

**Harvard Medical School Department of
Continuing Education and the Renal Division
of Brigham and Women's Hospital**



Nephrology Rounds
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Radiocontrast Nephropathy

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Objectives

This issue of *Nephrology Rounds* will help readers:

- To review the definition, incidence, pathogenesis, and risk factors of radiocontrast nephropathy (RCN)
- To evaluate recent advances in prophylactic options to reduce the incidence of RCN

Questions:

1. RCN is a common cause of hospital-acquired acute renal failure.

True False

2. The incidence of RCN can be as high as 40% in patients with advanced chronic kidney disease and diabetes mellitus.

True False

3. In-hospital mortality and 1-year mortality are not increased in patients who develop RCN.

True False

4. RCN is most commonly defined as an increase of $\geq 25\%$ or ≥ 0.5 mg/dL in the serum creatinine concentration after radiocontrast administration.

True False

5. The most common proposed mechanisms by which contrast induces kidney damage include alteration in renal perfusion, oxygen-free radicals, and direct nephrotoxicity.

True False

6. High-osmolar and ionic contrast media are less likely to cause RCN than other agents.

True False

7. The most important intervention to prevent RCN is intravenous fluid administration prior to and after contrast administration.

True False

8. There remains a debate in the literature regarding the effect of N-acetylcysteine in reducing RCN.

True False

9. Both hemodialysis and hemofiltration have been shown to reduce the incidence of RCN.

True False

10. Administration of sodium bicarbonate in preference to saline may result in a reduction in the incidence of RCN in high-risk groups.

True False

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