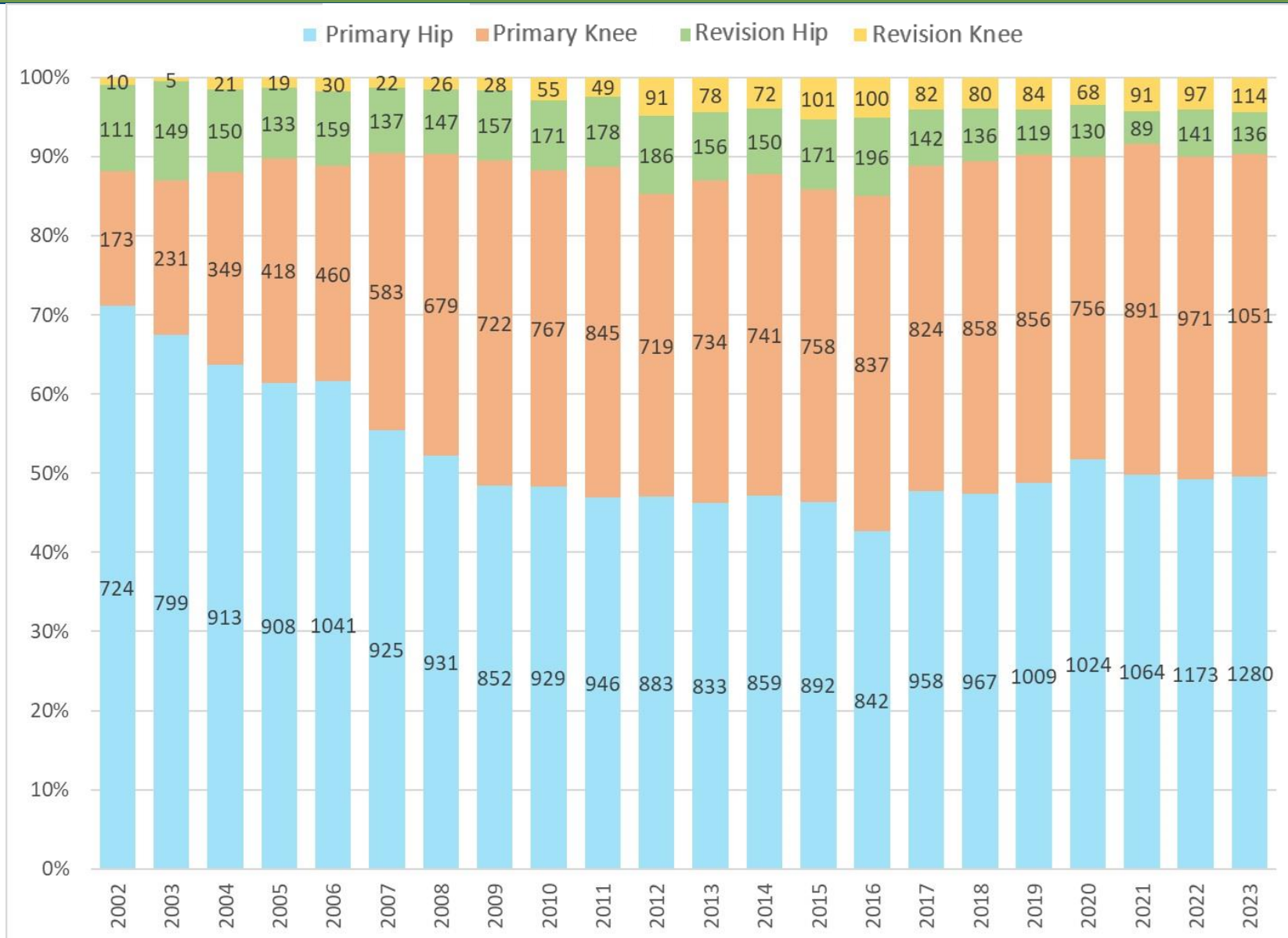




VALDOLTRA HIP ARTHROPLASTY REGISTRY REPORT 2002-2023

Vesna Levašič, PhD, Mateja Blas, MSc, Asst. prof. Simon Kovač,
PhD, Prof. Dr. Eva Podovšovnik, Prof. Dr. Ingrid Milošev, PhD

