

CONTACT: Maryann Verrillo 703-460-5572 Diane Shnitzler 703-460-5582 March 14, Don Murphy 212-453-2462 March 14, Neil Hochman 212-453-2067 March 15–March 20, 202-249-4016

3975 Fair Ridge Drive Suite 400 North Fairfax, Virginia 22033 703.691.1805 703.691.1855 fax www.SIRweb.org

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# New Interventional Radiology Treatment Shows Hope for People With Complications from Bone Marrow, Stem Cell Transplants

### High-Dose Steroids Delivered Directly to the Organ Successfully Treats Graft-Versus-Host Disease

Washington, D.C. (March 18, 2008)—The standard treatment to treat graft-versus-host disease (GVHD) after bone marrow or cord blood transplant is intravenous (IV) steroids that alter the immune response; however, it is not always effective and failure results in very high mortality. In a study released today, 15 patients who failed standard treatment were given a high dose of steroids directly to the affected organ. By delivering the steroids via catheter to the arteries that are supplying the organs affected by GVHD, a much higher, more effective dose can be given because the rest of the body is spared from the steroid's side effects.

"Overall, fewer than 30 percent of patients with steroid-resistant GVHD respond completely or partially to the standard IV treatment, and their chance of living one year is 15 percent or less. This interventional radiology treatment can be life-saving for these people," said Joshua L. Weintraub, M.D., chief of the Division of Vascular and Interventional Radiology at Mount Sinai Medical Center in New York City.

According to Weintraub, there were no immediate drug or procedure-related complications, and the treatment appears to be safe and effective in combating GVHD—with about 40 percent of the patients showing complete response to the intra-arterial treatment at less than a year follow-up. The study was presented during the Society of Interventional Radiology's 33rd Annual Scientific Meeting in Washington, D.C.

GVHD is a common complication of an allogeneic bone marrow transplant (one using blood-forming cells donated by a family member or unrelated donor) or cord blood transplant. With GVHD, the immune cells from the donated marrow or cord blood (the graft) attack the body of the transplant patient (the host). GVHD, which can be mild to life-threatening, can affect many different parts of the body, particularly the skin, liver and intestines. In this study the affected organs were the liver and small and large bowels.

Studies from the 1990s show that steroid resistance is common—80 percent of people fail to have a sustained, complete response rate or only have a partial response, which means the immune cells are still attacking the organ to varying degrees. "Until now, there has been no good therapy for steroid-resistant patients with GVHD. This small study—the

first of its kind in the United States—shows a new, viable option; however, larger studies with longer follow-up results are needed," added Weintraub.

Abstract 187, "Intra-arterial Steroid Injection Therapy for Systemic Steroid Resistant Graft-Versus-Host Disease," can be found at <u>www.SIRmeeting.org</u>.

#### **About Graft-Versus-Host Disease**

Graft-versus-host disease (GVHD) is a common side effect of an allogeneic bone marrow transplant (one using blood-forming cells donated by a family member or unrelated donor) or cord blood transplant. The differences between a donor's marrow and recipient's tissues often cause T cells (a type of white blood cell) from the donor's marrow to recognize the recipient's body tissues as foreign, according to the National Institutes of Health. GVHD is the term used when a donor's immune cells attacks the recipient's body—causing damage. Acute GVHD starts within three months after transplant, while chronic GVHD begins more than three months after transplant (and can last as long as three years). NIH notes that rates of GVHD vary from 30–40 percent for related donors and recipients to 60–80 percent for unrelated donors and recipients. Following a bone marrow transplant, the recipient is prescribed drugs that suppress the immune system to help with reducing the chances or severity of GVHD.

Bone marrow transplants are usually reserved for individuals with life-threatening diseases of the blood, bone marrow or certain types of cancer.

#### About the Society of Interventional Radiology

Interventional radiologists are physicians who specialize in minimally invasive, targeted treatments. They offer the most in-depth knowledge of the least invasive treatments available coupled with diagnostic and clinical experience across all specialties. They use X-ray, MRI and other imaging to advance a catheter in the body, usually in an artery, to treat at the source of the disease internally. As the inventors of angioplasty and the catheter-delivered stent, which were first used in the legs to treat peripheral arterial disease, interventional radiologists pioneered minimally invasive modern medicine.

Today many conditions that once required surgery can be treated less invasively by interventional radiologists. Interventional radiology treatments offer less risk, less pain and less recovery time compared to open surgery. Visit <u>www.SIRweb.org</u>.

# Local interviews are available by contacting SIR's communications department at <u>mverrillo@SIRweb.org</u>.

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