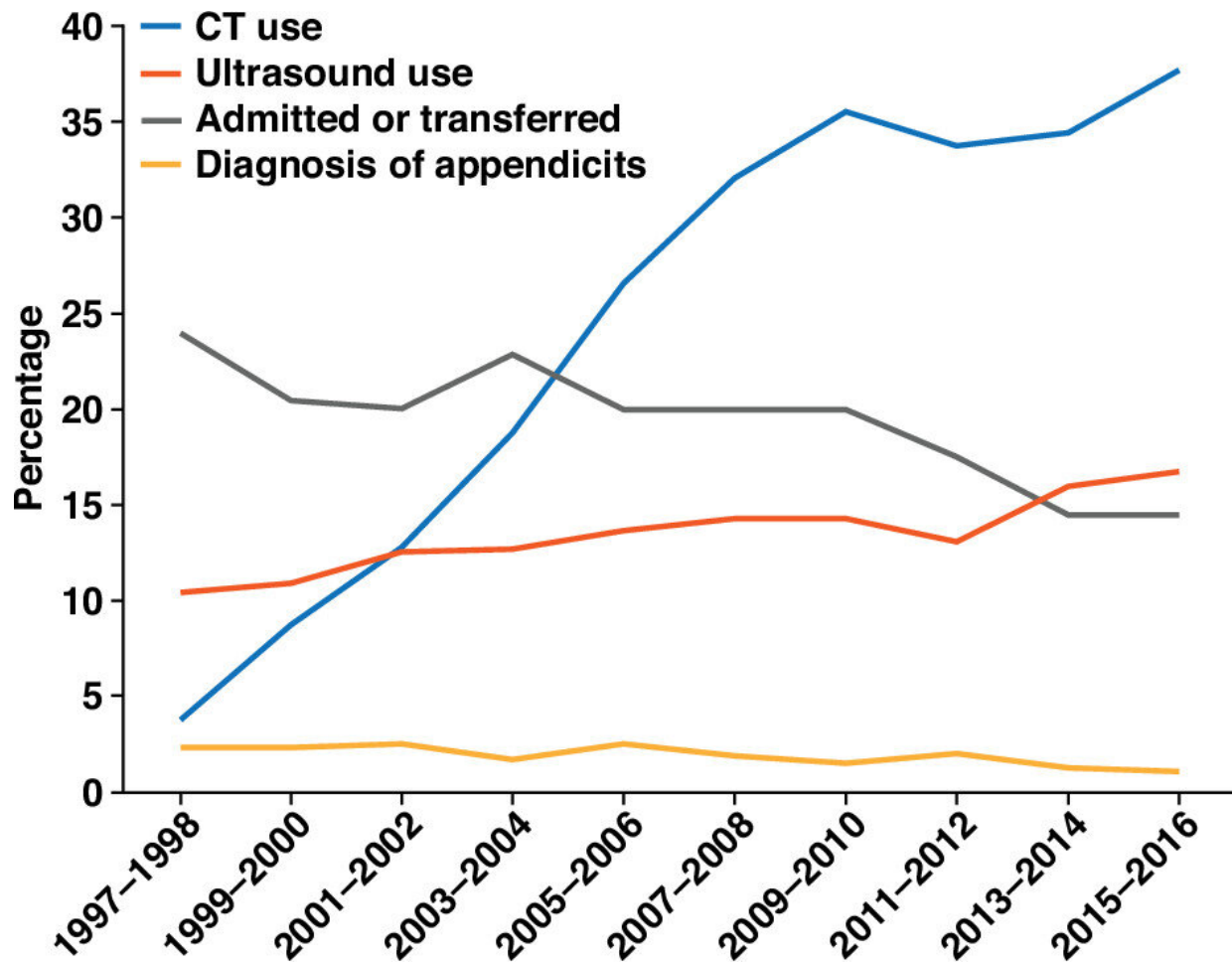


Chart shows trends among adult patients in use of imaging in emergency department visits for abdominal pain. Credit: American Roentgen Ray Society (ARRS), American Journal of Roentgenology (AJR)

"We believe that the decrease in use of CT to evaluate abdominal [pain](#) in children is related to successful nationwide research and implementation efforts to decrease radiation exposure of children," the authors of this AJR article concluded.

**More information:** Ralph C. Wang et al, Trends in Use of Diagnostic Imaging for Abdominal Pain in U.S. Emergency Departments, *American*

*Journal of Roentgenology* (2020). [DOI: 10.2214/AJR.19.22667](https://doi.org/10.2214/AJR.19.22667)

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