

**CHARACTERIZATION OF CONGENITAL VASCULAR MALFORMATION  
IN THE EXTREMITIES USING WHOLE BODY BLOOD POOL  
SCINTIGRAPHY AND LYMPHSCINTIGRAPHY**

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*ABSTRACT*

*The purpose of this study was to investigate the clinical usefulness of combined whole body blood pool scintigraphy (WBBPS) and lymphoscintigraphy (LS) in the characterization of patients with congenital vascular malformations (CVMs) of the extremities. Subjects included 134 patients who underwent Tc-99m RBC WBBPS and Tc-99m filtered tin colloid (or antimony sulfur colloid) LS on initial diagnosis. Scintigraphic results were interpreted as arteriovenous malformations (AVMs), venolymphatic malformations (VLMs), lymphatic malformations (LMs), and venous malformations (VMs). Final diagnosis of the type of vascular malformation was determined by physical examination, magnetic resonance imaging (MRI), angiography, duplex ultrasonography, and/or biopsy results. The final diagnosis demonstrated that 14 of the study subjects had an AVM, 29 had a HLM, 20 had a LM, and 71 had a VM. The sensitivity of WBBPS and LS in the characterization of CVM was 85.7% (12/14) for AVMs, 96.6% (28/29) for VLMs, 95.0% (19/20) for LMs, and 88.7% (63/71) for VMs. The specificity was 100% for AVMs (120/120), 91.4% for VLMs (96/105), 99.1% for LMs (113/114), and 98.4% for VMs (62/63). The overall accuracy of WBBPS and LS was 91.0% (122/134). Our results show that combination of WBBPS with LS can characterize extremity CVMs in patients with high diagnostic accuracy, and may thus be useful for making optimal treatment decisions.*