Entries to Valdoltra Arthroplasty Registry 2002-2023



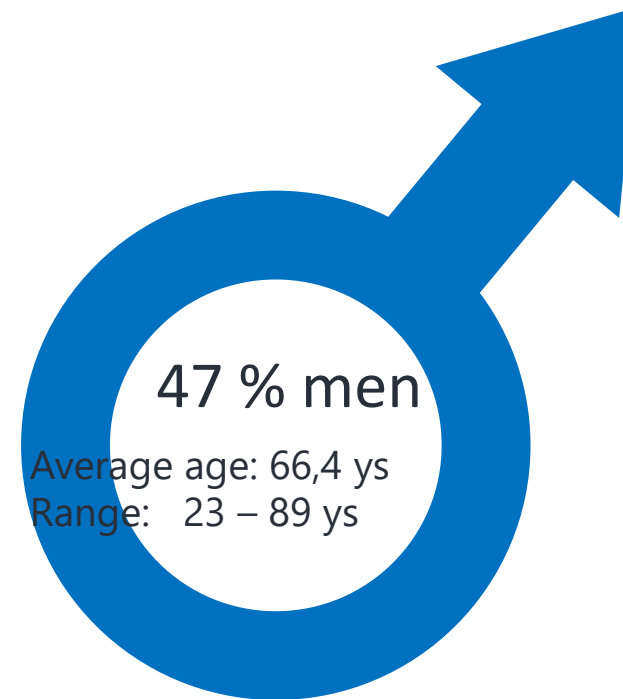
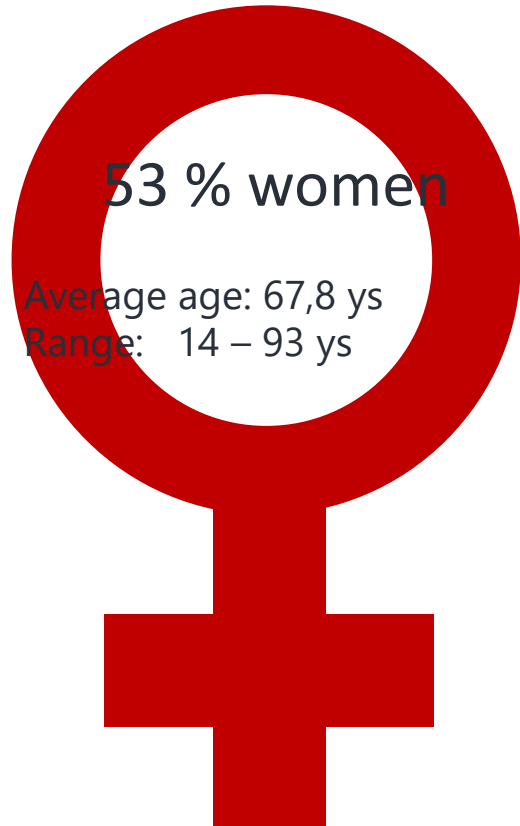
01

