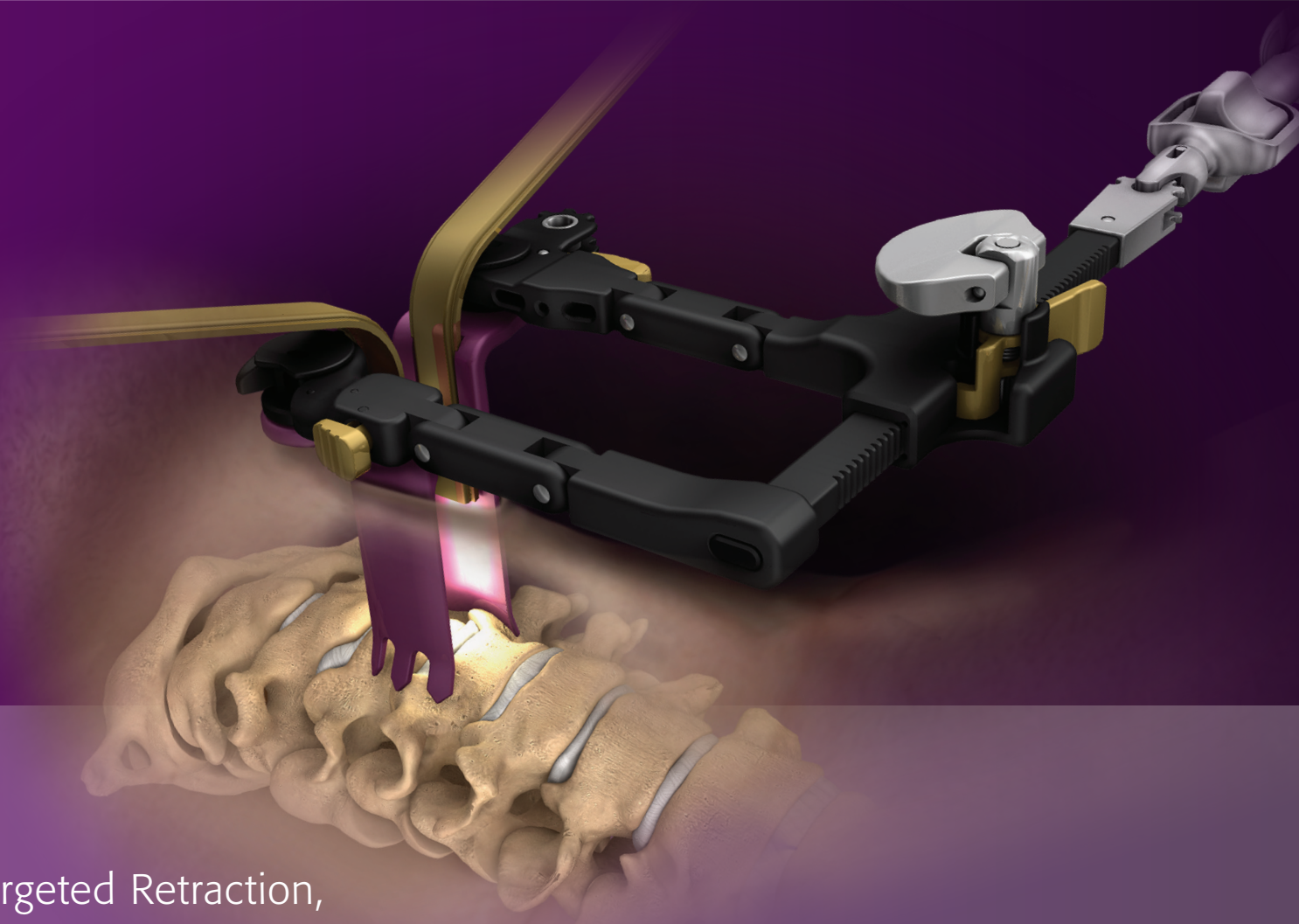


MAXCESS-C

MaXcess-Cervical Access System



Targeted Retraction,
Maximized Visualization

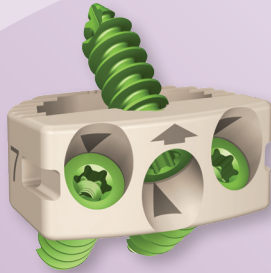
ACDF Procedural Solution

NuVasive Procedural Integration

NuVasive provides a suite of procedural offerings (including biologics, hardware, monitoring, implants, and access systems) with a goal of supplying surgeons with a single procedural source. Our intent with this combination of products is to increase surgical convenience, procedural fluidity, and surgeon confidence, which ultimately provide a single source to satisfy a surgeon's needs.

