

**GLUBRAN®2**

ENDOVASCULAR

# SOLVES.

**Building  
the perfect  
Embolization**



**GEM** SOLUTION  
COMES FROM  
EVOLUTION.

# WHY GLUBRAN®2\*

**Great penetration capacity also suitable for distal and very peripheral targets** 68,71,77,79,81,82

**Effective and quick** 1,20,38,48,57

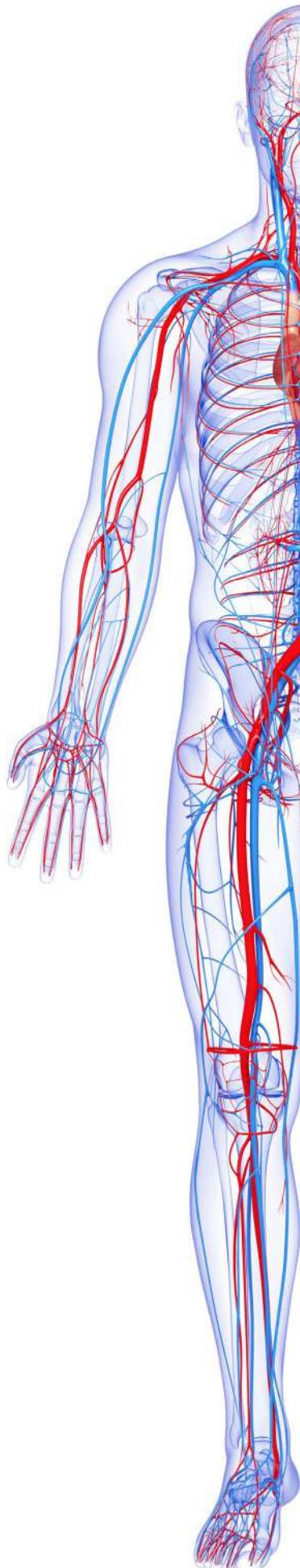
**Easy to prepare** 8,20,23,31,48

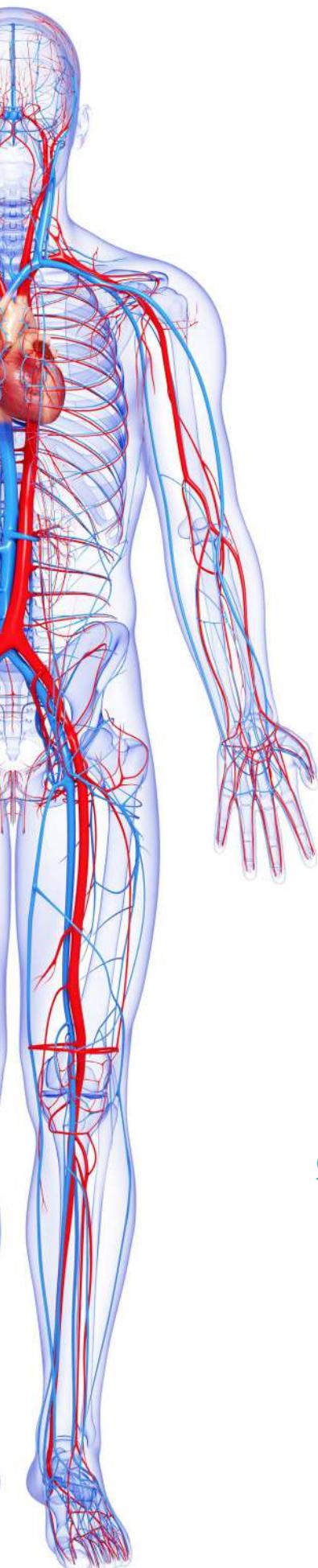
**Suitable for emergencies** 38,57,58

**High haemostatic power** 3,7,8,48,57,76

**Applicable with standard 4F catheters** 27,40

**In addiction to mechanically embolizing it also acts as a sclerotizing agent** 27,13,17,27





**It does not cause pain**<sup>20,27,85</sup>

**It does not contain toxic solvents**<sup>86</sup>

**Can be used in combination with other embolizing agents  
(Spirals and Microspheres)**<sup>38,48,75,79</sup>

**Reduced costs: "This treatment is safe, effective and a  
"low cost" treatment with a high success rate"**<sup>1,20</sup>