PRIMARY TOTAL HIP ARTHROPLASTY 2023

Analysis

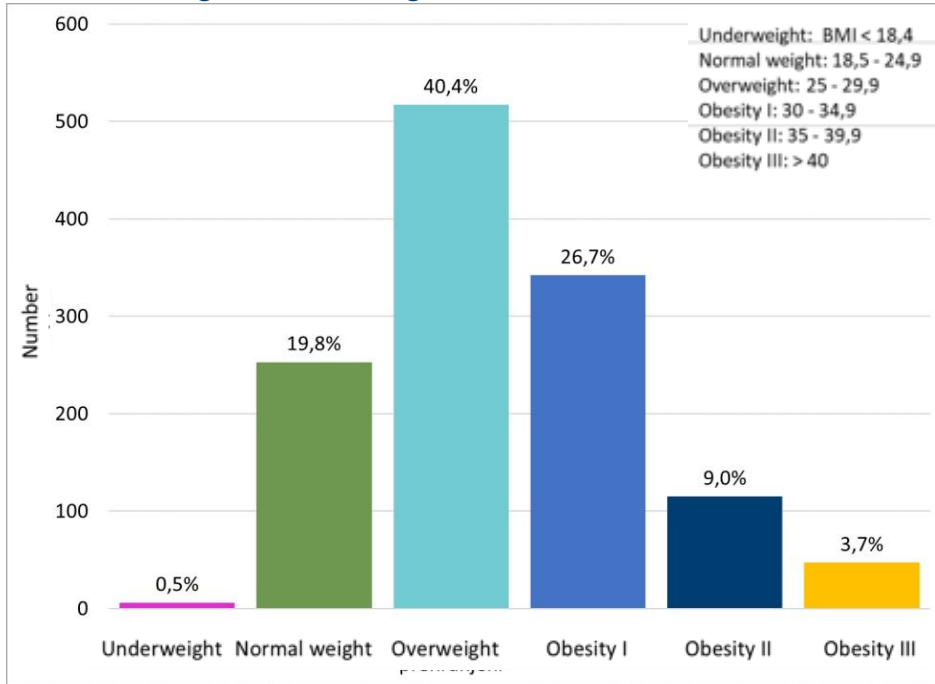
Primary total hip arthroplasty 2023

1280 Primary total hip arthroplasties at 1227 patients (53 patients operated on both sides, 31 of them on the same day)

