

# One-quarter of diagnostic catheterizations for suspected coronary artery disease are unnecessary

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A quarter of all patients undergoing diagnostic catheterizations for coronary artery disease in New York were rated as inappropriate for the procedure because they were relatively healthy, a new study finds.

(Medical Xpress)—One-quarter of patients undergoing diagnostic catheterizations (DC) for suspected coronary artery disease in New York were rated as inappropriate for the procedure primarily because they were relatively healthy, a recent study finds.

In the study published in January's *Circulation: Cardiovascular Interventions*, University at Albany School of Public Health and New York State Department of Health researcher Edward Hannan examined

New York's Cardiac Diagnostic Catheterization Database to identify [patients](#) undergoing DC for coronary artery disease between 2010 and 2011.

Patients were rated using appropriateness criteria developed by professional societies as appropriate, uncertain, and inappropriate for DC. The relationships between various patient characteristics and the appropriateness ratings were examined, along with the relationships between hospital-level inappropriateness for DC and other hospital-level variables (hospital DC volume and [percutaneous coronary intervention](#) inappropriateness).

Of the 8,986 patients who were rated, 35.3 percent were rated as appropriate, 39.8 percent as uncertain, and 24.9 percent as inappropriate for DC. Of the 2,240 patients rated as inappropriate, 56.7 percent were asymptomatic, had no previous [stress test](#), or had low or intermediate [coronary artery](#) disease risk. An even 36 percent had a previous stress test with low-risk findings and no symptoms, and 7.3 percent were symptomatic, had no previous stress test, or had low pretest probability.

Further, the study found that while one-quarter of patients undergoing DC for suspected [coronary artery disease](#) were rated as inappropriate for the procedure, approximately two-thirds of those inappropriate patients had no previous stress test, and approximately 90 percent of the inappropriate patients with no previous stress test were asymptomatic with low or intermediate global risk scores, i.e. the majority of those rated as inappropriate for DC procedures were comparatively healthy.

At the hospital level, the inappropriateness of DC procedures rate ranged from a maximum of 48.8 percent to a minimum of 8.6 percent. The researchers suggest that since a wide range of inappropriateness rates exists across hospitals, hospitals with very high rates could learn best practices DC protocols from hospitals with the lowest rates.

**More information:** "Appropriateness of Diagnostic Catheterization for Suspected Coronary Artery Disease in New York State." Edward L. Hannan, Zaza Samadashvili, Kimberly Cozzens, Gary Walford, David R. Holmes, Jr, Alice K. Jacobs, Nicholas J. Stamato, Ferdinand J. Venditti, Samin Sharma, and Spencer B. King III. Circ Cardiovasc Interv. 2014; CIRCINTERVENTIONS.113.000741. published online before print January 28 2014, [DOI: 10.1161/CIRCINTERVENTIONS.113.000741](https://doi.org/10.1161/CIRCINTERVENTIONS.113.000741)

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