8 Cardiac CT angiography: Patient-centric low-dose imaging
Cardiac CT has emerged as an important imaging tool in the
diagnosis of CAD. In addition to being noninvasive, advan-
tages include high spatial resolution, fast patient throughput,
and relatively low cost compared to other advanced cardio-
vascular modalities.
Jeffrey C. Helling MD, MBA, FACC, FSCCT,
Nicole E. Mendelson, Zain Kassam, MD,
and Carter Newton, MD, FACC

16 Practicing safe use of nonionic, low-
osmolarity iodinated contrast
Contrast media are generally safe, but allergy-like reactions
to contrast can become life threatening. To prevent adverse
complications, careful review of the patient’s history for
medical necessity of contrast agent is needed. This article
describes the epidemiology and types of contrast reactions,
factors associated with adverse reactions, premedication
to prevent adverse reactions, contrast-induced acute kid-
ney injury, contrast use among pregnant and breast-feeding
patients, and contrast extravasation management.
Simon Roh, MD, and Ancharna Landay, MD

24 Lung cancer screening: Pros and cons
Lung cancer is the leading cause of cancer mortality in the
United States and is associated with a 5-year survival of 17%.
However, only 15% of patients are diagnosed at an early
stage. The announcement and publication of the National
Lung Screening Trial results in 2013 was a defining moment in
the lengthy quest to determine the value of low-dose CT lung
cancer screening. For the first time, a mortality benefit was
demonstrated for this technique in a large randomized trial.
CT lung cancer screening remains a complex and multifaceted
issue, and it is worth reviewing the considerations that favor
screening and those that provide cause for hesitation.
Skanath Reppenning, MD; Cheng Ting Lin, MD; and
Charles S. White, MD
6 GUEST EDITORIAL
Virtual colonoscopy's time has come
Ron Schilling, Ph.D.

30 ENTERPRISE IMAGING
Influencing wisely — the path forward for value-based imaging
Rasu R. Shrestha, MD, MBA

34 TECHNOLOGY TRENDS
Cardiovascular imaging: The beat of progress goes on
Mary Beth Massal

38 RADIOLOGICAL CASE
Osteoblastic osteosarcoma
Kevin Cronin, MS; Marilyn Bul, MD, PhD; and Jamie T. Caracchio, MD, MBA

42 RADIOLOGICAL CASE
Denosumab-related osseous sclerotic response in metastatic small cell carcinoma of the lung
Balasubramanya Rangaswamy, MD; Jennifer L. Osborn MD; Chaitra Prasad MD; and Rachelle Akinede, MD

45 PEDIATRIC RADIOLOGICAL CASE
Total aganglionosis associated with ileal atresia and malrotation
Gerald A. Mandell, MD, FACR, FAAP, FACNM; Deepa R. Byram, MD; Scott Jorgensen, MD; Alexander J. Towbin, MD; and Richard Towbin, MD

48 WET READ
Night moves
C. Douglas Phillips, MD, FACR

Adviser Index
Bayer.......................... C3, C4
Bracco.......................... 20
Fujifilm......................... 15
Hitachi........................... C2
Siemens.......................... 3, 20, 33
Toshiba.......................... 5
Vital Images..................... 7