

## Exactech Humeral Reconstruction Prosthesis Two-Year Patient Outcomes Demonstrate Significant Improvements in Pain and Range of Motion, No Cases of Humeral Loosening

**GAINESVILLE, Fla. (May 2, 2023)** – [Exactech](#), a developer and producer of innovative implants, instrumentation, and smart technologies for joint replacement surgery, announced that a new [study](#)<sup>1</sup> that shows positive two-year outcomes for the Equinoxe® [Humeral Reconstruction Prosthesis](#) (HRP), a solution for extensive proximal humerus bone loss, has just been published in the **Journal of Shoulder and Elbow Surgery**.

The retrospective study is the largest of its kind to evaluate clinical outcomes of shoulder arthroplasty patients with proximal humeral bone loss, which can be challenging to treat because the loss of humeral bone compromises implant fixation and joint stability<sup>2-8</sup>. The results of this new two-year minimum study using the HRP demonstrated significant improvements in range of motion (ROM), pain and outcome scores (PROMs), with no cases of humeral component loosening. This is a powerful result, since previous modular endoprostheses on the market experienced loosening of the humeral component<sup>8</sup>.

Released in 2015, the HRP was designed to be hyper-modular, with multiple sizes of proximal bodies, mid-shaft extension segments with soft tissue attachments, and distal humeral stems to improve muscle tensioning and soft tissue fixation. These multiple implant options allow surgeons to reconstruct the length of the humeral resection from 50 to 222mm. Anatomically shaped proximal bodies restore locations of rotator cuff muscle insertions and increase deltoid wrapping and moment arms to improve biomechanical advantage and stability<sup>9-12</sup>. A key HRP design feature is the distal stem collar, in 17 sizes, which connects to the outside of the humeral bone to supplement the humeral stem fixation and provide additional rotational stability<sup>13</sup>.

“The HRP is the only solution for my shoulder arthroplasty patients with extensive proximal humeral bone loss,” said Thomas Wright, MD (University of Florida), one of the study authors and a design surgeon. “We designed this system to overcome the humeral loosening challenges associated with allograft humeral composites and other shoulder endoprostheses. It is truly gratifying to see just how effectively the HRP design features function to alleviate pain and improve ROM and PROMs in this most challenging patient population. Most importantly, no patients in the study experienced any occurrence of humeral loosening.”

“For nearly 20 years, Exactech has focused our shoulder development efforts to help shoulder specialists with their most difficult cases by developing new products that truly solve unmet clinical needs,” said Chris Roche, Sr. Vice President, Extremities. “With the release of the HRP, we expanded

the indications of reverse shoulder arthroplasty to treat patients with proximal humeral bone loss and implemented several patented design features, with the goal of achieving humeral fixation and joint stability in the most challenging of cases. While previous bench testing demonstrated that these design features would improve humeral fixation, the results of this two-year minimum multi-center clinical study demonstrating zero occurrence of humeral loosening provides a definitive validation of our design goals.”

The Equinoxe Humeral Reconstruction Prosthesis is available worldwide. Please contact your local Exactech representative for support. For more information, visit [www.exac.com/tech-humeralsolutions](http://www.exac.com/tech-humeralsolutions).

### About Exactech

Exactech is a global medical device company that develops and markets orthopaedic implant devices, related surgical instruments and the Active Intelligence® platform of smart technologies to hospitals and physicians. Headquartered in Gainesville, Fla., Exactech markets its products in the United States, in addition to more than 30 markets in Europe, Latin America, Asia and the Pacific. Visit [www.exac.com](http://www.exac.com) for more information and connect with us on [LinkedIn](#), [Vumedi](#), [YouTube](#), [Instagram](#) and [Twitter](#). *With Exactech by your side, you've got EXACTLY what you need.*

*Thomas Wright, MD, is a paid surgeon consultant of Exactech.*

<sup>1</sup>Ramesh C. Srinivasan, MD, Jonathan O. Wright, MD, Kevin A. Hao, BS, Joseph J. King, MD, Bradley S. Schoch, MD, Kevin W. Farmer, MD, Aimee M. Struk, MEd, MBA, ATC, LAT, Christopher P. Roche, MSE, MBA, Thomas W. Wright, MD. Two-Year Outcomes of the Reverse Humeral Reconstruction Prosthesis. JSES online. February 2023.

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<sup>8</sup>Shukla DR, Lee J, Mangold D, Cofield RH, Sanchez-Sotelo J, Sperling JW. Reverse shoulder arthroplasty with proximal humeral replacement for the management of massive proximal humeral bone loss. J Shoulder Elbow Arthroplasty 2018;2:247154921877984.

<sup>9</sup>Mengers et al. The Use of Tumor Prostheses for Primary or Revision Reverse Total Shoulder Arthroplasty With Proximal Humeral Bone Loss. Journal of Shoulder and Elbow Arthroplasty. Volume 6: 1–9. 2022.

<sup>10</sup>Roche C et al. Impact Of Inferior Glenoid Tilt, Humeral Retroversion and Bone Grafting on Muscle Length and Deltoid Wrapping in Reverse Shoulder Arthroplasty. Bulletin of Hospital for Joint Diseases. Vol. 71(4):284-93. 2013.



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<sup>12</sup>Hamilton M et al. Effect of Reverse Shoulder Design Philosophy on Muscle Moment Arms. J Orthop Res. Apr;33(4):605-13. 2015.

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*\*In vitro (bench) test results may not necessarily be indicative of clinical performance.*

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