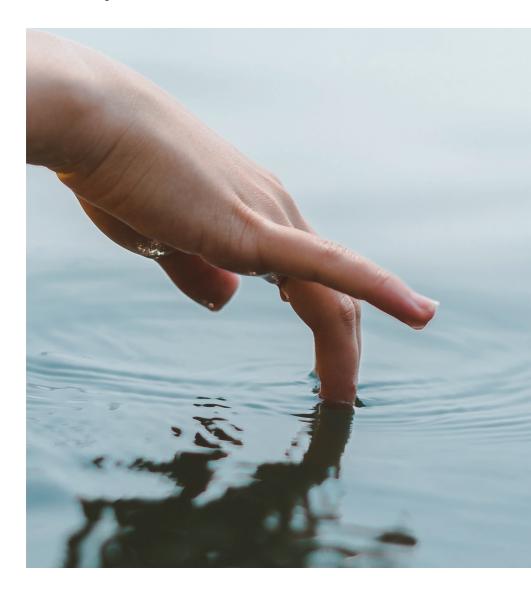


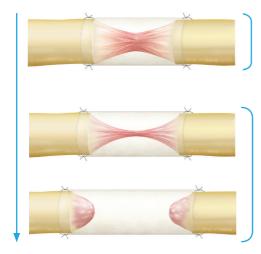
# Peripheral Nerve Bridging Materials: Using Clinical Evidence to Optimize Outcomes



revolutionizing the science of nerve repair™

# conduits were designed as a coaptation aid, not as a bridging material

Conduits are hollow tubes, relying on the body to form a fibrin cable.

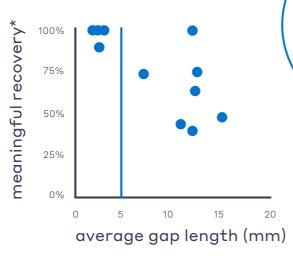


Originally designed to alleviate tension and reduce misalignment in short gaps less than 5 mm

What is the reliability with longer gaps?

# conduits have a reliability threshold

Each datapoint represents one clinical publication in sensory nerve gaps.<sup>1-10</sup>



\*Defined as S3 or higher.

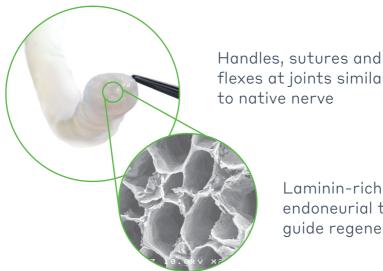
In gaps above 5 mm, more than 1 in 3 conduits fail to achieve meaningful recovery.<sup>1-10</sup>

## failures may result in:

- Lack of functional recovery
- Absence of protective sensation
- Revision procedure
- Chronic pain

# avance<sup>®</sup> nerve graft was developed to bridge nerve gaps

It is a biologically active processed human nerve allograft that eliminates the comorbidities and operative time associated with a second surgical site.

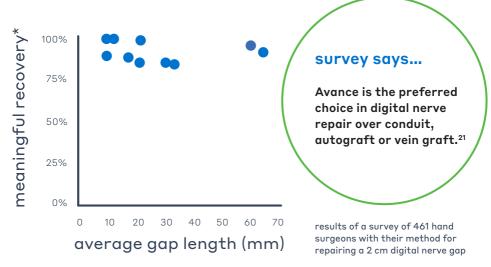


flexes at joints similar

Laminin-rich endoneurial tubes quide regeneration

## avance has demonstrated consistency and reliability

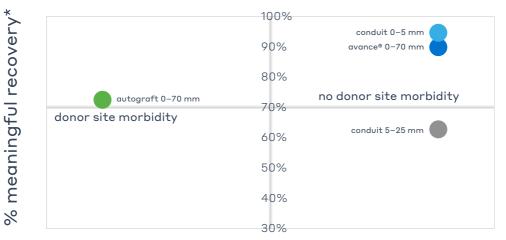
Each datapoint represents one clinical publication in sensory nerve gaps.<sup>11-20</sup>



\*Defined as S3 or higher.

# summary of clinical outcomes

Evidence based algorithm avoids potential complications of autograft harvest, without sacrificing patient outcomes.



\*Defined as S3 or higher. Data points derived from a weighted average of publications reporting meaningful recovery in sensory nerve gaps.<sup>1-20,22-24</sup>