CoRoent Small Interlock

Intervertebral Fixation Device



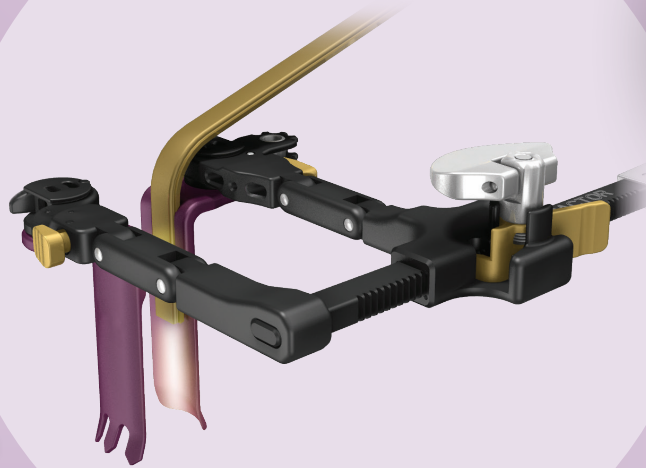
Triad CR Cortical Ring Allograft

Saline-Packaged Cervical Ring Allograft



NuVasive ET Tube

Monitoring of the
Recurrent Laryngeal Nerve



Osteocel Plus

Allograft Cellular Bone Matrix with Osteogenic, Osteoinductive, and Osteoconductive Properties



NVM5

Free Run EMG and
MEP Monitoring
Capabilities

Preface

Fellow Colleagues:

Proper exposure in an anterior cervical procedure is one of the keys to safe surgery with good clinical outcomes. Current retractor systems have limitations in placement and visualization that may serve to hinder that exposure. By incorporating several proven technologies from our MAS thoracolumbar access platforms, we intended to provide surgeons a system that allows them to place the retractor exactly where they require for an optimal ACDF procedure.

We designed the NuVasive MaXcess-C Cervical Access System to provide reproducibility, patient safety, and surgeon confidence. One of our major goals was to reduce retractor migration by incorporating the ability to fixate the retractor to the table, if desired. Additionally, we sought to maximize visualization by incorporating a light source with the blades, minimize tissue migration through a variety of blade designs and sizing options, and simplify access and disc preparation through a unique set of adjunct instrumentation.

The MaXcess-C Cervical Access System adds to an existing suite of NuVasive cervical products with the goal of providing a complete procedural solution, including access, monitoring, hardware, and biologics.

We are pleased to announce the release of the MaXcess-C Cervical Access System – designed to provide targeted retraction and maximum visualization in anterior cervical procedures.

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth J. Rich".

Kenneth J. Rich, M.D.
Capital Neurosurgery
Raleigh, NC
USA

A handwritten signature in black ink, appearing to read "Sandeep Kunwar".

Sandeep Kunwar, M.D.
Associate Professor
of Neurological Surgery, UCSF
Director, Taylor McAdam Bell
Neuroscience Institute
Fremont, CA
USA

NuVasive MaXcess-C Cervical Access System

System Overview

The MaXcess-C System, through its table fixation feature, allows the surgeon to expose only what is necessary for a complete anterior cervical procedure. The MaXcess-C System does not rely on surrounding tissue tension to maintain its alignment, and less pressure on the surrounding tissue may be required during retraction. The table fixation feature may also prove valuable in challenging lower or higher cervical levels, where anatomy causes traditional retractors to migrate.

Illumination provided by the MaXcess light source creates an additional level of visibility when working in challenging exposures. All of these features were designed to increase precision, visualization, and simplicity of access.

Integrated Light Source

Allows for focused, direct illumination of the surgical site and reduces the need for a head-mounted light source.

Single-Step Engagements

Allow simple engagement of the blades to handheld and blades to retractor body to increase confidence in attachments.