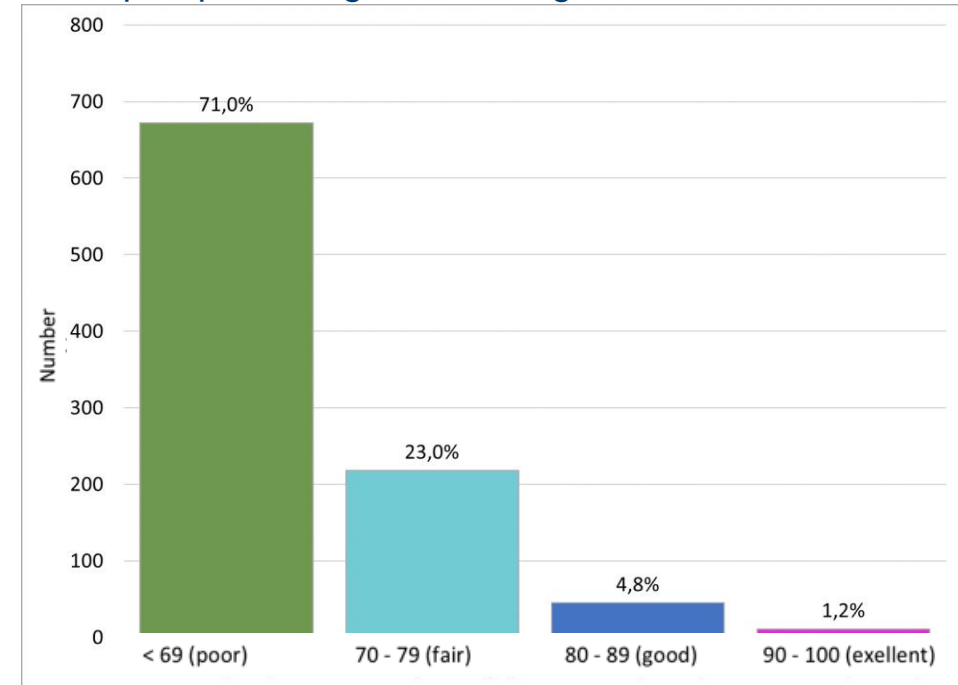


Primarne totalne artroplastike kolka 2023

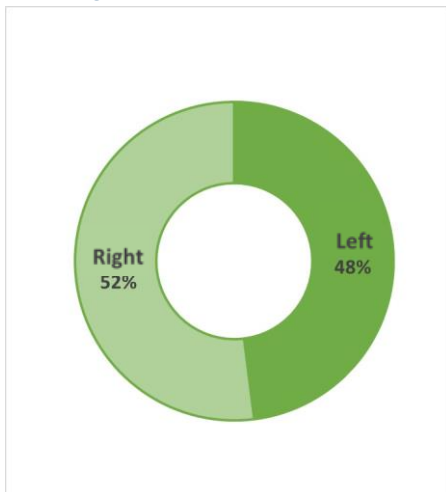
BMI, average: 29.2, range: 15 - 56



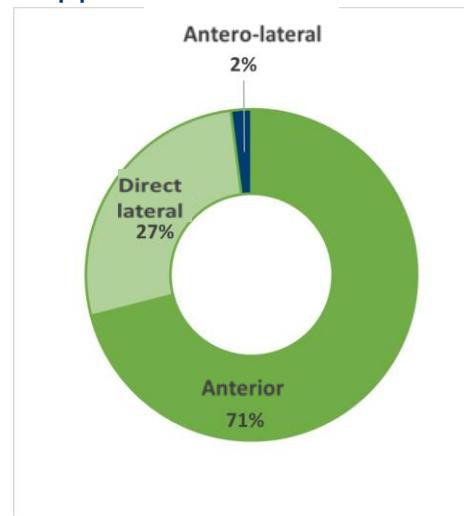
HHS preop., average: 56.8, range: 6 – 94; n=946



