## A DIFFERENT APPROACH TO TONSILLECTOMY

Discover the clinically proven benefits of BiZact™1-3,†



†Used in 48 cases, including adults (22+) US (18+) EU the use of the BiZact" tonsillectomy device resulted in non-measurable bloodloss compared to published literature stating 10.83 ml for Coblator"\*, 27.08 ml for electrocautery [Roje], and 125 ml [Lachanas] with cold knife.

Medtronic Further, Together



# THE RIGHT TOOL MAKES ALL THE DIFFERENCE

Medical technology should improve outcomes, lower overall healthcare costs, and contribute to a positive patient experience. And those imperatives are most meaningfully achieved when we work together.

That's why we partnered with ENTs to engineer a device specifically for tonsillectomies, to deliver superior clinical outcomes that drive economic value.

The BiZact™ device has been clinically shown to

- Nearly eliminate intraoperative blood loss<sup>1,†</sup>
- Improve procedural efficiency<sup>1,4,5,‡</sup>
- Reduce the incidence of postoperative hemorrhage<sup>6,7,§</sup>

†Used in 48 cases, including adults (22+) US (18+) EU the use of the BiZact<sup>™</sup> tonsillectomy device resulted in non-measurable bloodloss. ‡Used in 48 cases, including adults (22+) US (18+) EU. Average procedure time for the BiZact<sup>™</sup> tonsillectomy device was 7 min. compared to published literature stating 14.8 (pediatric) and 20.5 (adult) min. [Lee] for electrocautery and 27.3 min. [Omrani] for Coblator<sup>™</sup>. §Used in 60 cases, including patients (age range 3-12yrs) in the U.S. There were no intra-operative or post-operative bleeding events, defined as bleeding events that required intervention, compared to secondary post-operative hemorrhage rates in published literature of 6.3% for electrocautery, 4% for cold dissection, and 2.4% for coblation [Francis].



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## DESIGNED SPECIFICALLY FOR TONSILLECTOMY

The BiZact<sup>™</sup> device:

- Optimizes transoral access with a 12 cm shaft
- Offers a curved-shape jaw that follows the tonsil bed
- Reliably seals vessels up to 3 mm<sup>8</sup>

#### OPTIMIZES THE PROCEDURE FROM START TO FINISH

Surgeons using the BiZact<sup> $\top$ </sup> device are completing cases in about half the time<sup>1,4,5,†</sup> compared to the Coblator<sup> $\top$ \*</sup> device and electrocautery. Because the BiZact<sup> $\top$ </sup> device:

- Offers a fast and easy setup<sup>9,‡</sup>
- In-line activation facilitates efficient sealing and transection
- Nearly eliminates intraoperative bleeding<sup>1-3,§,Ω</sup>

That means patients spend less time under anesthesia. 1.4.5.† And your practice can perform more cases in a day.

†Used in 48 cases, including adults (22+) US (18+) EU. Average procedure time for the BiZact™ tonsillectomy device was 7 min. compared to published literature stating 14.8 (pediatric) and 20.5 (adult) min. [Lee] for electrocautery, and 27.3 min. [Omrani] for Coblator™

‡12 out of 12 surgeons and 13 out of 15 nurses surveyed agreed. §Used in 48 cases, including adults (22+) US (18+) EU. The use of the BiZact™ tonsillectomy device resulted in non-measurable blood loss compared to published literature stating 10.83 ml for Coblator™, 27.08 ml for electrocautery [Roje], and 125 ml for cold knife [Lachanas].

 $\Omega$ Compared to electrocautery, Coblator<sup>™\*</sup>, and cold knife.

## BUILT FOR ONE PURPOSE

The BiZact™ device was designed in collaboration with ENTs, to optimize tonsillectomies





#### FAST EASY SETUP<sup>9,1</sup>

Simple setup contributes to procedural efficiency — and it's easier than the Coblator\*\*\* device.9

†12 out of 12 surgeons and 13 out of 15 nurses surveyed agreed.

#### "Nurses are very happy with it." ‡

#### Dr. Eng Oo

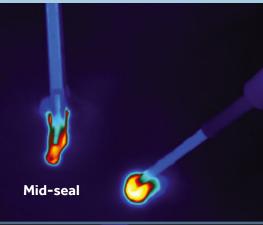
Head of Otolaryngology Head and Neck Surgery Unit at Flinders Medical Centre and Associate Professor, Flinders University, Adelaide, Australia

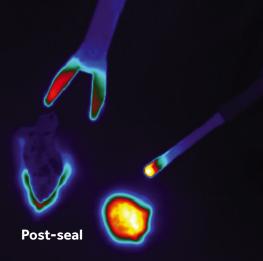
Feedback provided March 2017 after 30 procedures





#### BiZact<sup>™</sup> device vs. monopolar electrosurgery<sup>12</sup>





### LOW ENERGY LEVELS. HIGH CLINICAL VALUE.

The BiZact<sup>™</sup> device is powered by Valleylab<sup>™</sup> energy platforms that deliver consistent and reliable seals

The BiZact<sup>™</sup> device uses advanced bipolar energy to permanently seal vessels up to and including 3 mm.<sup>8</sup> It's powered by Valleylab<sup>™</sup> energy platforms that:

- Continuously measure impedance of clamped tissue
- Appropriately adjust energy levels in real time to maintain the desired tissue effect
- Automatically stop energy delivery when the seal is complete

The clinical result is seals that withstand three times normal systolic blood pressure, and an average thermal spread of less than  $1 \text{ mm}.^{10.11\,f}$ 

Device Performance

### DIFFERENT TECHNIQUE. BETTER RESULTS.

Compared to the Coblator™ device, the BiZact™ tonsillectomy device:

- Offers easier setup<sup>9.†</sup>
- Reduces intraoperative bleeding 1-3,‡
- Reduces postoperative bleeding<sup>6.7,§</sup>

Compared to an electrosurgical pencil, the BiZact™ tonsillectomy device provides:

- Less bleeding during and after surgery<sup>1-3,6,7,‡,§</sup>
- Significantly lower maximum external jaw temperature<sup>12</sup>
- Significantly faster jaw cooldown time to 60 C12

†12 out of 12 surgeons and 13 out of 15 nurses surveyed agreed.