Anatomically Contoured Blades

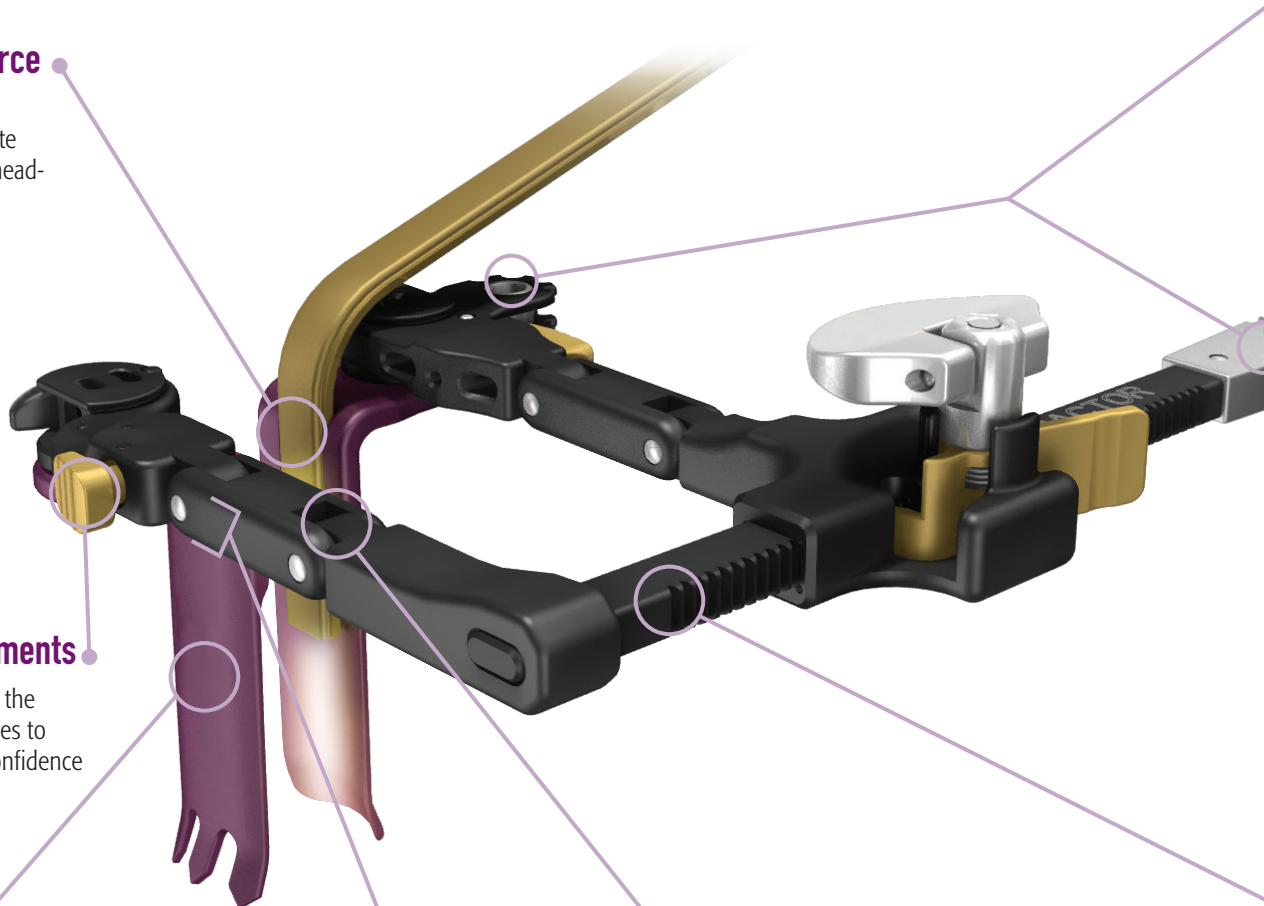
Incorporate a natural outside radius on the blades to evenly distribute tissue pressures.

Low Profile Retractor Body

Designed to increase working angles and minimize instrument/retractor contact during small incisions or challenging anatomies.

Pre-Adjusted Friction Joints

Hold a consistent amount of resistance and do not require tightening of the screw.



Multiple Fixation Points

Multiple fixation points provide two options for fixation of the retractor to the arm to accommodate differing patient anatomies or operating table limitations.

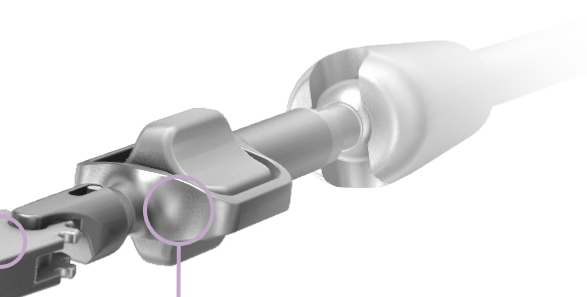


Table Fixation

Multi-axial fixation arm for secure table fixation, designed to reduce retractor migration and tissue creep during the procedure.

