



Angiodroid The CO₂ Injector

Automated Carbon Dioxide Angiography 



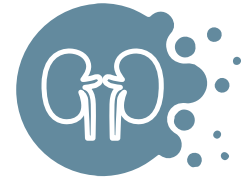
angiodroid

ACDA

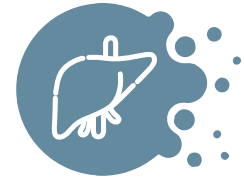
AUTOMATED
CARBON
DIOXIDE
ANGIOGRAPHY

WHEN to use ACDA?

		Albuminuria (mg/g)		
		< 30	30-299	> 300
eGFR (ml/min/m ²)	> 90	ACDA to avoid CIN risk	ACDA suggested	ACDA recommended
	60 – 90	ACDA to avoid CIN risk	ACDA suggested	ACDA recommended
	45 – 59	ACDA to avoid CIN risk	ACDA suggested	ACDA strongly recommended
	30 – 44	ACDA to avoid CIN risk	ACDA suggested	ACDA strongly recommended
	15 – 29	ACDA to avoid CIN risk	ACDA strongly recommended	ACDA strongly recommended
	< 15	ACDA to avoid CIN risk	ACDA UNIQUE Option	ACDA UNIQUE Option



No Contrast Induced Nephropathy Risk



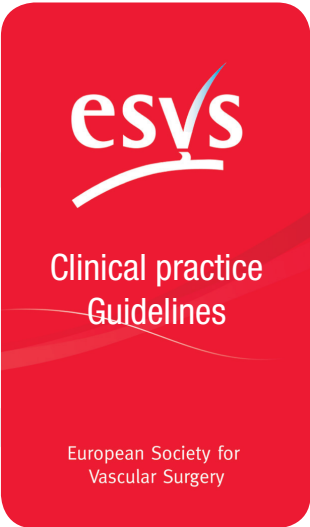
No hepatotoxicity



No Allergic reactions

Carbon Dioxide is the **Only Safe Contrast Agent** for patients with:

- ✓ Renal Failure
- ✓ Creatinine > 1.5 mg/dl
- ✓ eGFR < 60 ml/min/1.73 m²
- ✓ Allergy
- ✓ Diabetes
- ✓ Hypertension

The logo for the European Society for Vascular Surgery (ESVS) Clinical Practice Guidelines. It features the acronym 'esvs' in white lowercase letters on a red background, with a white swoosh underneath. Below this, the text 'Clinical practice Guidelines' is written in white. At the bottom, 'European Society for Vascular Surgery' is written in a smaller white font.

Iodinated contrast agents can cause further deterioration of residual renal function.

CO₂ angiography is an effective alternative, without the risk of further impairment of renal function. CO₂ angiography has a sensitivity of 97% and a specificity of 85%.

Due to the acceptable results of CO₂ angiography and the potential risk of NSF, gadolinium enhanced DSA is no longer indicated.

ESVS Vascular Access: 2018 Clinical Practice Guidelines.