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### EFFICIENT AND EFFECTIVE

"The removal is so efficient in terms of vessel sealing that it's quite rare for us to have to actually do anything once the tonsil's removed."

Dr. Ron J. Karni

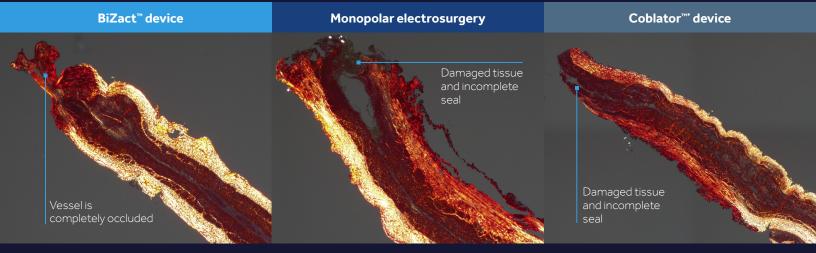
Chief, Division of Head & Neck Surgical Oncology; Associate Professor, Department of Otorhinolaryngology – Head & Neck Surgery

University of Texas Medical School at Houston

Feedback provided March 2017 after 30 procedures

#### Picrosirius Red (PSR) Stained Images<sup>14,0</sup>

 $\Omega Damaged$  tissue is dark red and undamaged tissue is gold.



Hematoxylin and Eosin (H&E) Stained Images

BiZact™ device Monopolar electrosurgery Coblator™ device

Vessel is completely occluded Vessel is not occluded

Vessel is not occluded

## INDICATIONS FOR USE

BZ4212

The  $BiZact^{\mathbb{M}}$  device is a bipolar instrument intended for use in open surgical procedures where ligation and division of vessels, tissue bundles and lymphatics is desired.

The tissue fusion of the device can be used on vessels (arteries and veins) and lymphatics up to and including 3 mm diameter. The  $BiZact^{\text{TM}}$  device is indicated for use in open general surgical procedures.

It's also indicated for adult, children and adolescent ENT procedures, including tonsillectomy, for the ligation and division of vessels, tissue bundles and lymphatics 2-3 mm away from unintended thermally sensitive structures.

The  $BiZact^{\mathbb{M}}$  device has not been shown to be effective for tubal sterilization or tubal coagulation for sterilization procedures. Do not use for these procedures.





### LET'S OPTIMIZE TONSILLECTOMY **PROCEDURES**



#### References

- 1. Karni, R., Attner, P. (2018). A prospective, multi-center, single arm, non-comparative pilot study of BiZact on adults undergoing tonsillectomy. Data on file. Study sponsored by Medtronic. Clinical Trials.gov Identifier: NCT02876575
- Roje Z, Racić G, Dogas Z, Pisac VP, Timms M. Postoperative morbidity and histopathologic characteristics of tonsillar tissue following coblation tonsillectomy in children: a prospective randomized single-blinded study. Coll Antropol. 2009;33(1):293–298.
- 3. Lachanas VA, Prokopakis EP, Bourolias CA, et al. LigaSure™ versus cold knife tonsillectomy. Laryngoscope. 2005;115(9):1591–1594
- 4. Lee SW, Jeon SS, Lee JD, Lee JY, Kim SC, Koh YW. A comparison of postoperative pain and complications in tonsillectomy using BiClamp forceps and electrocautery tonsillectomy. Otolaryngol Head Neck Surg. 2008;139(2):228-234.
- Omrani M, Barati B, Omidifar N, Okhovvat AR, Hashemi SA. Coblation™ versus traditional tonsillectomy: A double blind randomized controlled trial. J Res Med Sci. 2012:17(1):45-50
- 6. Brown, E. (2019). A prospective, multi-center, single arm study of BiZact™ on children undergoing tonsillectomy. Data on file. Study sponsored by Medtronic. ClinicalTrials.gov Identifier: NCT03266094
- 7. Francis D, Fonnesbeck C, Sathe N, McPheeters M, Krishnaswami S, Chinnadurai S. Postoperative bleeding and associated utilization following tonsillectomy in children: a systematic review and meta-analysis. Otolaryngology Head and Neck Surgery. 2017; 156(3):442-455.
- 8. BiZact™ Tonsillectomy Device [instructions for use].Boulder, CO: Medtronic; 2017.
- 9. Based on internal test report #RE00073873 and #RE00079704, Independent surgeon and nurse feedback collected during Medtronic-sponsored labs. January and February 2017.
- 10. Based on internal test report #RE00077022, Porcine testing. Jan. 9-10, 2017
- 11. Based on internal test report #RE00015788, Tissue testing. March 23, 2017.
- 12. Based on internal test report #RE00011247, Benchtop testing comparing the BiZact" Tonsillectomy device with the E1551X Valleylab" Hex-locking blade electrode. March 23, 2017.
- 13. Based on internal test report #RE00089921, Histological image collection with BiZact™ BZ4212, a monopolar electrosurgical device E1551X, and the Coblator™ Surgery System. March 30 and April 11, 2017.

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