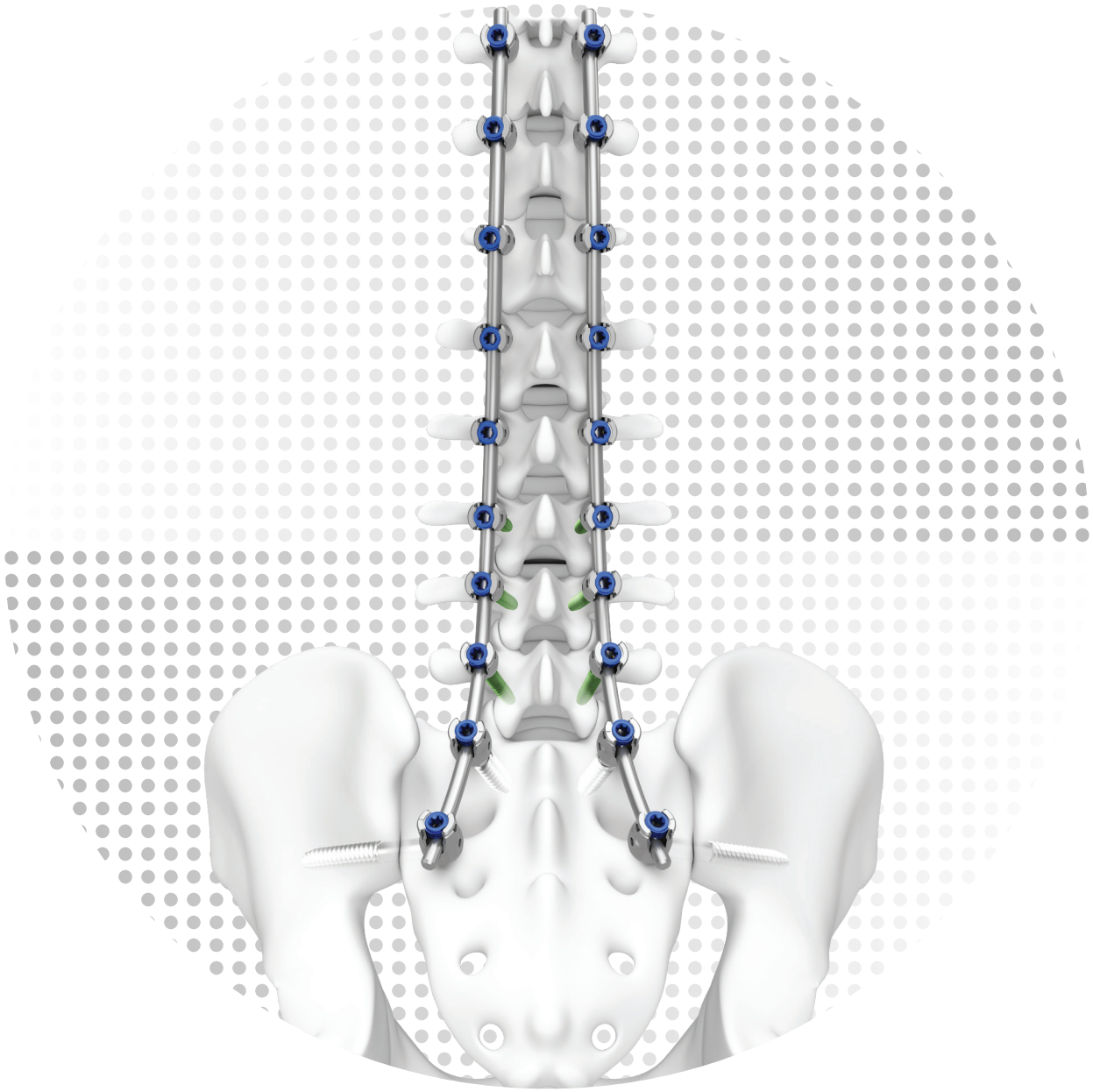
TriALTIS™

SPINE SYSTEM

Elevate Your Experience



Johnson&Johnson
MedTech

TECHNOLOGY

RELIABILITY

INNOVATION

System Overview

TriALTIS™ Spine System is DePuy Synthes' innovation platform providing a comprehensive product offering that combines implant technology with the digital ecosystem. The system was created with an emphasis on three design principles: technology, reliability and innovation.