diaphragm

ARTERIES

CO₂ can be used in all districts below the diaphragm



HEPATIC ARTERY



EVAR



EMBOLIZATION TACE



AORTOGRAPHY ILIAC



SMA



SFA - POP



RENAL ARTERIES



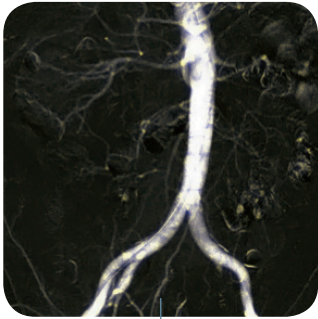
BTK



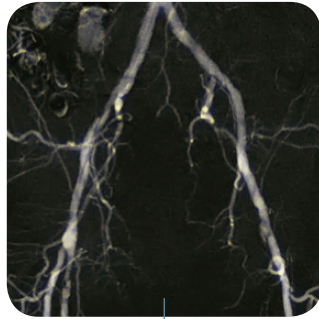
GI BLEEDING AND TRAUMA



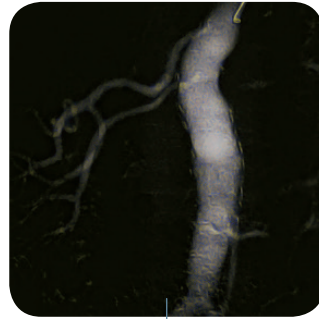
FOOT



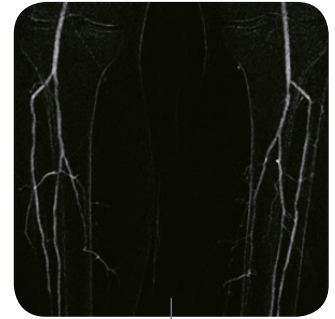
Aortography



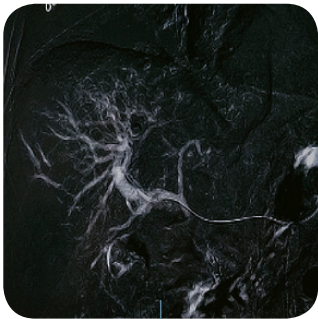
Aortic Bifurcation



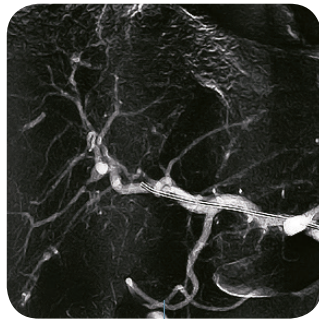
Renal Arteries



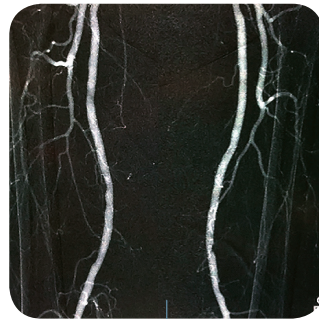
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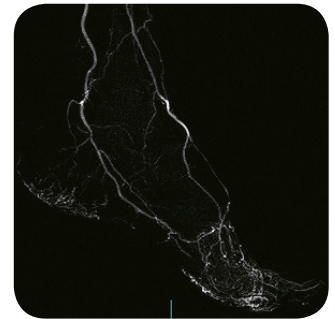
TACE