**Effective even in patients on anticoagulants or  
affected by inherited coagulation disorders**<sup>28,31,48</sup>

**It generates a permanent occlusion**<sup>31,40,85</sup>

**CE authorized for endovascular use**<sup>1,27</sup>

# SIX PRODUCTS IN A DROP.

GLUBRAN®2



## ADHESIVE

High tensile strength. Acceptable minimum load is  $\geq 435$  N [approx. 18 Kgf/cm<sup>2</sup>]. <sup>2-3</sup>



## SEALANT

Applied with dedicated nebulizing devices it forms a thin film with sealing and waterproof properties due to its synthetic nature and strong adhesive power. <sup>3-6</sup>



## HAEMOSTATIC

Effective in wet environment. <sup>10</sup>



## BACTERIOSTATIC

Blocks bacterial growth for an average of 7 days. <sup>10-12</sup>



## SCLEROSANT

Injected into the lumen of a vessel/varices, polymerize generating a plastic cap causing thrombosis and subsequent fibrosis and sclerosis. <sup>13-17</sup>



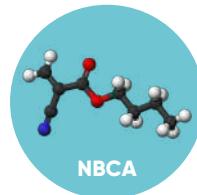
## LIQUID EMBOLIZING AGENT<sup>20-81</sup>

Injected into a blood vessel polymerizes building a cast adheres to the vessel occluding it such as an embolus. It causes completely and definitively occlusion without any recanalization, equivalent to surgical ligation.

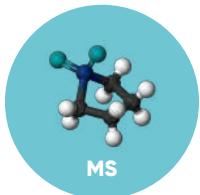
Tailored dilutions with Lipiodol allow a great modularity of Glubran®2, adaptable to a large variety of cases:

| TREATMENTS                     | GLUBRAN®2/LIPIODOL                      |
|--------------------------------|---|
| • Arterial and venous bleeding | 1:3-1:6 <sup>48,57,58, 84</sup>         |
| • AVM                          | 1:3 <sup>84</sup>                       |
| • Fistulas                     | 1:1-1:3 <sup>24,30,36,46,62,73,79</sup> |
| • Varicocele                   | 1:1 <sup>84</sup>                       |
| • Cysts and tumours            | 1:1-1:6 <sup>29,31,67</sup>             |
| • Portal Vein                  | 1:1-1:8 <sup>84</sup>                   |
| • Endoleaks type II            | 1:3 <sup>41,49,56</sup>                 |
| • Prostate                     | 1:8 <sup>87,89</sup>                    |

- Ready to use
- Does NOT polymerise in the presence of air
- Storage at +2 to +8°C
- Can remain at room T (22,5 +/- 2,5°C) for 5 days <sup>2</sup>



+



The co-monomer NBCA + MS is an add value to give:

- Polymerisation Temperature 45°C <sup>10-13-61-82</sup>
- NO tissue necrosis <sup>10-12-61-63-64</sup>
- Greater elasticity of the cast at the end of the polymerization <sup>4-6</sup>