Surgery side

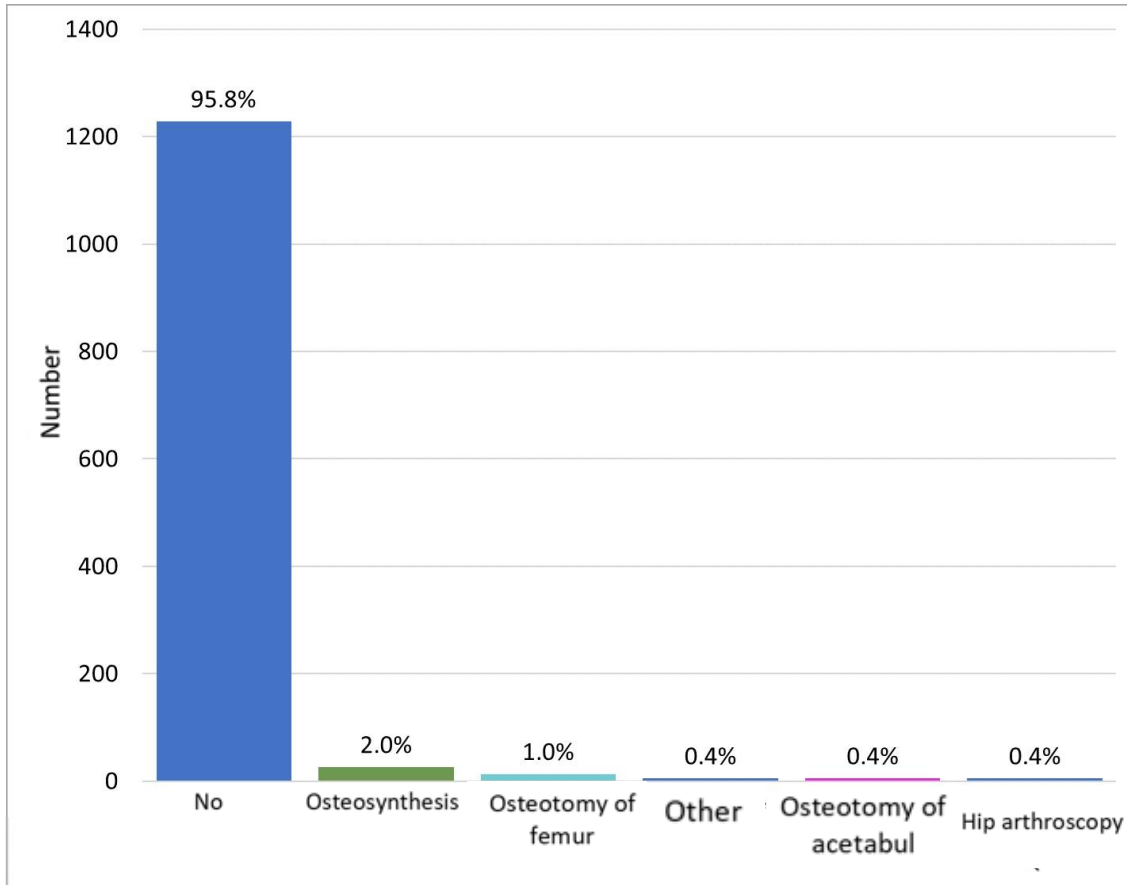


Approach

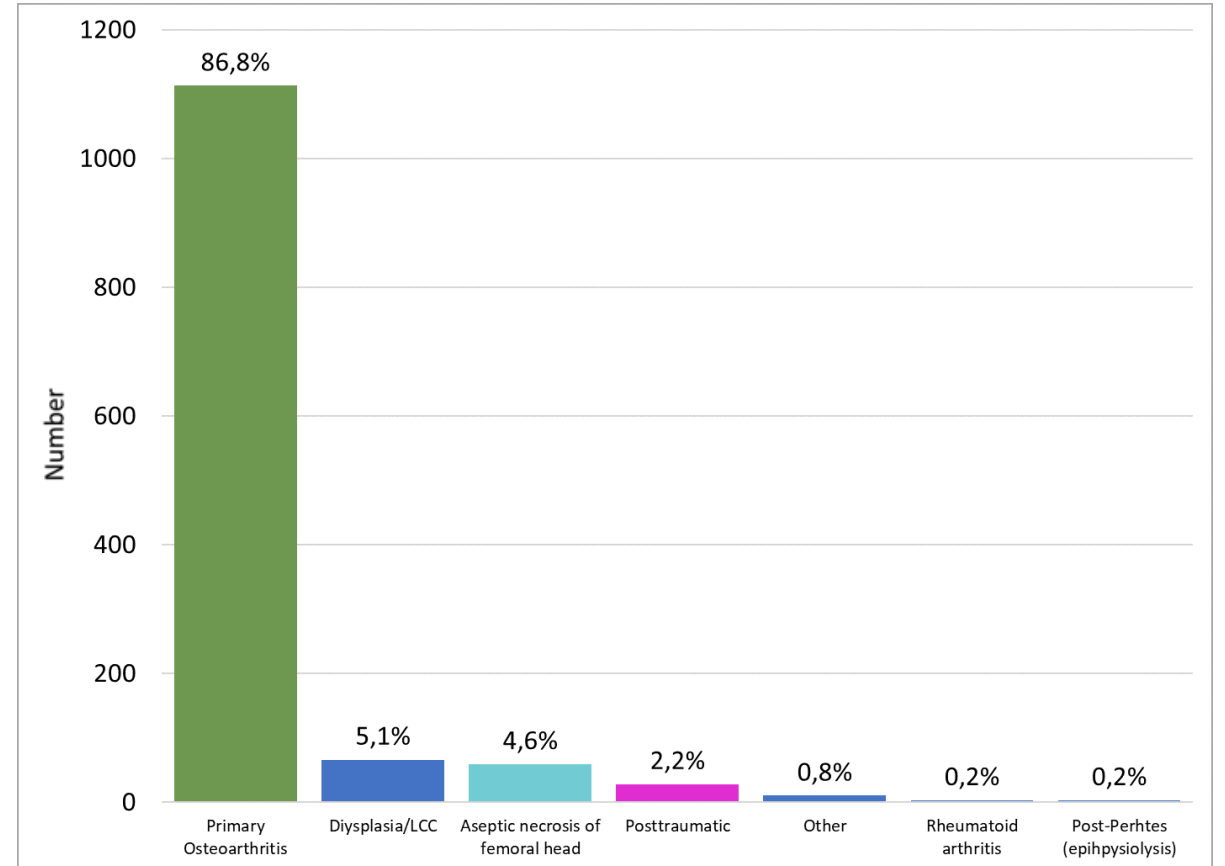