Retractor Body – Black Surface Finish

Intended to reduce glare from overhead, head-mounted, and camera-mounted light sources.

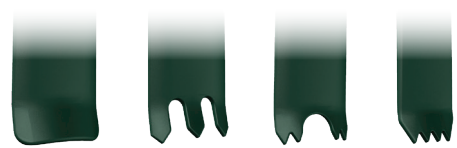
Quick-Connect Handhelds

Allow blades to be rigid when connected and easily engage and disengage with one hand. Anatomic silicon grip for added comfort when held during longer procedures.



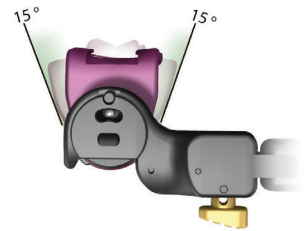
Retraction Blade Options

Multiple widths and teeth configurations to match patient anatomy and surgical preferences.



Semi-Rotational Blades

Reduce the amount of toggle versus traditional blades while avoiding excessive tissue pressure from spot loading.



Radiolucent Blades

Provide optimal visualization of instrumentation and implants under fluoroscopy.



Blade Posts – Black Surface Finish

Intended to reduce glare from overhead, head-mounted, and camera-mounted light sources.

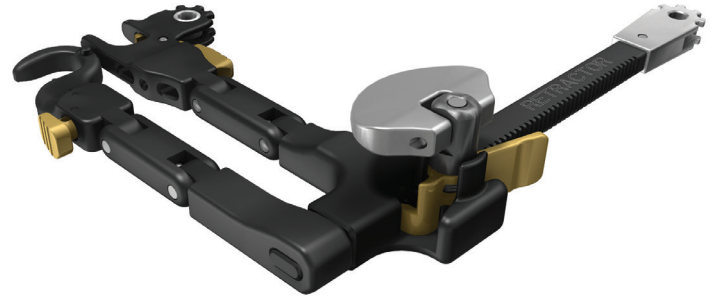


Design Rationale

RETRACTOR DESIGN

The MaXcess-C retractor body is designed to be low profile, accommodating for larger instrumentation and surgeon-working angles. Special attention was paid to the connection mechanisms that were designed to simply and confidently engage the blades to the retractor body. Friction joints were added to ensure a consistent level of resistance to joint movement that would not require constant upkeep and adjustments.

In addition, the black surface finish of the retractor body was intended to reduce glare from overhead lights and microscopes. The rack was designed to allow for solid fixation, finite confirmations, and versatility of access and placement of the MaXcess-C System.



BLADE DESIGN

- Blades were designed to minimize tissue pressures through a gradual radius of the outside surface of the blades. Multiple toothed options and a carefully selected distal rake angle were designed to mitigate tissue creep.
- The addition of micro blades allows the surgeon to expose just enough area to insert a no-profile interbody device, such as the CoRoent Small Interlock.
- Blades feature a semi-rotational movement to reduce the amount of toggle. Traditional blades are fully rotational, and can lose position easily while avoiding excessive tissue pressure from spot loading, as with a fully rigid blade.
- The distal anatomical contour feature was designed to account for the raised ventral lip surfaces.



HANDHELDS

- Quick-connect feature allows blades to be snapped on without a need to depress lever.
- When attached to the handheld, the connection becomes rigid, ideal for tissue manipulation and placement.
- Integrated light source can be utilized with handhelds for illumination during tissue exposure and dissection.
- Ergonomically designed to help reduce fatigue if held for long periods of time.



Adjunct Instrumentation

ADJUNCT INSTRUMENTATION

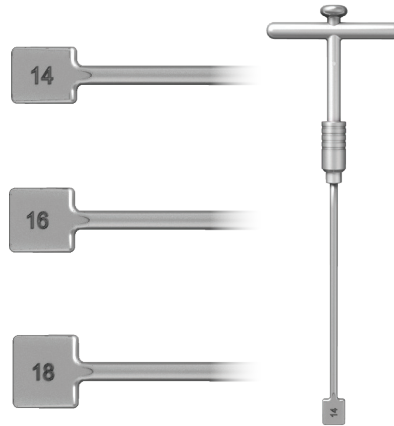
Caspar Pin Distraction System

- Positive engagement driver.
- Locking distractor to avoid riding up as distraction is placed.
- Self-drilling tip on pins eliminates the need for drilling.
- Offered in 12, 14, and 16mm sizes to accommodate multiple anatomies.



