

**Focus on biocomposite suture anchor resorption**

**Introduction**

Biocomposite suture anchors composed of biodegradable polymers and osteoconductive materials are commonly used in rotator cuff repair.<sup>1</sup> Osteoconductive materials were introduced in response to the poor bone replacement and bone-derived complications associated with polymer-only anchors.<sup>1-5</sup> However, despite their widespread use, the resorption process of biocomposite suture anchors for rotator cuff repair has only recently been studied.<sup>1,2</sup>

**HEALICOIL<sup>®</sup> REGENESORB<sup>®</sup> Suture Anchors<sup>1</sup>**

**Overview**

Retrospective study evaluating resorption of 18.5mm HEALICOIL REGENESORB Suture Anchors in 48 patients (82 anchors).

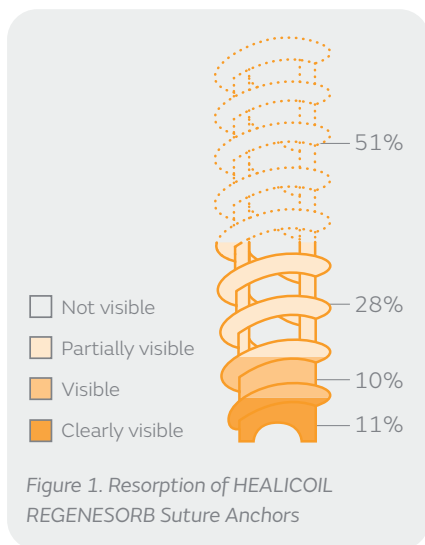
Anchor resorption was evaluated by MRI 21 months after rotator cuff repair.

**Anchor material composition**

<b>65%</b>	<b>15%</b>	<b>20%</b>
PLGA	-TCP	Calcium sulphate

**Results**

- Resorption at 21 months (Figure 1):
- Complete or near complete resorption of 65/82 suture anchors (79%)
- Only 17/82 suture anchors (21%) were visible or clearly visible
- No severe osteolysis



**Arthrex BioComposite™ Suture Anchors<sup>2</sup>**

**Overview**

Retrospective study evaluating resorption of 14.7mm Biocomposite Corkscrew<sup>®</sup> and 19.1mm Biocomposite SwiveLock<sup>®</sup> anchors (Arthrex, Naples, FL, USA) in 25 patients (84 anchors).

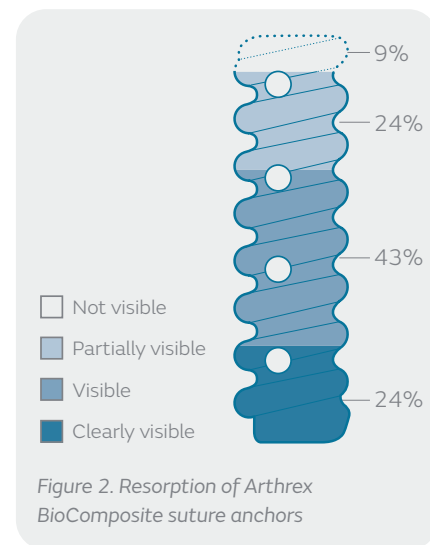
Anchor resorption was evaluated by MRI 28 months after rotator cuff repair.

**Anchor material composition**

<b>85%</b>	<b>15%</b>
PLLA	-TCP

**Results**

- Resorption at 28 months (Figure 2):
- Complete or near complete resorption of only 28/84 suture anchors (33%)
- Two-thirds of suture anchors (56/84, 67%) remained visible or clearly visible
- No severe osteolysis



**Commentary**

- The material composition and physical structure of biocomposite suture anchors affects their resorption<sup>1,2</sup>
- In separate clinical studies, resorption of more than twice as many HEALICOIL REGENESORB Suture Anchors was complete or near complete at 21 months compared to 85% PLLA and 15% -TCP suture anchors at 28 months<sup>1,2</sup>
- Successful anchor resorption and bone replacement offers benefits for patients requiring revision surgery<sup>1,2</sup>

**Abbreviations**

-TCP = -tricalcium phosphate, MRI = magnetic resonance imaging, PLGA = poly-L-lactic co-glycolic acid, PLLA = poly L-lactic acid

**References**

1. Vonhoegen J, John D, Hägermann C. *J Orthop Surg Res.* 2019;14(1):12. 2. Sgroi M, Friesz T, Schocke M, Reichel H, Kappe T. *Clin Orthop Relat Res.* 2019;477(6):1469-1478. 3. Dhawan A, Ghodadra N, Karas V, et al. *Am J Sports Med.* 2012;40(6):1424-1430. 4. Duralde XA. *Clin Orthop Relat Res.* 2019;477:1479-1482. 5. Milewski MD, Diduch DR, Hart JM, et al. *Am J Sports Med.* 2012;40(6):1392-1401.