



# Aquamantys for Orthopedic and Spine Surgery

## Overview

Aquamantys is a bipolar soft tissue sealer from Medtronic. In conjunction with a generator, the device delivers Medtronic’s Transcollation technology, which combines radiofrequency energy and saline. While it has multiple potential applications, this analysis focuses on orthopedic and spine surgery.



Aquamantys may be used in place of traditional monopolar electro-surgical electrodes and handpieces (in orthopedic and spine surgery), which are available from multiple vendors.

## Does the evidence support the price premium?

Aquamantys devices typically cost \$500–\$600 each, compared to \$10–\$15 for traditional electrocautery devices (excluding the cost of a generator and any necessary accessories). Clinical evidence can help elucidate when use of Aquamantys may be appropriate and when its costs likely outweigh its potential benefit.

The table below provides a high-level summary of the available evidence. (Lumere clients can access to a detailed analysis of the clinical evidence associated with use of Aquamantys through our online platform.)

| Procedure             | Blood Loss           | Hemoglobin Drop      | Blood Transfusion    | Operative Time       | Length of Stay      | Legend               |
|-----------------------|----------------------|----------------------|----------------------|----------------------|---------------------|----------------------|
| TKA (primary)         | Positive Implication | Neutral Implication  | Neutral Implication  | Neutral Implication  | Neutral Implication | Positive Implication |
| TKA (revision)        | Neutral Implication  | Not Evaluated        | Neutral Implication  | Not Evaluated        | Not Evaluated       |                      |
| THA (primary)         | Positive Implication | Neutral Implication  | Neutral Implication  | Neutral Implication  | Neutral Implication |                      |
| THA (revision)        | Positive Implication | Positive Implication | Neutral Implication  | Positive Implication | Not Evaluated       | Neutral Implication  |
| Shoulder arthroplasty | Not Evaluated        | Not Evaluated        | Not Evaluated        | Not Evaluated        | Not Evaluated       |                      |
| Spine                 | Positive Implication | Positive Implication | Positive Implication | Neutral Implication  | Neutral Implication | Not Evaluated        |

TKA = total knee arthroplasty; THA = total hip arthroplasty. Clinical evidence synthesis based on peer-reviewed, published literature comparing Aquamantys to traditional electrocautery. Please see Lumere.com for detailed information, including bibliography.

## Conclusion

Clinical evidence demonstrates the potential value of Aquamantys in the following procedures:

- **Revision total hip arthroplasty:** Decrease in blood loss, hemoglobin drop and operative time
- **Spine:** Decrease in blood loss and hemoglobin drop, and potential to decrease blood transfusions

In other orthopedic procedures (e.g., total knee arthroplasty, primary total hip arthroplasty), Lumere recommends restricting use of Aquamantys due to its high cost and lack of demonstrated clinical or operational improvements.

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