Hepatic Artery



SFA



Foot



VEINS

Also the peripheral venous system is investigable with CO₂



SUBCLAVIAN VEIN



BASILIC VEIN



CEPHALIC VEIN



ILIAC VEIN



RADIAL VEIN



GREAT SAPHENOUS VEIN



AV SHUNT PHLEBOGRAPHY



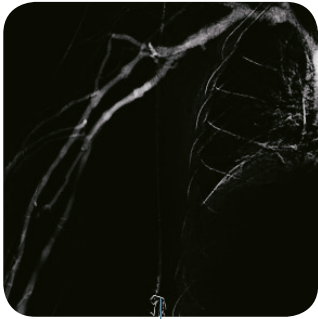
SMALL SAPHENOUS VEIN



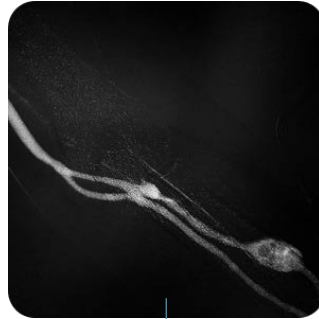
TIPS



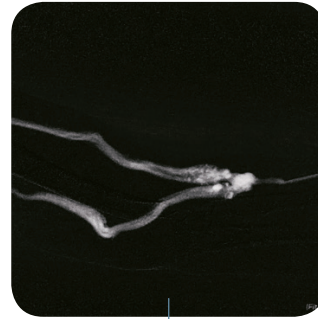
POPLITEAL VEIN



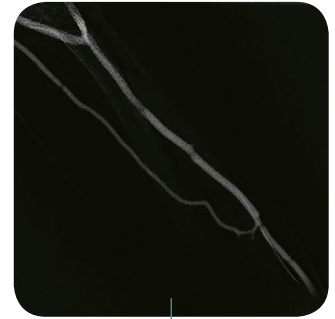
Subclavian Vein



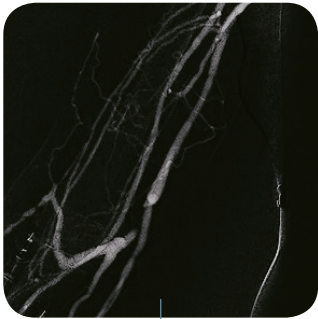
Basilic Vein



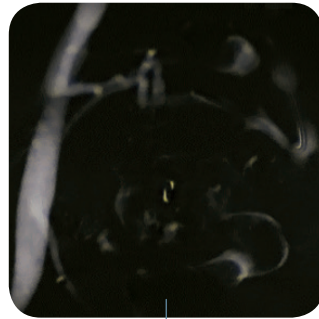
AV shunt



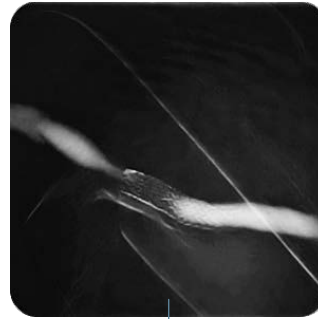
Radial Vein



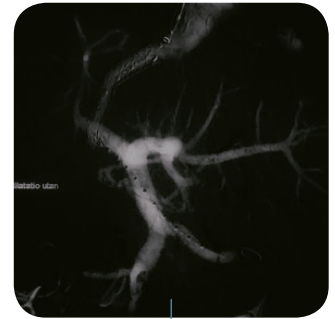
Cephalic Vein



Iliac Vein



Arm Stent

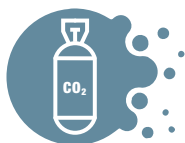


TIPS



HIGH ACCURACY

For CO₂ dose and injection pressure



HIGH PERFORMANCE

More than 400 procedures with an integrated 2L CO₂ cylinder



COMPLETELY SAFE

Internal positive pressure prevents air contamination

MAXIMUM SPEED

Injector ready in 6 seconds



IMPROVED SAFETY

Inject with remote controller, up to 15 meters away



ALWAYS READY

Standardize your work with unique protocols



1st Automated Injection System for CO₂ Angiography

Last Injection: 00:00:00

VOLUME 40 ml

FLUSH 10 ml

PRESSURE 200 mmHg
27 KPa

Reload

angiodroid

SET

Last Injection: 00:00:00

INJECTOR READY

FLUSH 10 ml

INJECTION PARAMETERS

VOLUME	PRESSURE
40 ml	150 mmHg
	20 KPa

Reload

angiodroid

INJECT

Last Injection: 00:01:45

BODY DISTRICT	V (ml)	P (mmHg)	P (KPa)	Flush (ml)
AORTA/PELVIS	60	500	67	15
EVAR / FEVAR	100	650	87	15
ILIAC ARTERY	40	350	47	15
RENAL ARTERY	40	300	40	15
ABOVE THE KNEE	20	250	33	0
BELOW THE KNEE	30	250	33	15
MICROCATHETER	40	500	67	15
SUBCLAVIAN VEIN	50	300	40	0
TIPS	100	700	93	15

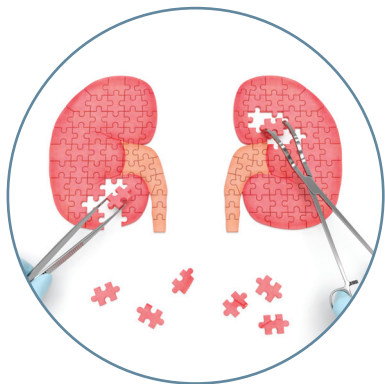
SAVE

PROCEDURE RESUME

Executed injections	2
Total injection volume	110 ml
Total injected flush volume	10 ml
Total injected CO ₂	100 ml
Average injection volume	50.0 ml
Average injection pressure	150.0 mmHg

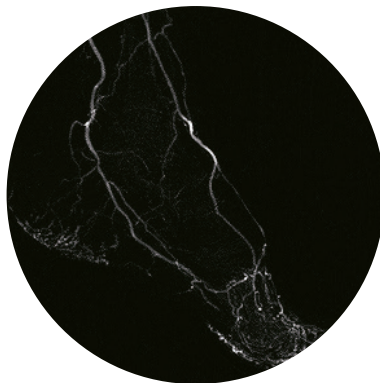
REVIEW

Zero Contrast Procedure



SAVE COST

Avoid iodine and related complications (e.g. CIN risk and adverse reactions).



EXCELLENT IMAGING

ACDA ensures optimum CO₂ image quality and complete injection management.



IMPROVED SAFETY



Inject remotely to reduce X-ray dose even from the control room.

Makes the *Difference*

ACDA as
**Standard
Imaging
Option**



SEE MORE



SAVE ICM



SAVE KIDNEYS

Images courtesy of Dr. P. Sbarzaglia.



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ACDA

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ANGIOGRAPHY



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Rev.2 01-2021