Technology

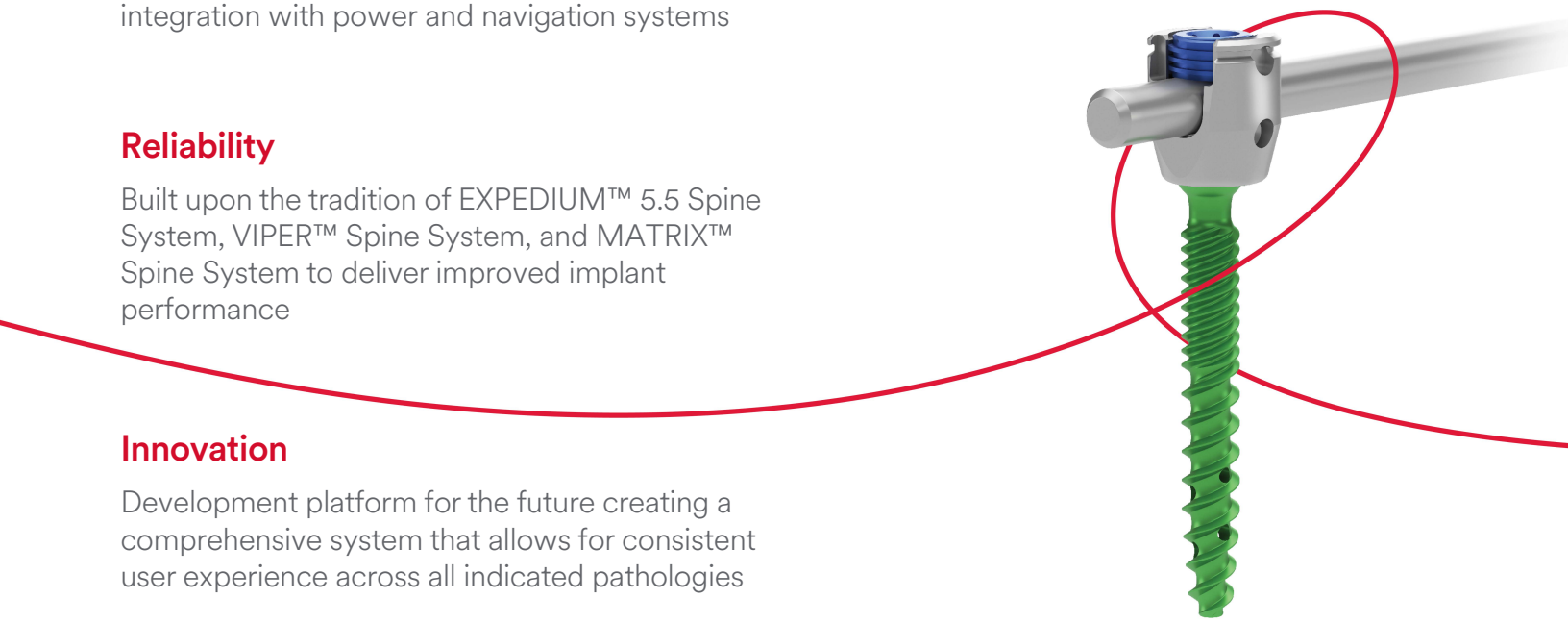
Designed from the ground up with enabling technology in mind, creating seamless integration with power and navigation systems

Reliability

Built upon the tradition of EXPEDIUM™ 5.5 Spine System, VIPER™ Spine System, and MATRIX™ Spine System to deliver improved implant performance

Innovation

Development platform for the future creating a comprehensive system that allows for consistent user experience across all indicated pathologies



Technology

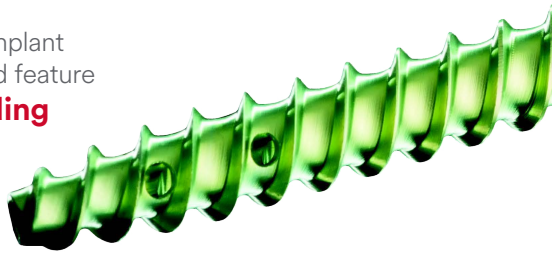
Designed for seamless integration with enabling technology

