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A newly released retrospective observational study shows that use of lower volumes of contrast media while using the ACIST Contrast Delivery System is associated with a reduced relative risk of Contrast Induced Nephropathy (CIN) when compared to traditional hand injection methods.

Minneapolis, MN, December 14, 2006 – ACIST Medical Systems, leading the market in variable-rate, automated contrast delivery systems used in cardiac and vascular angiography, announced the recent publication of a clinical study which showed that use of lower volumes of contrast media while using the ACIST Contrast Delivery System was associated with a reduced relative risk of Contrast Induced Nephropathy (CIN). The study, **Automated Contrast Injection in Contemporary Practice during Cardiac Catheterization and PCI: Effects on Contrast-Induced Nephropathy**, by Jason Call, et al, was published in the October 2006 issue of the [Journal of Invasive Cardiology \(Volume 18, Number 10, pages 469-474.\)](#) This study is believed to be “the first study to demonstrate that methods to reduce contrast use and strategies to minimize CIN are associated with a lower incidence of CIN and Acute Renal Failure (ARF) after diagnostic catheterization and PCI procedures,” according to the study authors.

This retrospective, observational study involved 2,175 patients from April 2002 through November 2004 who underwent coronary catheterizations and PCI procedures at Wake Forest University Baptist Medical Center in North Carolina. Data were compared between patients undergoing traditional hand injection methods (n=1798) and those who were treated using the ACIST variable-rate, automated contrast injection method (n=377), to reduce contrast volumes, in conjunction with contemporary strategies of hydration and N-acetylcysteine use. It was found that the use of the ACIST to reduce contrast volume in conjunction with strategies to minimize CIN was associated with a significant reduction in the incidence of CIN. The study demonstrated a 28% reduction in contrast volume, a 31% lower incidence of CIN, and a 49% lower incidence of acute renal failure, when compared to traditional hand injection methods.

CIN is associated with significant economic and clinical consequences, including prolonged hospitalization, the requirement for dialysis, and an increased risk of death.¹ In susceptible patients, CIN is first noticed 24 to 72 hours after contrast exposure, and typically becomes most severe five to seven days later. CIN is particularly more likely to occur in those with preexisting renal disease or diabetes. While renal function often returns to normal over the next 2 weeks, clinical studies have shown that CIN is associated with significant increases in morbidity, and mortality after coronary angiography²⁻⁵. In the study by Call *et al*, the risk of CIN was correlated with the dose of

contrast injected into the patient. Use of the ACIST Contrast Delivery System was associated with a significant reduction in contrast dose compared to the traditional, older method of hand injection of contrast using a standard syringe.

“We are pleased with the results of this important study.” states Fulvio Renoldi Bracco, Chairman of ACIST. “We believe this recent publication, in addition to the previously published clinical literature⁵⁻¹⁵, helps convey the important role that ACIST Contrast Delivery Systems play in today’s modern world of cardiac and vascular angiography.”

About ACIST

ACIST is a world leader in contrast delivery solutions for the imaging field, dedicated to advancing the art of angiography through research and development of new products and technologies – supporting today's needs and anticipating those of tomorrow. More than four million people around the world have had cardiovascular angiographic procedures using an ACIST system, now at over 1 million annually – and growing. ACIST systems are widely proven in the global health care arena, with clinical usage in over 30 countries and in many world-renowned centers, as well as in community hospitals and university settings.

About Bracco

The Bracco Group is a world leading provider in diagnostic imaging, with net sales of about 800 million Euros per year. Bracco has operations in 115 countries and about 2,100 employees, around 300 of whom work in R & D. Bracco invests approximately 15% of its annual turnover in R & D and has a portfolio of 1,500 patents worldwide.

The Bracco Group is a leader in the diagnostic imaging market with an integrated product offering from a diverse roster of subsidiary companies. While Bracco is recognized internationally as a definitive market leader in its core business of contrast media, Bracco also markets key diagnostic imaging resources through the following companies: ACIST Medical Systems, a manufacturer of advanced contrast media injection systems and Singapore-based Volume Interactions, which also produces advanced 3-D medical software.

Bracco also operates a high-level international research network, with three centers (Ivrea, Geneva, and Princeton). These centers develop products of the latest-generation diagnostic techniques, from X-ray and computed tomography (CT), magnetic resonance imaging (MRI), echocontrast and nuclear medicine.

AngioTouch is a registered trademark of ACIST Medical Systems.

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