Evidence in focus

REDAPT◊ Revision Femoral Stem – stable fixation with minimal subsidence at 1 year
Revision total hip arthroplasties (rTHAs) are set to increase as younger, more active patients, outlive their implants\textsuperscript{1,2}

In a recent study, survivorship of primary THA was \textbf{86\%} at 15 years\textsuperscript{4}

“Despite the success of primary THA, failure and revision continue to pose a major challenge for orthopedists while persisting as a significant economic burden on the healthcare system.”\textsuperscript{3}
Compared to primary THA, rTHA is associated with:

- 52 minutes longer operative time
- 4 days increased length of stay
- 76% increased costs
- 6.8% more infections
- Less impact on patient-reported outcomes
Key reasons for rTHA failure

- Aseptic loosening
- Dislocation
- Infection
- Instability
- Other*

*Includes mechanical complications, bone fracture, component fracture, pain, wear.

Aseptic loosening is linked to subsidence in rTHA.
Subsidence rates with a frequently used nonmodular revision stem

- Subsidence ≥10mm has been shown to be a risk factor for re-revision of the femoral component.
- A recent systematic literature review and meta-analysis determined subsidence rates for the Wagner SL Revision™ stem (Zimmer Biomet, Warsaw, IN, USA):
  - Search performed on December 3, 2018
  - Search term: ‘Wagner SL’
  - Peer-reviewed manuscripts published from 2000
  - Mean follow-up ranged from 2.0 to 14.4 years
  - English language studies
- Wagner SL stem subsided >5mm in ~17% of patients and >10mm in ~8% of patients.

*See Appendix for studies included. †Number of studies, 8 (mean follow-up: 2.1–13.9 years).
‡Number of studies, 15 (mean follow-up: 2.0–14.4 years).
REDAPT◊ Revision Femoral Stem: 1-year results from a multicentre, retrospective study*

- Stable fixation with subsidence <5mm was achieved within 3 months in ~90% of patients\textsuperscript{10}
- 10/111 stems (9%) showed radiographic subsidence >5mm within 1 year\textsuperscript{10}
- No subsidence >10mm\textsuperscript{10}
- No revisions due to subsidence\textsuperscript{10}
- Mean subsidence was 1.44mm at 1 year\textsuperscript{10}
- All patients achieved stable fixation on last follow-up evaluation\textsuperscript{10}

\textsuperscript{*}111 rTHAs using REDAPT Revision Femoral Stems in 108 patients.\textsuperscript{10} One femoral stem revision due to periprosthetic joint infection.
REDAPT◊ Revision Femoral Stem may result in lower subsidence rates than Wagner SL Revision™ Stem

A multicentre, retrospective study of 111 rTHAs using REDAPT Revision Femoral Stems in 108 patients (follow-up: 1 year).

Number of studies, 8 (mean follow-up: 2.1–13.9 years).

Number of studies, 15 (mean follow-up: 2.0–14.4 years).

Percentage of rTHA with subsidence

REDAPT Revision Femoral Stem subsidence rate: results of a single study10*

Wagner SL Revision Stem subsidence rate (95% CI): results of a systematic literature review and meta-analysis9

0% 17% 8%

9%

>5mm subsidence† (n=497) >10mm subsidence‡ (n=1,022)

>5mm subsidence (n=111) >10mm subsidence (n=111)

* A multicentre, retrospective study of 111 rTHAs using REDAPT Revision Femoral Stems in 108 patients (follow-up: 1 year).
† Number of studies, 8 (mean follow-up: 2.1–13.9 years). ‡ Number of studies, 15 (mean follow-up: 2.0–14.4 years).
Designed to deliver reliable stability

- *In vitro and in vivo studies have demonstrated that ROCKTITE fixation renders REDAPT Revision Femoral Stem resistant to subsidence*¹¹,¹²
- 3° taper angle with ROCKTITE fixation¹³
- Proprietary multi-level spline pattern designed for subsidence control and axial and rotational stability¹³

**REDAPT Revision Femoral Stem patented ROCKTITE Flutes**
Summary

REDAPT® Revision Femoral Stem may result in lower rates of subsidence compared to Wagner SL Revision™ Stem. Approximately 90% of rTHA patients experienced subsidence <5mm with REDAPT Revision Femoral Stem; none experienced subsidence >10mm at 1 year and none required revision due to subsidence.¹⁰

By reducing subsidence rates, REDAPT Revision Femoral Stem may help to reduce the re-revision rate of rTHAs and the human and economic burden of rTHAs.
Click on the links to find out more about REDAPT® Revision Hip System

- **Is there a place for a straight nonmodular stems in femoral revision surgery?**
  
  Presented at: 2nd World Arthroplasty Congress; April 19–21, 2018; Rome, Italy.

- **Focus on REDAPT Revision Hip System**
  

- **Short-term outcomes of the REDAPT Revision Femoral Stem**
  

- **Focus on REDAPT Revision Hip System**
  
  Hip Revision Masterclass. May 9–10, 2019; Berlin, Germany.
## Appendix: systematic literature review and meta-analysis studies*

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<tr>
<th>Study</th>
<th>Subsidence</th>
<th>5mm subsidence</th>
<th>10mm subsidence</th>
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*Most studies did not specify the generation of Wagner SL used.
References


12. Khan MA, Osagie L, Raja S, Samra S, Boottram M, Haddad FS. Modular distally fixed stems provide a stable revision solution for extensive bone loss. Poster presented at: British Hip Society Annual Scientific Meeting; February 27–March 1, 2013; Bristol, UK.