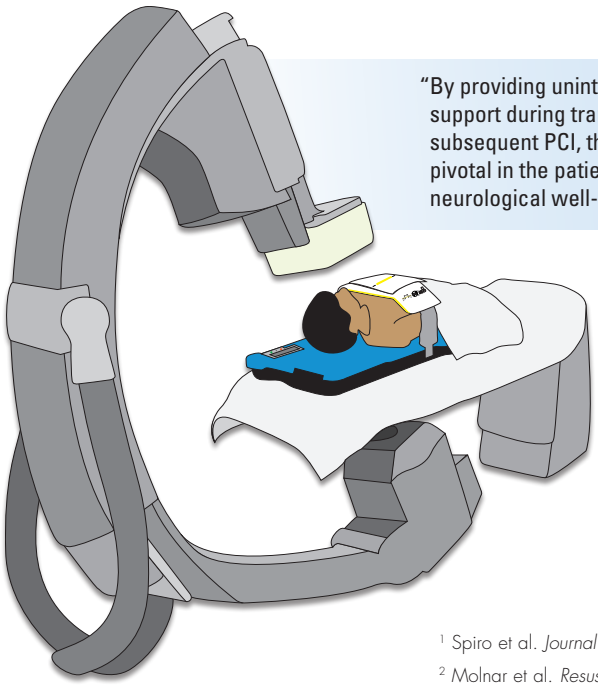
AutoPulse Cath Lab
Application Note

The AutoPulse® Non-Invasive Cardiac Support Pump was developed to provide consistent, high-quality CPR, and is capable of doing so over long periods of time. The load-distributing band design delivers a tailored compression that employs both the sternal and thoracic pump mechanisms. The only mechanical CPR system to show meaningful clinical benefits in comparative human trials, it provides the intelligence to optimize compressions for each patient, no matter how challenging the circumstances.

Recently, use of the AutoPulse for life-threatening rhythms during both diagnostic and therapeutic catheter-based procedures has been described.[1,2,3] It can be rapidly deployed in any situation where CPR is required. The use of the load-distributing band to provide maintenance of circulation while continuing percutaneous coronary procedures is supported by a Class IIa recommendation in the American Heart Association Guidelines.[4]

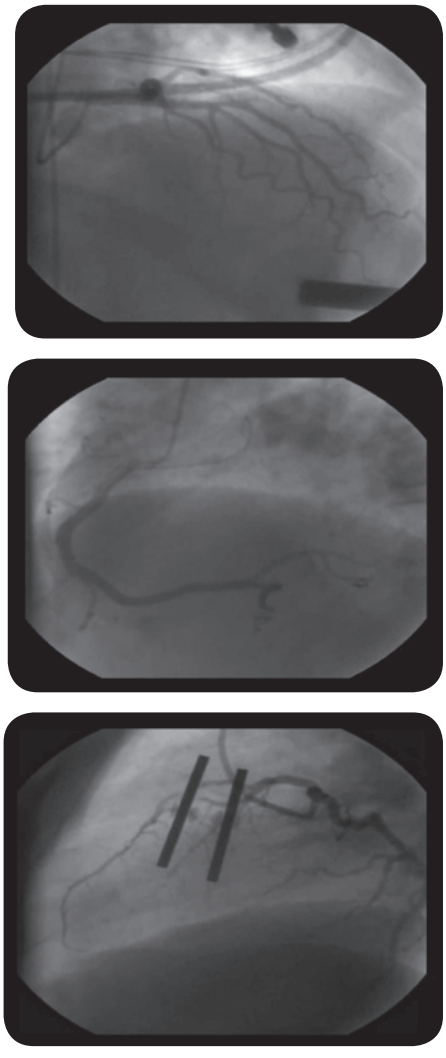
AutoPulse in the Cath Lab:

1. Drives near-normal blood flow for victims in circulatory arrest.
2. No compromising patient position on the table. Accommodates a wide range of projection angles.
3. Low-profile design maintains integrity of the sterile field.
4. Minimizes radiation exposure while delivering continuous compressions.
5. Movement of the C-arm without compromise.



"By providing uninterrupted circulatory support during transfer to the cath lab and subsequent PCI, the AutoPulse was likely pivotal in the patient's survival and intact neurological well-being."[1]

Angiographic Views with the AutoPulse in Place



[1] Spiro et al. *Journal of Invasive Cardiology.* 2012;24:224-228.
[2] Molnar et al. *Resuscitation.* 2011;82S1:S1-S34 AP002
[3] van Wely et al. *Resuscitation.* 2011;82S1:AS10
[4] AHA. Guidelines for CPR and ECC, 2010;12.13:S849

