

## Safety

### How safe are blood pool contrast agents?

Data for the only approved blood pool contrast agent, gadofosveset (Vasovist), show that it can be safely administered at a dose of 0.03 mmol/kg body weight as an i.v. bolus injection for contrast-enhanced MRA. Clinical and non-clinical data showed an excellent safety profile which is comparable to that of other Gd-chelates.

No evidence of significant interactions with protein-binding drugs, such as warfarin or ibuprofen, has been found.

The AE profile of gadofosveset is generally mild with immediate onset after injection and short duration of events. This was demonstrated in 1,321 patients participating in the clinical studies. 98% of adverse event symptoms were mild to moderate.

**Table 1: Common treatment-related AEs at the clinical dose of gadofosveset\***

Adverse event	Incidence
Pruritus	4.4%
Paresthesia	2.6%
Headache	2.2%
Nausea	3.8%
Vasodilatation	2.9%
Burning sensation	2.0%
Dysgeusia, i.e. dysfunction of the sense of taste	2.1%
Feeling cold	0.7%

\* [Data from Shamsi K, Yucel EK, Chamberlin P \(2006\). \*Inv Radiol\* 41: 822-830.](#)

For contrast-media, pruritus is a typical adverse event which may have delayed onset. Most of the adverse reactions (80%) occurred within two hours. However, delayed skin reactions may occur after hours to days. Most of these reactions are self-limiting and resolve within a week. There is no evidence that patients with renal impairment or moderate hepatic impairment are at an increased risk of AEs or clinical laboratory abnormalities.

No adjustments in the dose are required in renal impairment and/or hepatic impairment.

If absolutely necessary gadofosveset can be effectively removed from the body by dialysis using high flux filters. This was demonstrated in a clinical trial.

No clinically significant trends in vital signs, ECG parameters (QTc prolongation) or other abnormalities were observed in an extensive array of laboratory values.