



# Wherever Motor Nerves are at Risk

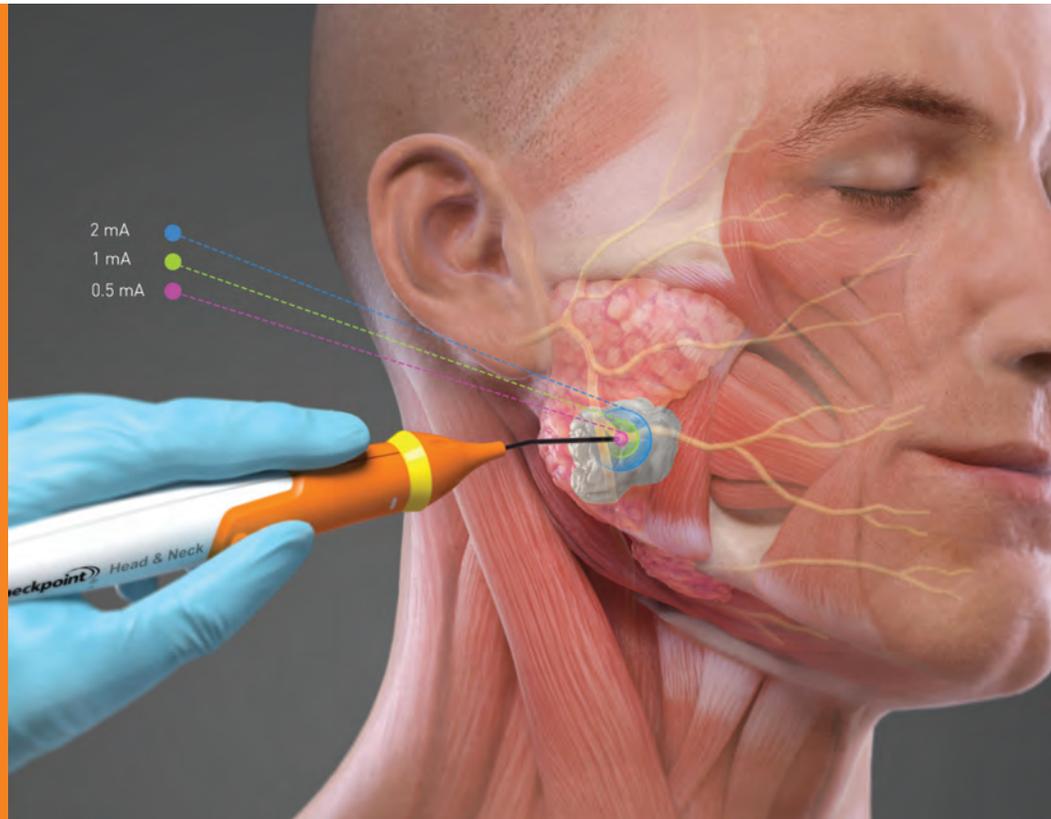
Checkpoint® Head & Neck

PAROTIDECTOMY | NECK DISSECTION | THYROIDECTOMY | FACIAL REANIMATION

# Parotidectomy

**Babak Larian, MD**  
**Los Angeles, CA**

“There is potential for wide application of the Checkpoint in head and neck surgery especially in cases where the nerve is encased in scar tissue or involved in the tumor. In addition to its reliability, I particularly appreciate the ease of use of the device and its ability to penetrate dense tissue.”