Primary total hip arthroplasty 2023

Previous procedures

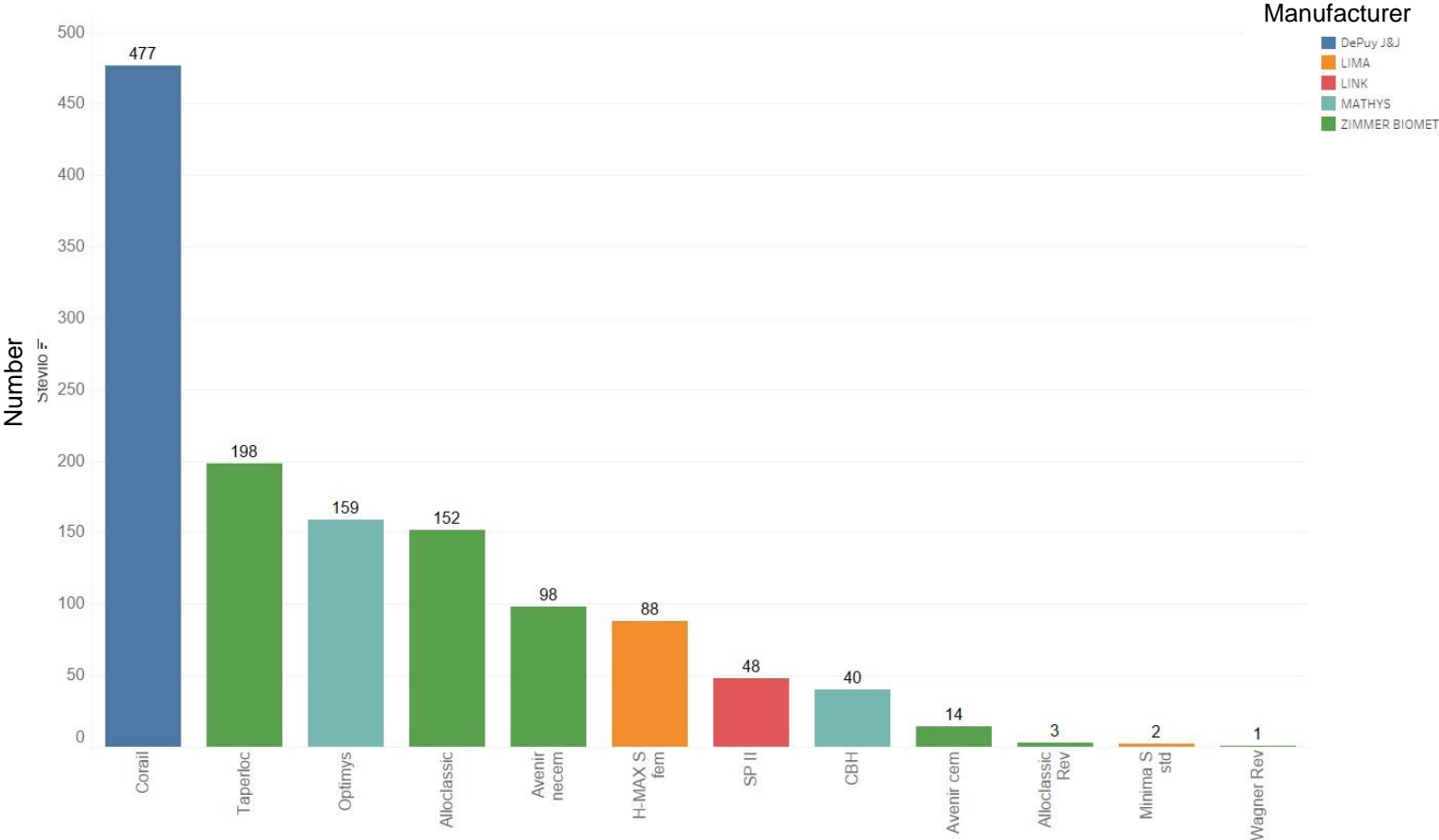


Diagnosis

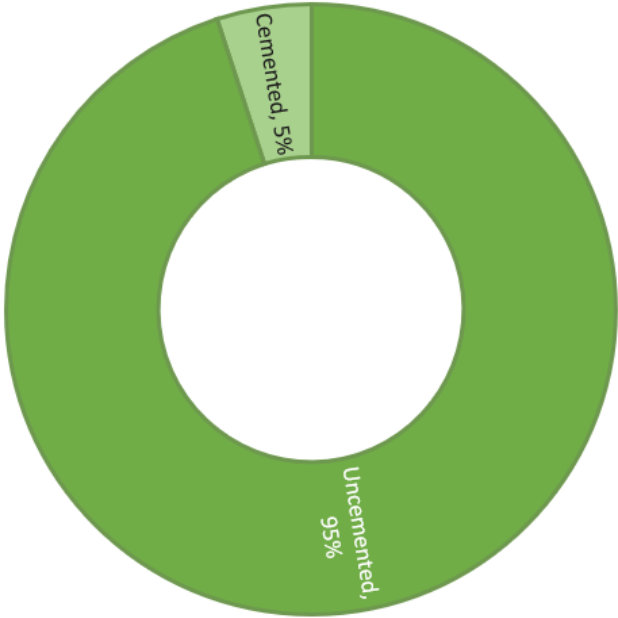


