BeadBlock

Embolization of hypervascular renal tumors
Bead Block® embolic agent offers the benefits associated with targeted occlusion of renal vessels and is ideally suited for super-selective arterial embolization. Recent studies have demonstrated that super-selective embolization of renal tumors prior to resection or ablation may offer the following benefits:

- Preservation of renal function
- Reduced RFA heat sink effect
- Reduced probability of bleeding
- Eliminate the need to clamp renal vessels

Preoperative SEA (super-selective arterial embolization) allows us to perform LPN (laparoscopic partial nephrectomy) without clamping hilum vessels and so avoiding ischemic damage that is the main limiting step of this procedure for an experienced surgeon.

STE (super-selective transarterial embolization) allowed us to perform a zero-ischemia LPN for tumors with moderate nephrometry score and provided excellent functional results with low complications rate and adequate oncologic results. STE significantly simplifies LPN and combines the advantages of excellent bleeding control without any ischemia and thus without time thresholds within which to perform tumor excision.

Although this does not argue that all large renal tumors should undergo pre-embolization, it does suggest that pre-embolization can reduce post-cryoablation hemorrhage. This also supports the finding that percutaneous cryoablation of very large renal masses measuring at least 5cm is technically feasible, relatively safe, and appears to be effective in local tumor control at short-term follow-up.

The combination of RF ablation and embolization in tumors larger than 2.5cm in diameter is regarded to be of some advantage. Devascularization presumably allows the creation of a larger necrotic volume and less energy is needed to completely destroy the tumor. Therefore, the remaining parenchyma is less exposed to possible detrimental effects of heating.

Bead Block® em bolization of hypervascular renal tumors in combination therapy

Bead Block™ Partial Nephrectomy

- Eliminate the requirement to clamp the renal artery during procedure
- Avoid risks associated with exceeding the warm ischemia time (WIT) threshold

Bead Block™ Cryoablation

- Reduce the risk of bleeding and bleeding-related complications following renal cryoablation
- Increase the feasibility, safety and effectiveness of cryoablation of very large (>5cm) renal tumors

Bead Block™ Radiofrequency Ablation

- Reduce the risk of bleeding and bleeding-related complications following RFA
- Reduce the RFA "heat sink" effect
- Achieve a larger volume of necrosis

Hematoma volume after renal cryoablation

Before Bead Block embolization

After Bead Block embolization
Bead Block® embolic agent offers:

- Proven performance for the embolization of hypervascular tumors and arteriovenous malformations (AVMs)
- Blue-tinted beads, in prefilled, color-coded syringes for added convenience and safety
- Precisely calibrated sizing for effective and accurate embolization
- Compressible spherical embolic with 100% elastic shape recovery for easier delivery
- Confidence of product and clinical support from Biocompatibles – leaders in embolization technology

Bead Block ordering information

<table>
<thead>
<tr>
<th>Label Color and Nominal Bead Size</th>
<th>Volumes of Beads</th>
<th>Product Code</th>
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</thead>
<tbody>
<tr>
<td>100-300µm</td>
<td>2mL</td>
<td>EB2S103</td>
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<tr>
<td>300-500µm</td>
<td>2mL</td>
<td>EB2S305</td>
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<td>500-700µm</td>
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<td>700-900µm</td>
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<tr>
<td>900-1200µm</td>
<td>2mL</td>
<td>EB2S912</td>
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</tbody>
</table>

2mL Bead Block is suspended in physiological buffered saline in 20mL syringe and is packed singly.

For more information or to order, please contact:
Customer Service
Biocompatibles, Inc.
115 Hurley Road
Building B
Oxford CT 06478
USA
Toll Free Phone: 877.626.9989
Toll Free Fax: 877.626.9950
Phone: 203.262.4198
Fax: 203.262.6314
E: orders@biocompatibles.com
www.biocompatibles.com

Reimbursement Service:
The Pinnacle Health Group
Phone: 866.369.5290 or 215.369.9290
Fax: 877.369.2986 or 215.369.5296
E: LCBead@thepinnaclehealthgroup.com
BeadBlock@thepinnaclehealthgroup.com

References

Important information

Indications:
Bead Block is intended to be used for the embolization of hypervascular tumors and arteriovenous malformations (AVMs).

Potential Complications:
1. Unilateral or bilateral passage of Bead Block into normal arteries adjacent to the targeted lesion or through the lesion into other arteries or arterial beds, such as the internal carotid artery, pulmonary, or coronary circulations.
2. Postembolization:
   - Thrombosis
   - Ischemia at an undesirable location
   - Causing cold sensation and tissue damage
   - Ischemic stroke or ischemic infarction
   - Vascular occlusion and necrosis
   - Neurological deficits including cerebral nerve palsy
   - Motor paralysis

Caution:
Federal (USA) law restricts the sale of this device by or on order of a physician.

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