## Parotidectomy

Scan QR code to view Checkpoint use during a parotidectomy. Note the repeated stimulation without loss of muscle response

## Reliably locate nerves in altered anatomy or any time motor nerves are at risk

- Map location of motor nerves through tissue to facilitate dissection
- Localize motor nerve tissue obscured by scarring and tumor
- Biphasic stimulation allows surgeon to safely stimulate nerve repeatedly and continuously without diminished motor response

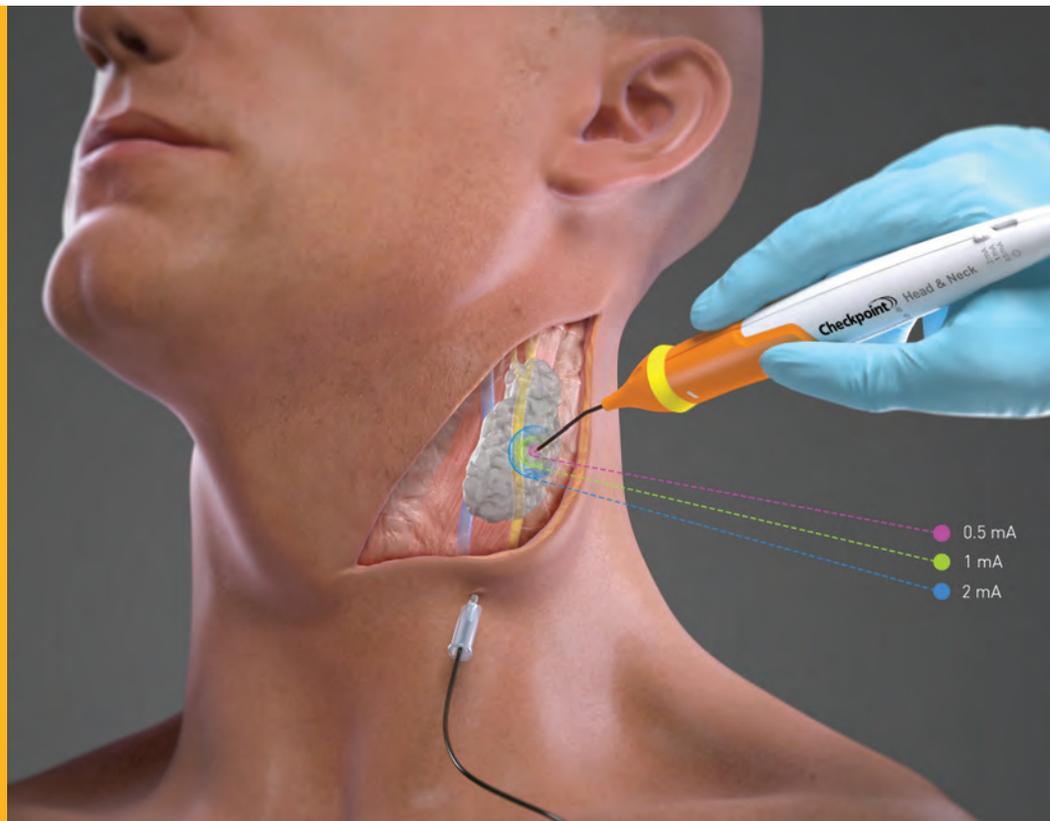
**Source: “USE OF THE CHECKPOINT STIMULATOR IN REVISION PAROTIDECTOMY”  
- White Paper, Checkpoint Surgical, January 2014**

Babak Larian, MD, FACS, is Chief of Otolaryngology, Head & Neck Surgery at a leading academic teaching hospital in Los Angeles, California and Director, Center for Advanced Head & Neck Surgery, Beverly Hills, California.

# Neck Dissection

**Salvatore Caruana, MD**  
**New York, NY**

“Checkpoint stimulation effectively penetrates surrounding soft tissue allowing verification of nerves before they can be visualized, thus facilitating neck dissection.”



## Neck Dissection

Scan QR code to view Dr. Salvatore Caruana discuss the use of Checkpoint Head & Neck at COSM 2018 (Company Sponsored Presentation)

## Confidently identify motor nerves during surgical exposure

- Confirm whether a tissue structure is or is not a motor nerve
- Confirmation of motor nerve response by tetanic contraction
- Identify individual motor nerve branches through soft tissue and tumor

**Source: COSM 2018 - Company Sponsored Presentation April, 2018**

Salvatore Caruana, MD, is the Director of the Division of Head and Neck Surgery in the Department of Otolaryngology-Head and Neck Surgery at a leading academic hospital in New York City.

