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### Title

DIGITAL ANGIOGRAPHIC ROADMAPPING - A NEW AID FOR ASSISTING CORONARY ANGIOPLASTY

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Peer reviewed

**Clinical Research:  
Angioplasty/Angiography IV  
Wednesday Morning**

DIGITAL ANGIOGRAPHIC ROADMAPPING: A NEW AID  
FOR ASSISTING CORONARY ANGIOPLASTY

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A technique has been developed to improve visualization of the location of the balloon dilatation catheter relative to coronary anatomy during angioplasty (PTCA). Using digital subtraction angiography, an end-diastolic image of a coronary angiogram was chosen and stored in computer memory. The stored image was recalled, interlaced with the live fluoroscopic image of the guidewire and balloon catheter and displayed on the television monitor above the catheterization table. This live fluoroscopic image superimposed upon the digital coronary angiogram provides visual information about branch vessels and the position of individual lesions relative to the guidewire and balloon. Because the coronary image and catheter are displayed on the same monitor at the same magnification, digital coronary roadmapping was found to be useful in 13 of 15 patients (pts) who underwent PTCA. In 8 pts, injection of contrast through the guiding catheter did not adequately opacify the stenosis while in 5 pts, roadmapping helped confirm balloon placement. Therefore, digital roadmapping is a useful adjunct to PTCA because it allows easier guidance of the dilatation catheter into branch arteries and better positioning of the balloon relative to the lesion.