System Design

Instruments throughout the system are designed with standardized features to allow for consistent integration with enabling technology including[3]

- 1/4” modular coupling
- T27 drive feature
- Proximal navigation shaft geometry

Deliberate integration with enabling technology is also incorporated in the system's implant design through the screw's quick catch tip. This consists of a bullet-shaped screw end feature that **allows for immediate bone engagement of the screw by extending threads to the distal tip**.[4]



Power

- Dedicated instrumentation designed for power integration
- Two specifically designed couplings for drilling and powered tapping / screw insertion compatible with UNIUM™ Power Tool System

Increased torque output by 66% compared to DHS adapter[1]

Navigation

- Dedicated instrumentation for navigation integration including drill bits, taps, and screwdrivers
    - Navigated taps range from 3.5 mm – 12.0 mm diameter
    - Navigated drill bits come in 2.4 mm, 3.2 mm, and 4.0 mm diameter
- Drill sleeves that enable one-handed adjustment of the navigation array[2]

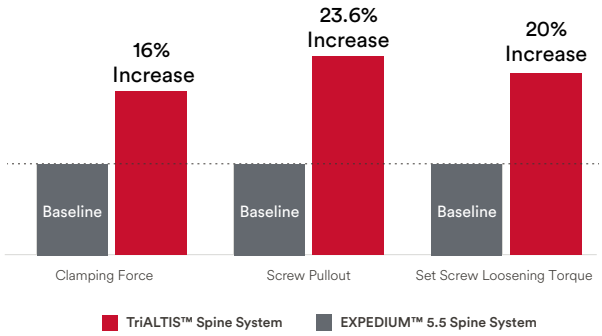
Reliability

Built on a heritage of reliability to deliver improved performance

The TriALTIS System offers an increased final tightening torque specification compared to existing DePuy Synthes Spine systems. The result is a **16% increase in set screw clamping force** compared to EXPEDIUM 5.5 Spine System.[5]

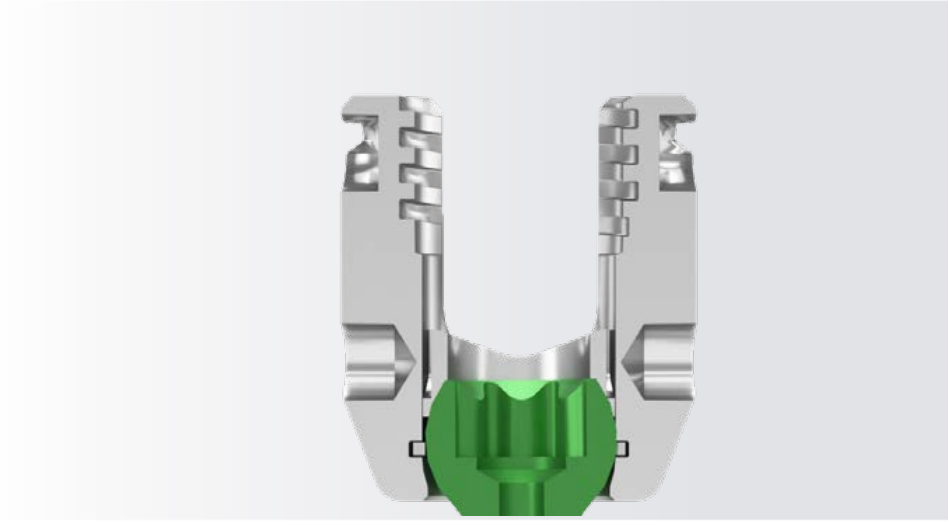
Cortical fix thread form designed to enhance pedicle fixation and **increase resistance to screw pullout by 23.6% compared dual lead thread**.[6]

In addition, the TriALTIS System features a **20% improvement of the set screw loosening torque**.[5]



Standardized head geometry enables a **streamlined clinical workflow** via consistent proximal instrument-implant engagement features.[7]

The square thread form offers a significant improvement over standard threads **reducing the propensity for cross- threading of the implants**.[8]



Innovation

Development platform for the future

The TriALTIS System is DePuy Synthes' premier pedicle screw platform and is built with integration across the product portfolio.