# Thyroidectomy

**Raymond Chai, MD**  
**New York, NY**

“I’ve used Checkpoint in well over 400 cases. Over the last two or three years I’ve expanded my use of Checkpoint to any case in which nerves are at risk, including all of my thyroidectomy surgeries.”



## Thyroidectomy

Scan QR code to view  
Checkpoint Head & Neck in  
a thyroidectomy procedure

## Evaluate nerve and muscle function for surgical decision-making

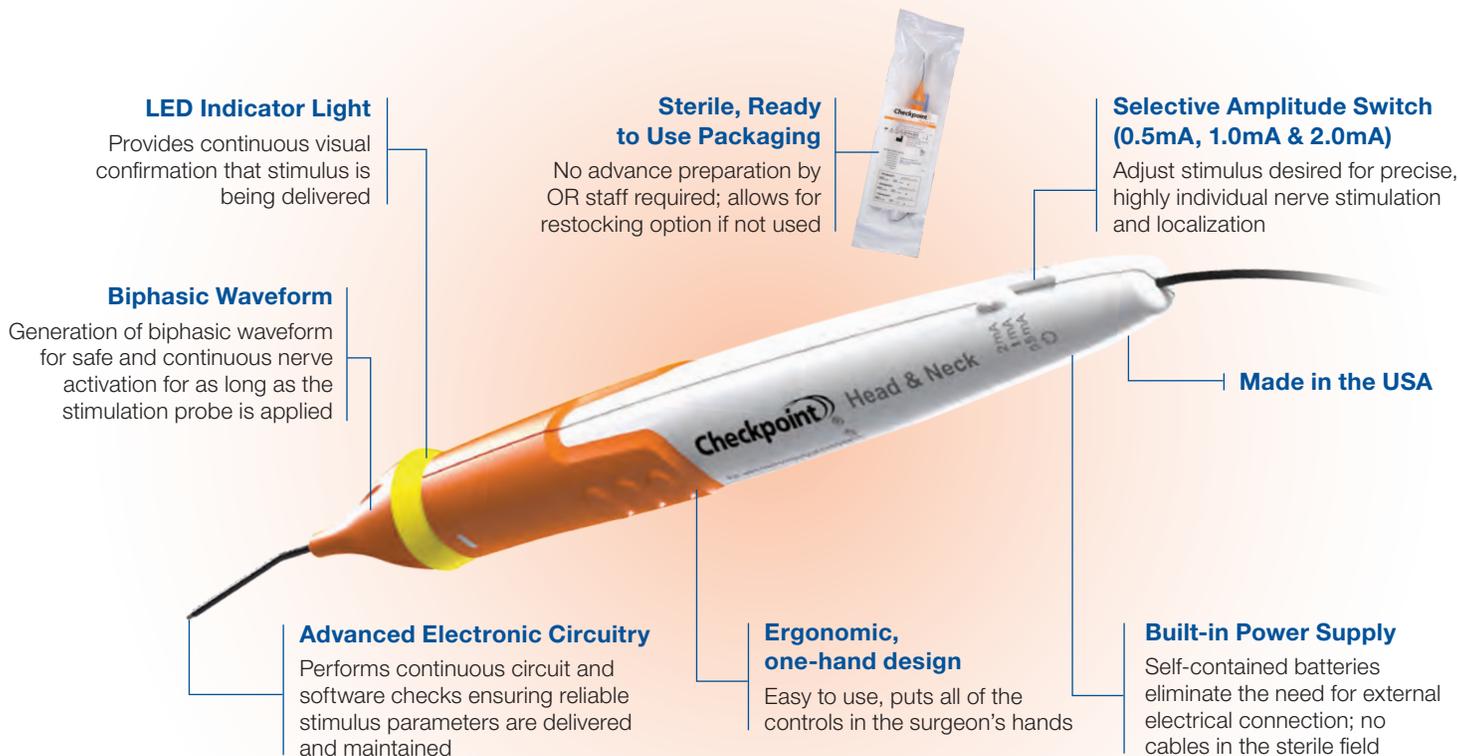
- Safe and reliable nerve stimulation
- Easy to palpate muscle response
- Biphasic stimulation allows for repeated nerve stimulation without diminished response