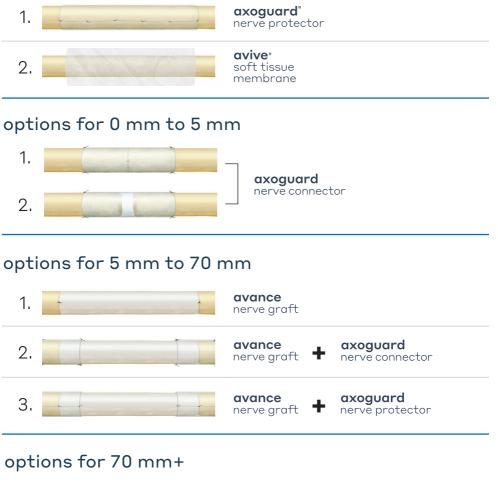
## references

- 1. Weber, et al. *Plast Reconstr Surg.* 2000 Oct;106(5).
- 2. Lohmeyer, et al. *J Reconstr Microsurg.* 2009 Jan;25(1).
- 3. Alligand-Perrin et al. Orthop Traumatol Surg Res. 2011 Jun;97(suppl 4).
- Taras et al. J Hand Surg Am. 2011 Sep;36(9).
- Chiriac, et al. J Hand Surg Eur Vol. 2012 May;37(4).
- Haug, et al. J Hand Surg Am. 2013 Jan;38(1).
- 7. Lohmeyer, et al. *J Reconstr Microsurg.* 2014 May;30(4).
- Fujita, et al. J Oral Maxillofac Surg. 2014 Jul;72(7).
- 9. Arnaout, et al. Chir Main. 2014 Sep;33(4).
- 10. Buncke, et al. J Hand Surg 2015;40(9).
- 11. Karabekmez, et al. Hand (NY). 2009 Sep;4(3).
- 12. Brooks, et al. Microsurgery. 2012 Jan;32(1).

- 13. Cho, et al. J Hand Surg Am. 2012 Nov;37(11).
- 14. Taras, et al. J Hand Surg Am. 2013 Oct;38(10).
- Zuniga. J Oral Maxillofac Surg. 2015 Apr;73(4).
- Rinker, et al. J Reconstr Microsurg. 2015 Jun;31(5).
- 17. Means, et al. Hand (NY). 2016 Jun;11(2).
- Salomon, et al. J Oral Maxillofac Surg. 2016 Dec;74(12).
- Zuniga, et al. J Oral Maxillofac Surg. 2017 Dec;75(12).
- 20.Rinker, et al. Ann Plast Surg. 2017 Jun;78(6S suppl 5).
- 21. Azouz, et al. Plast Reconstr Surg Glob Open. 2018 Aug 6;6(8).
- 22. Stang, et al. Arch Orthop Trauma Surg. 2013 Jun;133(6).
- 23. Manoli, et al. Microsurgery. 2014 Nov;34(8).
- 24.Kallio. J Hand Surg. British and European Volume. 1993;18B.
- 25. Axogen data on file.

# axogen's portfolio of products

## options for no transection





# this is the new normal

At least 66 portfolio peer-reviewed publications

Over 2/3 of US hand and microsurgery fellows were trained on this algorithm in  $2018^{25}$ 

### Indications and Trademark Disclaimers

#### **Avance Nerve Graft**

REGULATORY CLASSIFICATION: Avance Nerve Graft is processed and distributed in accordance with US FDA requirements for Human Cellular and Tissue-based Products (HCT/P) under 21 CFR Part 1271 regulations, US State regulations and the guidelines of the American Association of Tissue Banks (AATB). Additionally, international regulations are followed as appropriate. Avance Nerve Graft is to be dispensed only by or on the order of a licensed physician.

INDICATIONS FOR USE: Avance Nerve Graft is processed nerve allograft (human) intended for the surgical repair of peripheral nerve discontinuities to support regeneration across the defect.

CONTRAINDICATIONS: Avance Nerve Graft is contraindicated for use in any patient in whom soft tissue implants are contraindicated. This includes any pathology that would limit the blood supply and compromise healing or evidence of a current infection.

#### **Axoguard Nerve Connector**

INDICATIONS FOR USE: Axoguard Nerve Connector is intended for the repair of peripheral nerve discontinuities where gap closure can be achieved by flexion of the extremity. The Axoguard Nerve Connector is supplied sterile and is intended for one-time use.

CONTRAINDICATIONS: The Axoguard Nerve Connector is derived from a porcine source and should not be used for patients with known sensitivity to porcine material.

#### **Axoguard Nerve Protector**

INDICATIONS FOR USE: The Axoguard Nerve Protector is indicated for the repair of peripheral nerve injuries where there is no gap. The Axoguard Nerve Protector is supplied sterile and is intended for one-time use.

CONTRAINDICATIONS: The Axoguard Nerve Protector is derived from a porcine source and should not be used for patients with known sensitivity to porcine material.

#### Avive Soft Tissue Membrane

REGULATORY CLASSIFICATION: Avive Soft Tissue Membrane is processed and distributed in accordance with US FDA requirements for Human Cellular and Tissue-based Products (HCT/P) under 21 CFR Part 1271 regulations, US State regulations and the guidelines of the American Association of Tissue Banks (AATB). Additionally, international regulations are followed as appropriate. Avive Soft Tissue Membrane is to be dispensed only by or on the order of a licensed physician.

INDICATIONS FOR USE: Avive Soft Tissue Membrane is processed umbilical cord intended for homologous use as a soft tissue covering.

CONTRAINDICATIONS: Avive Soft Tissue Membrane is contraindicated for use in any patient in whom soft tissue implants are contraindicated.

Disclaimer: Not all products are available internationally.

© 2019 Axogen Corporation. Avance Nerve Graft, Axoguard Nerve Protector, Axoguard Nerve Connector, Avive Soft Tissue Membrane and revolutionizing the science of nerve repair are trademarks of Axogen Corporation. Axoguard Nerve Connector and Axoguard Nerve Protector are manufactured in the United States by Cook Biotech Incorporated, West Lafayette, Indiana.

## Axogen Corporation

Phone 888.Axogen1 (888.296.4361) Fax 386.462.6801 customercare@axogeninc.com www.axogeninc.com



Intended for distribution in the European Union

## revolutionizing the science of nerve repair