Paddle Distractors

- To facilitate in accessing severely collapsed disc spaces.
- Offer an intermediate option if Caspar pin distraction is unfavorable.
- Multiple widths for varying anatomies: 14, 16, and 18mm.



Depth Gauge

- Color-coded depth gauge allows for quick and easily referenced blade selection.



(RICHARD D. LAZAR)

March 1, 1959 – April 1, 2011

Richard D. Lazar's ideas were foundational to the design of this retractor system. We lost Rich in 2011. He died as he lived – contagiously passionate, engaged, and on the edge. While our lives are richer for having known him, even the passage of time has not eased that loss.

Each blade in the system is etched with Rich's initials (RDL) in dedication to an irreplaceable contributor, surgeon, colleague, and friend.

Thank you, Rich.

~Your Friends at NuVasive

MAXCESS-C INSTRUMENTS

DESCRIPTION	CATALOG #
Retractor Body, Left	7992002
Retractor Body, Right	7992001
Handheld	7992004
Depth Gauge	7992012
Distraction Pin Driver	7670200
Distraction Pin, 12mm	7670212
Distraction Pin, 14mm	7670214
Distraction Pin, 16mm	7670216
Standard Distractor, Right	7670250
Standard Distractor, Left	7670251
Cervical Paddle Distractor, 14mm	7992014
Cervical Paddle Distractor, 16mm	7992016
Cervical Paddle Distractor, 18mm	7992018
T-Handle	1004180

MAXCESS-C ARTICULATING ARM INSTRUMENTS

DESCRIPTION	CATALOG #
Bedrail Clamp	3240122
MaXcess-C Primary Arm	7992500

MAXCESS-C BLADES

DESCRIPTION	CATALOG #
MaXcess-C Blade – Micro, 30mm, Serrated	7992063
MaXcess-C Blade – Micro, 40mm, Serrated	7992064
MaXcess-C Blade – Micro, 50mm, Serrated	7992065
MaXcess-C Blade – Micro, 60mm, Serrated	7992066
MaXcess-C Blade – Micro, 70mm, Serrated	7992067



DESCRIPTION	CATALOG #
MaXcess-C Blade – Micro, 30mm, Blunt	7992033
MaXcess-C Blade – Micro, 40mm, Blunt	7992034
MaXcess-C Blade – Micro, 50mm, Blunt	7992035
MaXcess-C Blade – Micro, 60mm, Blunt	7992036
MaXcess-C Blade – Micro, 70mm, Blunt	7992037



DESCRIPTION	CATALOG #
MaXcess-C Blade – Wide, 30mm, Serrated	7992043
MaXcess-C Blade – Wide, 40mm, Serrated	7992044
MaXcess-C Blade – Wide, 50mm, Serrated	7992045
MaXcess-C Blade – Wide, 60mm, Serrated	7992046
MaXcess-C Blade – Wide, 70mm, Serrated	7992047



DESCRIPTION	CATALOG #
MaXcess-C Blade – Wide, 30mm, Blunt	7992023
MaXcess-C Blade – Wide, 40mm, Blunt	7992024
MaXcess-C Blade – Wide, 50mm, Blunt	7992025
MaXcess-C Blade – Wide, 60mm, Blunt	7992026
MaXcess-C Blade – Wide, 70mm, Blunt	7992027



DESCRIPTION	CATALOG #
MaXcess-C Blade – Wide, 30mm, 3-Tooth	7992053
MaXcess-C Blade – Wide, 40mm, 3-Tooth	7992054
MaXcess-C Blade – Wide, 50mm, 3-Tooth	7992055
MaXcess-C Blade – Wide, 60mm, 3-Tooth	7992056
MaXcess-C Blade – Wide, 70mm, 3-Tooth	7992057



To order, please contact your NuVasive Sales Consultant or Customer Service Representative today at:

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NuVasive Netherland B.V. Jachthavenweg 109 A, 1081 KM Amsterdam, The Netherlands • phone: +33 20 72 33 000

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