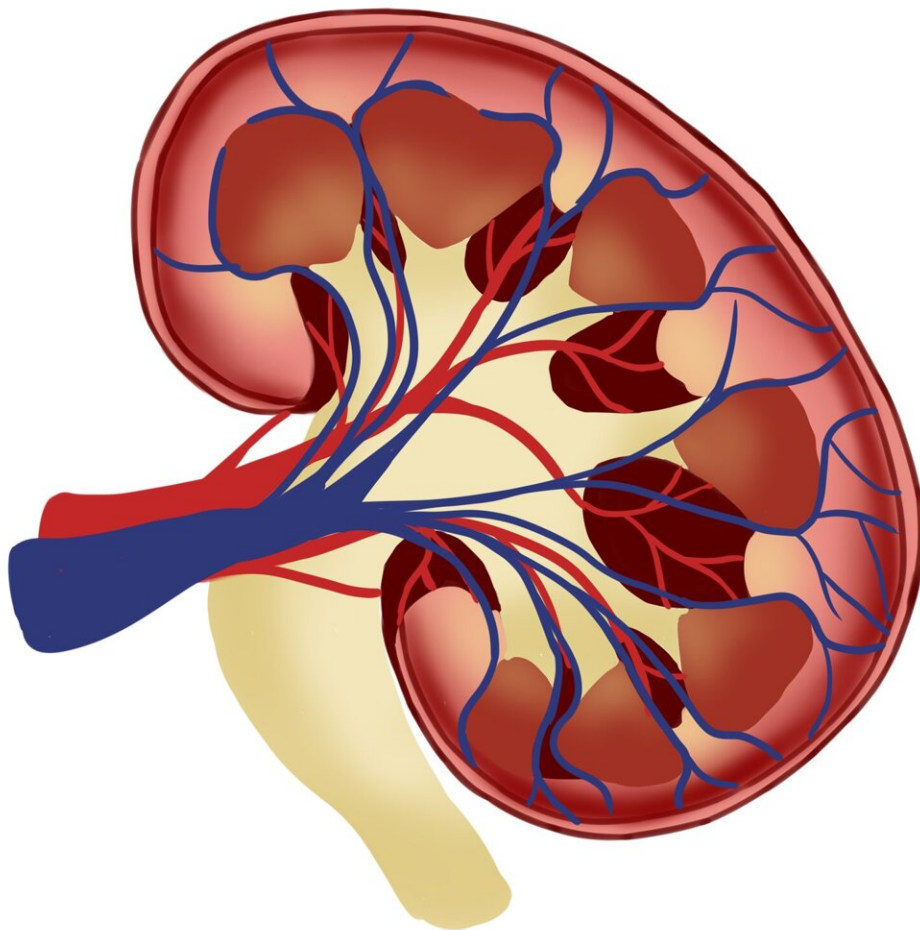


Inorganic nitrate found to improve safety of coronary angiography in patients at renal injury risk

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Inorganic nitrate reduces contrast-induced nephropathy (CIN), improves renal outcomes and reduces cardiac events compared to placebo in patients at risk of renal injury undergoing coronary angiography for acute coronary syndrome, according to late breaking research presented in a Hot Line session today at [ESC Congress 2023](#).

CIN, also termed contrast associated-acute kidney injury, refers to a deterioration in renal function after contrast exposure and is a serious complication of [coronary angiography](#). Older age, heart failure, chronic kidney disease and diabetes are independent predictors of CIN following coronary angiography for [acute coronary syndromes](#).

CIN is associated with longer hospital stays, an increased risk of myocardial infarction and higher mortality. ESC guidelines highlight that patients with chronic kidney disease have been excluded from randomized trials on myocardial revascularization and that additional randomized evidence is needed on optimal strategies for CIN prevention.

Research has suggested that nitric oxide is deficient in CIN; therefore, strategies to replace nitric oxide might be of benefit. Inorganic nitrate is metabolized in the body to deliver [nitric oxide](#) to areas of the body in need and has shown renoprotective effects in preclinical studies.

The NITRATE-CIN trial examined the efficacy of inorganic nitrate for the prevention of CIN in patients with non-ST elevation [acute coronary syndrome](#) referred for invasive coronary angiography and at risk of CIN. Risk of CIN was defined as an estimated glomerular filtration rate (eGFR) 70 years, exposure to contrast in the last 7 days, [heart failure](#) (or left ventricular ejection fraction

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