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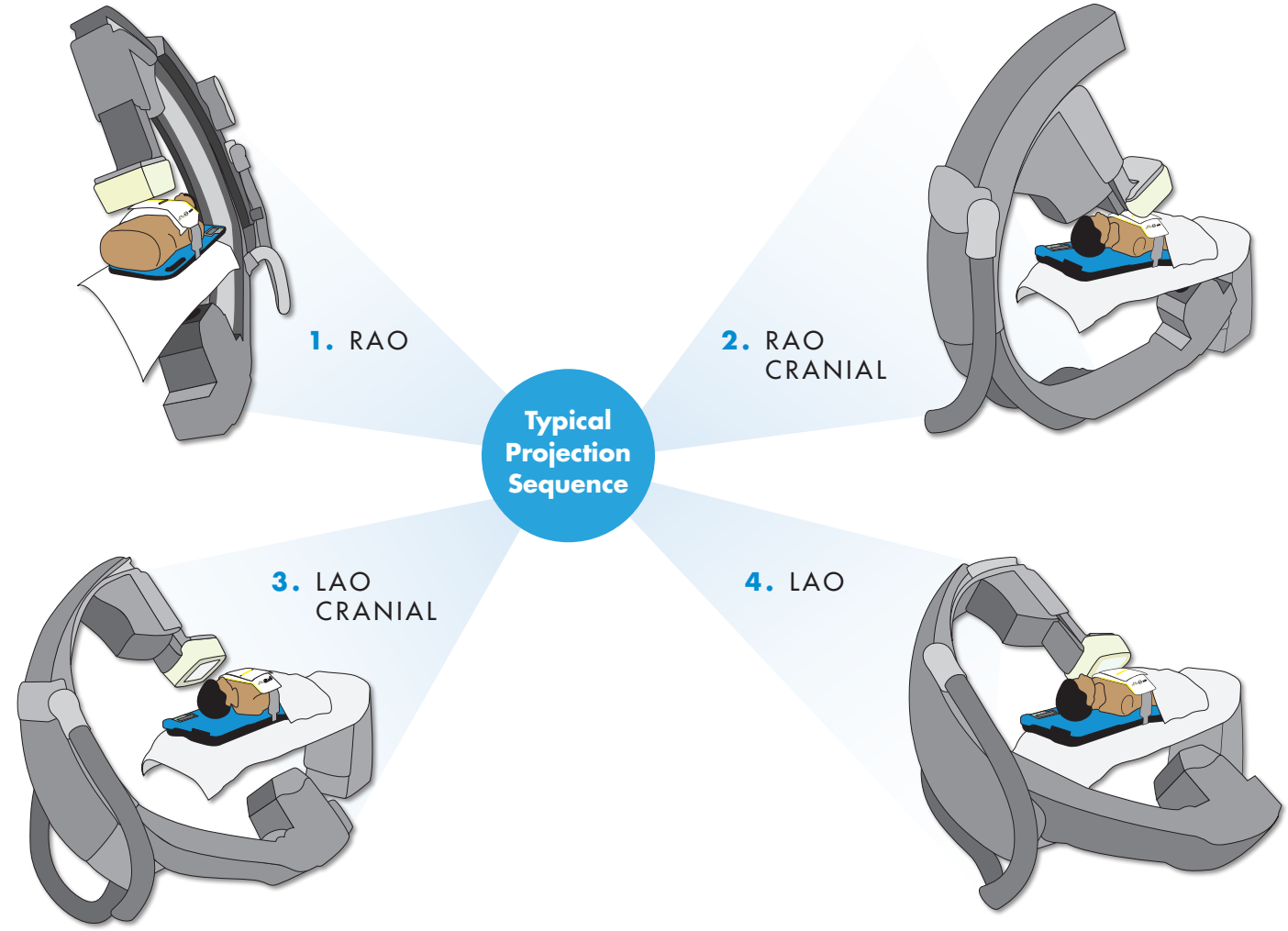
Typical Viewing Angles

The low profile of the AutoPulse design makes it easy to use in the cath lab. It accommodates a wide variety of angles for the cranial, RAO, and LAO views. The sequence illustrated below shows a typical flow employed in the interventional setting.

VESSEL	LEFT MAIN			LAD			CX				RA				
LAO/RAO	LAO 20	LAO 8	LAO 55	LAO 8-15	LAO 90	LAO 65	LAO 12	LAO 65	RAO 55	LAO 55	RAO 80-110	LAO 8	LAO 55	LAO 39	RAO 51
CRA/CAU	CRA 6	CRA 22	CAU 24	CRA 22	CRA 0	CRA 0	CRA 14	CRA 0	CRA 13	CAU 24	CRA 0-5	CRA 22	CAU 24 (orif)	CRA 0 (orif)	CRA 11 (distal)

Molnar et al. *Resuscitation.* 2011;82S1:S1-S34 AP002



The optimal viewing angles will vary for individual patients due to variations in patient anatomy and placement of the patient on the AutoPulse.

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