Appearance

TRANSPARENT

Odour

TYPICAL OF CYANOACRYLATES

Density

SIMILAR TO WATER

# INTERVENTIONAL RADIOLOGY

## PRE → POST EMBOLIZATION

### BODY<sup>20-58</sup>

#### ARTERIAL EMBOLIZATION FOR BONE TUMOURS<sup>31</sup>

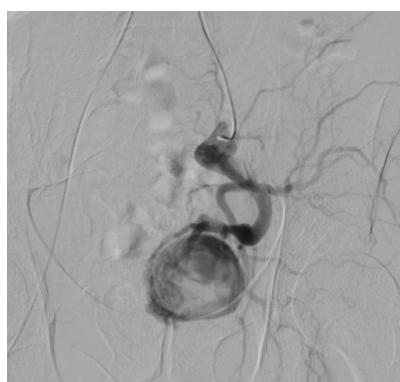


Pre-embolization

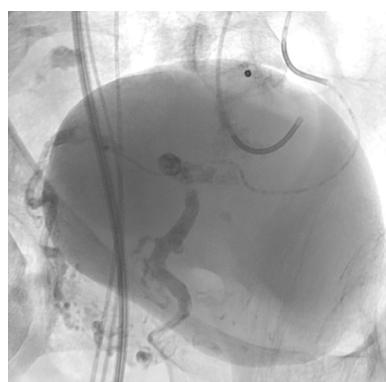


Post-embolization

#### PELVIC AVM<sup>83</sup>



Pre-embolization



Post-embolization

#### VARICOCELE<sup>83</sup>



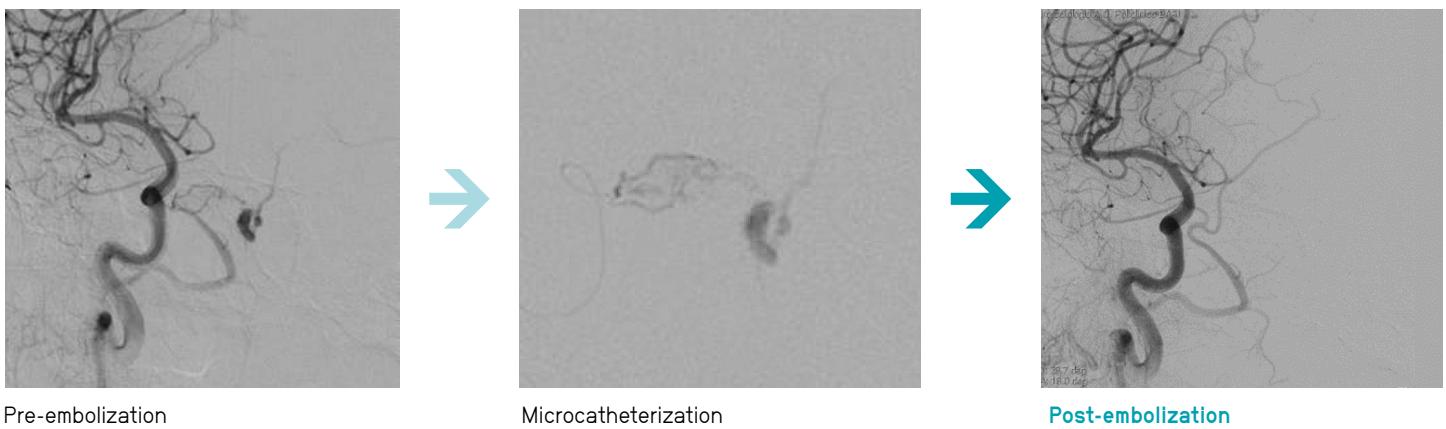
Pre-embolization



Post-embolization

# HEAD & NECK 59-81

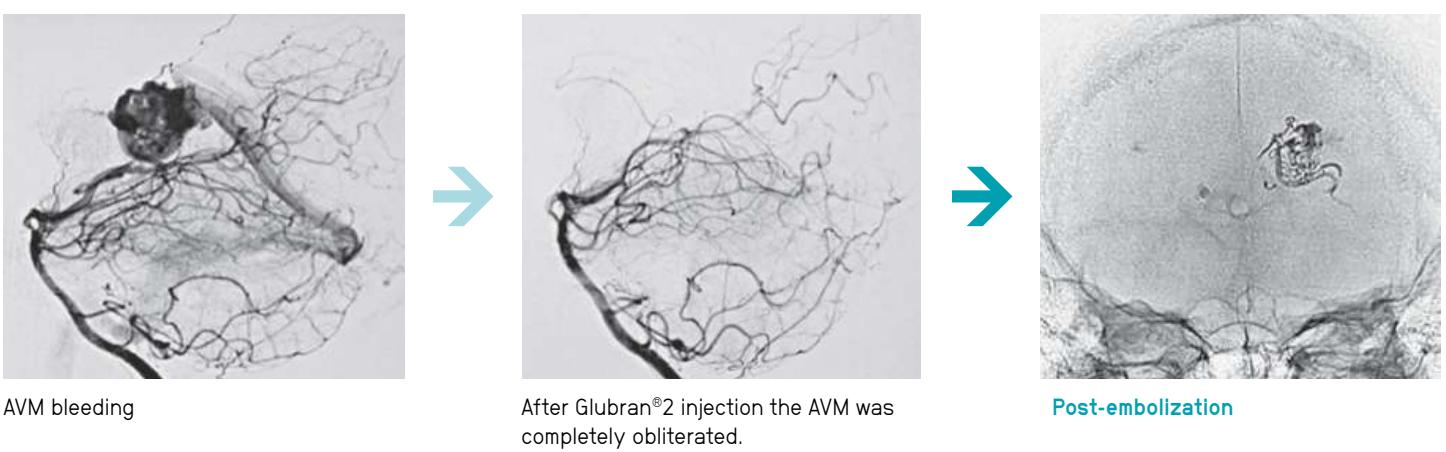
## DURAL FISTULA<sup>62</sup>



## INTRAVENTRICULAR BLEEDING<sup>62</sup>



## AVM HEMORRHAGE IN A YOUNG PATIENT<sup>62</sup>



# GUIDELINES FOR USING

GLUBRAN®2



## 1. Careful preliminary angiographic examination

Identification of the afferent and collateral vessels and any eventual AV fistulas, with oblique and cranio-caudal projections



## 2. Selective and superselective catheterisation of the area to be embolised



## 3. Careful hemodynamic evaluation



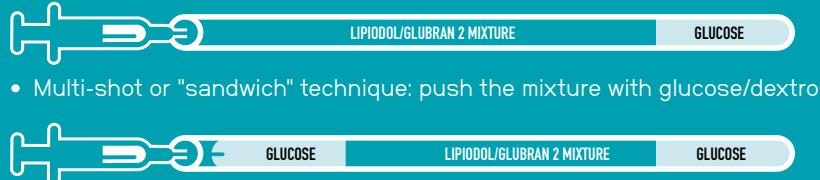
## 5. Mix the two compounds uniformly

Immediately before injection (with a 3-way resistant stopcock or in a steel bowl)



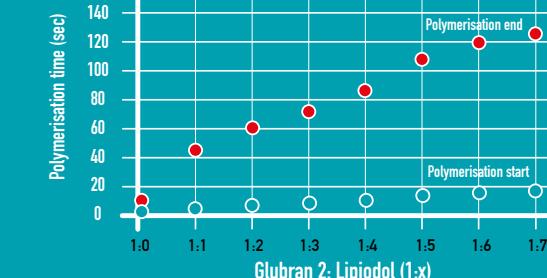
## 7. Inject slowly

- A single injection continuously



## 8. Remove the catheter

Quickly and immediately after the injection, if it was not performed the "sandwich technique" with glucose



