

Disclaimer

The FDA chose a specific outcome algorithm that met its need for a given medical product-outcome assessment. The use of a specific outcome algorithm in a Sentinel assessment should not be interpreted as an endorsement from FDA to use the algorithm for all safety assessments. Investigators should always consider the objective, study design, analytic approach, and data source of a given medical product safety assessment when choosing the outcome algorithm. The suitability of an outcome algorithm may change when applied to different scenarios. For additional information, please refer to the [Best Practices for Conducting and Reporting Pharmacoepidemiologic Safety Studies Using Electronic Healthcare Data](#) guidance document provided by the FDA.

Overview

Title	Hip Replacement Algorithm Defined in "Osteoporotic Fractures following Lupron Depot-PED Use: A Multiple Factor Matched Analysis"
Request ID	cder_mpl2p_wp011_nsdv_v01
Description	<p>This report lists International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) and Current Procedural Terminology, Fourth Edition (CPT-4) procedure codes, and algorithms used to define the secondary outcome hip replacement in this request.</p> <p>For additional information about the algorithm and how it was defined relative to the cohort and exposures of interest in the inferential analysis, see the analysis page here: https://www.sentinelinitiative.org/drugs/assessments/osteoporotic-fractures-following-lupron-depot-ped-use-multiple-factor-matched</p>
Outcome	Hip Replacement
Algorithm to Define Outcome	Evidence of an ICD-9-CM, ICD-10-PCS, or CPT-4 procedure code used to define hip replacement, in any care setting.
Query Period	January 1, 2000 - August 31, 2018
Request Send Date	April 22, 2019

Glossary

Care Setting - type of medical encounter or facility where the exposure, event, or condition code was recorded. Possible care settings include: Inpatient Hospital Stay (IP), Non-Acute Institutional Stay (IS), Emergency Department (ED), Ambulatory Visit (AV), and Other Ambulatory Visit (OA). For laboratory results, possible care settings include: Emergency department (E), Home (H), Inpatient (I), Outpatient (O), or Unknown or missing (U)

Outcome - outcome of interest (either primary or secondary)

Principal Diagnosis (PDX) - diagnosis or condition established to be chiefly responsible for admission of the patient to the hospital. 'P' = principal diagnosis, 'S' = secondary diagnosis, 'X' = unspecified diagnosis, '.' = blank. Along with the Care Setting values, forms the Caresetting/PDX parameter.

Query Period - period in which the modular program looks for exposures and outcomes of interest

Request Send Date - date the request was sent to Sentinel Data Partners

International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Hip Replacement in this Request

Codes	Description	Code Type	Code Category
81.51	Total hip replacement	ICD-9-CM	Procedure
81.52	Partial hip replacement	ICD-9-CM	Procedure
27125	Hemiarthroplasty, hip, partial (eg, femoral stem prosthesis, bipolar arthroplasty)	CPT-4	Procedure
27130	Arthroplasty, acetabular and proximal femoral prosthetic replacement (total hip arthroplasty), with or without autograft or allograft	CPT-4	Procedure
27236	Open treatment of femoral fracture, proximal end, neck, internal fixation or prosthetic replacement	CPT-4	Procedure
0SR9019	Replacement of Right Hip Joint with Metal Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SR901A	Replacement of Right Hip Joint with Metal Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SR901Z	Replacement of Right Hip Joint with Metal Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SR9029	Replacement of Right Hip Joint with Metal on Polyethylene Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SR902A	Replacement of Right Hip Joint with Metal on Polyethylene Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SR902Z	Replacement of Right Hip Joint with Metal on Polyethylene Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SR9039	Replacement of Right Hip Joint with Ceramic Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SR903A	Replacement of Right Hip Joint with Ceramic Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SR903Z	Replacement of Right Hip Joint with Ceramic Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SR9049	Replacement of Right Hip Joint with Ceramic on Polyethylene Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SR904A	Replacement of Right Hip Joint with Ceramic on Polyethylene Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SR904Z	Replacement of Right Hip Joint with Ceramic on Polyethylene Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SR9069	Replacement of Right Hip Joint with Oxidized Zirconium on Polyethylene Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SR906A	Replacement of Right Hip Joint with Oxidized Zirconium on Polyethylene Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SR906Z	Replacement of Right Hip Joint with Oxidized Zirconium on Polyethylene Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SR907Z	Replacement of Right Hip Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure

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Codes	Description	Code Type	Code Category
0SR90J9	Replacement of Right Hip Joint with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SR90JA	Replacement of Right Hip Joint with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SR90JZ	Replacement of Right Hip Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SR90KZ	Replacement of Right Hip Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRA009	Replacement of Right Hip Joint, Acetabular Surface with Polyethylene Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRA00A	Replacement of Right Hip Joint, Acetabular Surface with Polyethylene Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRA00Z	Replacement of Right Hip Joint, Acetabular Surface with Polyethylene Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRA019	Replacement of Right Hip Joint, Acetabular Surface with Metal Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRA01A	Replacement of Right Hip Joint, Acetabular Surface with Metal Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRA01Z	Replacement of Right Hip Joint, Acetabular Surface with Metal Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRA039	Replacement of Right Hip Joint, Acetabular Surface with Ceramic Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRA03A	Replacement of Right Hip Joint, Acetabular Surface with Ceramic Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRA03Z	Replacement of Right Hip Joint, Acetabular Surface with Ceramic Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRA07Z	Replacement of Right Hip Joint, Acetabular Surface with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRA0J9	Replacement of Right Hip Joint, Acetabular Surface with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRA0JA	Replacement of Right Hip Joint, Acetabular Surface with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRA0JZ	Replacement of Right Hip Joint, Acetabular Surface with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRA0KZ	Replacement of Right Hip Joint, Acetabular Surface with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRB019	Replacement of Left Hip Joint with Metal Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRB01A	Replacement of Left Hip Joint with Metal Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRB01Z	Replacement of Left Hip Joint with Metal Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure

International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), and Current Procedural Terminology, Fourth Edition (CPT-4) Procedure Codes Used to Define Hip Replacement in this Request

Codes	Description	Code Type	Code Category
OSRB029	Replacement of Left Hip Joint with Metal on Polyethylene Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRB02A	Replacement of Left Hip Joint with Metal on Polyethylene Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRB02Z	Replacement of Left Hip Joint with Metal on Polyethylene Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRB039	Replacement of Left Hip Joint with Ceramic Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRB03A	Replacement of Left Hip Joint with Ceramic Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRB03Z	Replacement of Left Hip Joint with Ceramic Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRB049	Replacement of Left Hip Joint with Ceramic on Polyethylene Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRB04A	Replacement of Left Hip Joint with Ceramic on Polyethylene Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRB04Z	Replacement of Left Hip Joint with Ceramic on Polyethylene Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRB069	Replacement of Left Hip Joint with Oxidized Zirconium on Polyethylene Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRB06A	Replacement of Left Hip Joint with Oxidized Zirconium on Polyethylene Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRB06Z	Replacement of Left Hip Joint with Oxidized Zirconium on Polyethylene Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRB07Z	Replacement of Left Hip Joint with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRB0J9	Replacement of Left Hip Joint with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRB0JA	Replacement of Left Hip Joint with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRB0JZ	Replacement of Left Hip Joint with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRB0KZ	Replacement of Left Hip Joint with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRE009	Replacement of Left Hip Joint, Acetabular Surface with Polyethylene Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRE00A	Replacement of Left Hip Joint, Acetabular Surface with Polyethylene Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRE00Z	Replacement of Left Hip Joint, Acetabular Surface with Polyethylene Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRE019	Replacement of Left Hip Joint, Acetabular Surface with Metal Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure

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Codes	Description	Code Type	Code Category
OSRE01A	Replacement of Left Hip Joint, Acetabular Surface with Metal Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRE01Z	Replacement of Left Hip Joint, Acetabular Surface with Metal Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRE039	Replacement of Left Hip Joint, Acetabular Surface with Ceramic Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRE03A	Replacement of Left Hip Joint, Acetabular Surface with Ceramic Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRE03Z	Replacement of Left Hip Joint, Acetabular Surface with Ceramic Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRE07Z	Replacement of Left Hip Joint, Acetabular Surface with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRE0J9	Replacement of Left Hip Joint, Acetabular Surface with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRE0JA	Replacement of Left Hip Joint, Acetabular Surface with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRE0JZ	Replacement of Left Hip Joint, Acetabular Surface with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRE0KZ	Replacement of Left Hip Joint, Acetabular Surface with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRR019	Replacement of Right Hip Joint, Femoral Surface with Metal Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRR01A	Replacement of Right Hip Joint, Femoral Surface with Metal Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRR01Z	Replacement of Right Hip Joint, Femoral Surface with Metal Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRR039	Replacement of Right Hip Joint, Femoral Surface with Ceramic Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRR03A	Replacement of Right Hip Joint, Femoral Surface with Ceramic Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRR03Z	Replacement of Right Hip Joint, Femoral Surface with Ceramic Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
OSRR07Z	Replacement of Right Hip Joint, Femoral Surface with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
OSRR0J9	Replacement of Right Hip Joint, Femoral Surface with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
OSRR0JA	Replacement of Right Hip Joint, Femoral Surface with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
OSRR0JZ	Replacement of Right Hip Joint, Femoral Surface with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure

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Codes	Description	Code Type	Code Category
0SRR0KZ	Replacement of Right Hip Joint, Femoral Surface with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRS019	Replacement of Left Hip Joint, Femoral Surface with Metal Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRS01A	Replacement of Left Hip Joint, Femoral Surface with Metal Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRS01Z	Replacement of Left Hip Joint, Femoral Surface with Metal Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRS039	Replacement of Left Hip Joint, Femoral Surface with Ceramic Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRS03A	Replacement of Left Hip Joint, Femoral Surface with Ceramic Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRS03Z	Replacement of Left Hip Joint, Femoral Surface with Ceramic Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRS07Z	Replacement of Left Hip Joint, Femoral Surface with Autologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
0SRS0J9	Replacement of Left Hip Joint, Femoral Surface with Synthetic Substitute, Cemented, Open Approach	ICD-10-PCS	Procedure
0SRS0JA	Replacement of Left Hip Joint, Femoral Surface with Synthetic Substitute, Uncemented, Open Approach	ICD-10-PCS	Procedure
0SRS0JZ	Replacement of Left Hip Joint, Femoral Surface with Synthetic Substitute, Open Approach	ICD-10-PCS	Procedure
0SRS0KZ	Replacement of Left Hip Joint, Femoral Surface with Nonautologous Tissue Substitute, Open Approach	ICD-10-PCS	Procedure
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