Navigation

Power

Neuromonitoring

Biologics

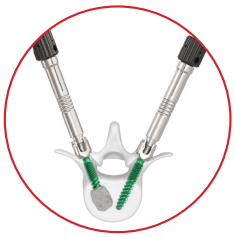
Ergonomics and Workflow

Touch Points

Consistent design elements throughout the system indicate features where the user actuates to engage or disengage the device from a mating implant or instrument.

Drive Feature

Consolidated drive feature (T27) across the platform to streamline workflow.

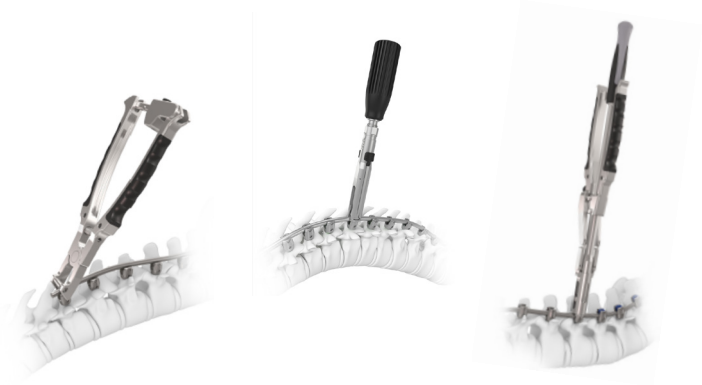


Cement Augmentation

Improved cement augmentation workflow enabling multiple cement delivery options while reducing the number of steps compared to legacy systems as well as reducing the risk of misalignment or cement cannula breakage.

Enhanced Reducer Options

Comprehensive portfolio of reducers for various surgical applications covering up to 40 mm of reduction with the sequential reducer.[11]



System Offerings

Enhanced Single-Use, Sterile Packaging (SSP) Offering

One study showed that out of 1,071 orthopedic procedures, over 5% are delayed more than 30 minutes or cancelled because of Sterile Processing Department delayes or shortage of sterile instruments[16]

TriALTIS™ System provides additional economic value through enhanced sterile-packed offering and the "Opened but Unused" 510k approved indication. Fenestrated screws maybe re-sterilized if the sterile barriers have been opened but screws have not been compromised (refer to the "Open but Unused" IFU indication). This allows hospitals to reprocess screws that were opened during the procedure but not used.

Increase Confidence in Implant Availability

Missing or incomplete sets could cause delays in surgical procedure and often result in the need to open additional sets. In a survey of surgical staff, slow instrument turnaround time was identified as the biggest barrier to the desired case experience.[12]

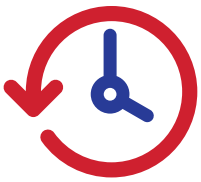
Enhance Implant Traceability for Patient Records

Accurately tracking every implant in a patient's permanent medical record is important to be able to facilitate outcomes measurement and safety surveillance. Sterile packed implants allow the products to be traced from manufacturer to hospital and ultimately to the patient.

Reduce Reprocessing Costs

Sterile packed implants may eliminate reprocessing cost of CAD169 per tray.[13] Additionally, while sterile packed implants do not remove the need to reprocess instruments, they may free up resources in a constrained environment by reducing the number of trays being processed.

Improve Efficiency



Single-Use, Sterile, Pre-Packaged surgical instruments and implants (SSPs) reduces OR turnover time with an average reduction of **12 minutes** to almost **20.9 minutes** per procedure.[17]

SSPs reduce set-up time by an average of **30%** across the spectrum of orthopedic procedures[17]

Case and tray redesigned from the ground up for efficiency and reducing reprocessing cost via:

- Core instruments consolidated into two sets with consideration for back table management
- Instrument sets arranged in order of procedural use
- Redesigned case with durable feet for back table stacking
- Updated lid locking mechanism
- Modular case and try design enables customization of case and tray layout

40% reduction in number of sets[14]

CAD338 savings on reprocessing costs per procedure*†[13,15]

*Based on a reduction of two trays per procedure.

Abrams reported a reprocessing cost per tray of $125.00 for Spine Surgeons in 2017. This cost was inflated and converted to Canadian Dollars using PPP, giving a final value of CAD169 - As of December 2024. † [13 15]

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Important Information: Prior to use, refer to the instructions for use supplied with the device(s) for indications, contraindications, side effects, warnings and precautions.

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