Primary total hip arthroplasty 2023

FEMORAL STEM, n=1280

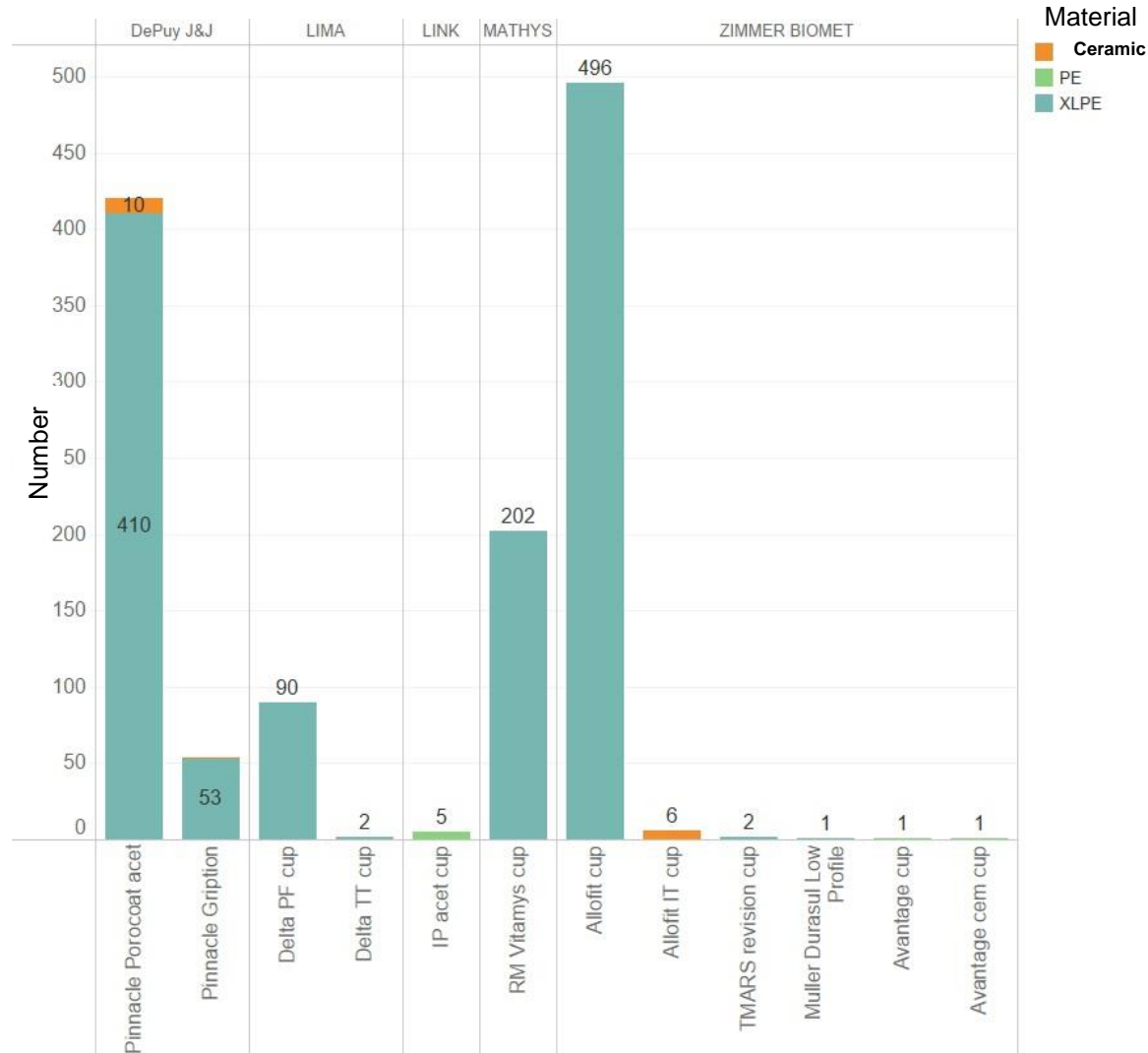