**Source: COSM 2018 - Company Sponsored Presentation April, 2018**

Raymond Chai, MD, is the Assistant Professor of Otolaryngology at a leading academic teaching hospital in New York City and is the Director of Head and Neck Robotic Surgery.

# Checkpoint® Head & Neck

## Features



For additional information and surgical videos visit [www.checkpointsurgical.com](http://www.checkpointsurgical.com).

To schedule a trial or to place an order, contact Checkpoint Surgical:

Phone: 216.378.9107

Fax: 216.378.9116

Email: [info@checkpointsurgical.com](mailto:info@checkpointsurgical.com)

### Product #9394 | Sold in a box of 4 | RX Only

The Checkpoint Stimulator is a single-use, sterile device intended to provide electrical stimulation of exposed motor nerves or muscle tissue to locate and identify nerves and to test nerve and muscle excitability. Do not use this Stimulator when paralyzing anesthetic agents are in effect, as an absent or inconsistent response to stimulation may result in inaccurate assessment of nerve and muscle function. For a complete list of warnings and precautions regarding the use of the Stimulator please see [www.checkpointsurgical.com](http://www.checkpointsurgical.com).

# Safety and reliability of a handheld stimulator for neural monitoring during thyroid surgery.

Laryngoscope. 2019 Apr 25. doi: 10.1002/lary.28027

Lawson BR, Kamani D, Shama M, Kyriazidis N, Randolph GW

## Abstract

### Objective:

The Checkpoint nerve stimulator (Checkpoint Surgical, Cleveland, OH) is a U.S. Food and Drug Administration-cleared device for neural localization and monitoring during surgery. Its safety, efficacy, and reliability for neural monitoring during thyroid and parathyroid surgery have not been compared to more standard formats of neural monitoring.

### Study design:

Retrospective review.

### Methods:

Vagal, recurrent, and superior laryngeal nerve monitoring were performed using both the Checkpoint stimulator and Medtronic NIM 3.0 laryngeal electromyography endotracheal tube (Medtronic,

Jacksonville, FL) during thyroid and parathyroid surgery. A total of 21 operated sides in 15 patients were included for analysis. Latency and amplitude data for the Checkpoint stimulator were recorded using the NIM monitor and compared to normative endotracheal tube surface electrode data.

### Results:

Mean amplitude using the Checkpoint stimulator was 574.6 microvolts ( $\mu\text{V}$ ), 1060.6  $\mu\text{V}$ , and 182.8  $\mu\text{V}$  for the vagus, recurrent laryngeal, and superior laryngeal nerves, respectively. Mean amplitude using standard laryngeal electromyography was 709  $\mu\text{V}$ , 1077.0  $\mu\text{V}$ , and 183.7  $\mu\text{V}$  for the same nerves. Mean latency was significantly shorter with stimulation of the recurrent laryngeal nerve

compared to the vagus nerve with both stimulators ( $P < 0.001$ ). No neural injuries occurred during the study.

### Conclusion:

The Checkpoint stimulator is a safe and reliable alternative to traditional laryngeal electromyography providing equivalent induced electromyography of the vocalis for neural monitoring during thyroid and parathyroid surgery.

### Level Of Evidence: 4

Laryngoscope, 2019.

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## Checkpoint® Stimulator/Locator

For more complex procedures that require a higher stimulation amplitude (20mA) or more discrete stimulation adjustments, Checkpoint Stimulator/Locator #9094 is also available. Potential procedures include facial nerve repair, free muscle transfers, revision tumor, facial trauma reconstruction and many others.

Product 9094 / Sold in box of 4 / Rx only.