## 6. Wash the catheter with glucose or dextrose solution



## 9. Eventual check with contrast medium at least two minutes later

### WARNING: DO NOT USE GLUBRAN® 2 WITH POLYCARBONATE OR SILICONE MATERIALS

#### Advised products & materials

- Glubran® 2/Lipiodol® Ultra-Fluid
- Glucose or dextrose 5%-33%
- Polyethylene (PE) or polypropylene (PP) syringes with luer lock
- 3-way-stopcocks
- Standard 4F catheter
- Coaxial microcatheter

#### Glubran® 2/Lipiodol® dilution ratios<sup>84</sup>

| MICROCATHETER POSITION   | CATHETER TIP    | INJECTION OF THE MIXTURE | FLOW SPEED   | OCCLUSION | EXAMPLES OF APPLICATIONS |  |
|--|-----------------|--------------------------|--------------|-----------|--------------------------|--|
| GLUBRAN® 2/LIPIODOL® <sup>84</sup><br>Dilution ratio 1:1 to 1:3 <sup>1-9</sup>   | Close to lesion | Wedged                   | Continuous   | High      | Proximal                 | Varicocele, Hypervascularized tumors, Gastro-intestinal bleedings, Peripheral bleedings, Pseudoaneurysms, High-flow AVM    |
| GLUBRAN® 2/LIPIODOL® <sup>84</sup><br>Dilution ratio 1:4 to 1:9 <sup>10-14</sup> | Far from lesion | Free                     | Drop by drop | Low       | Distal                   | Organ-end artery, Portal vein embolization, Low-flow AVM, Tumor devascularization, Venous malformations, Lymphatic leakage |

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