Stem fixation

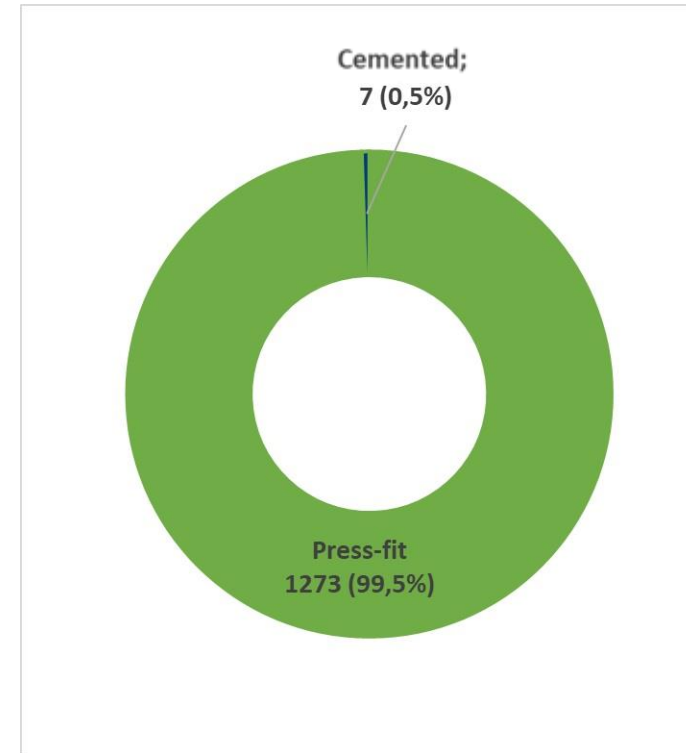


Primary total hip arthroplasty 2023

ACETABULAR PART, n=1280

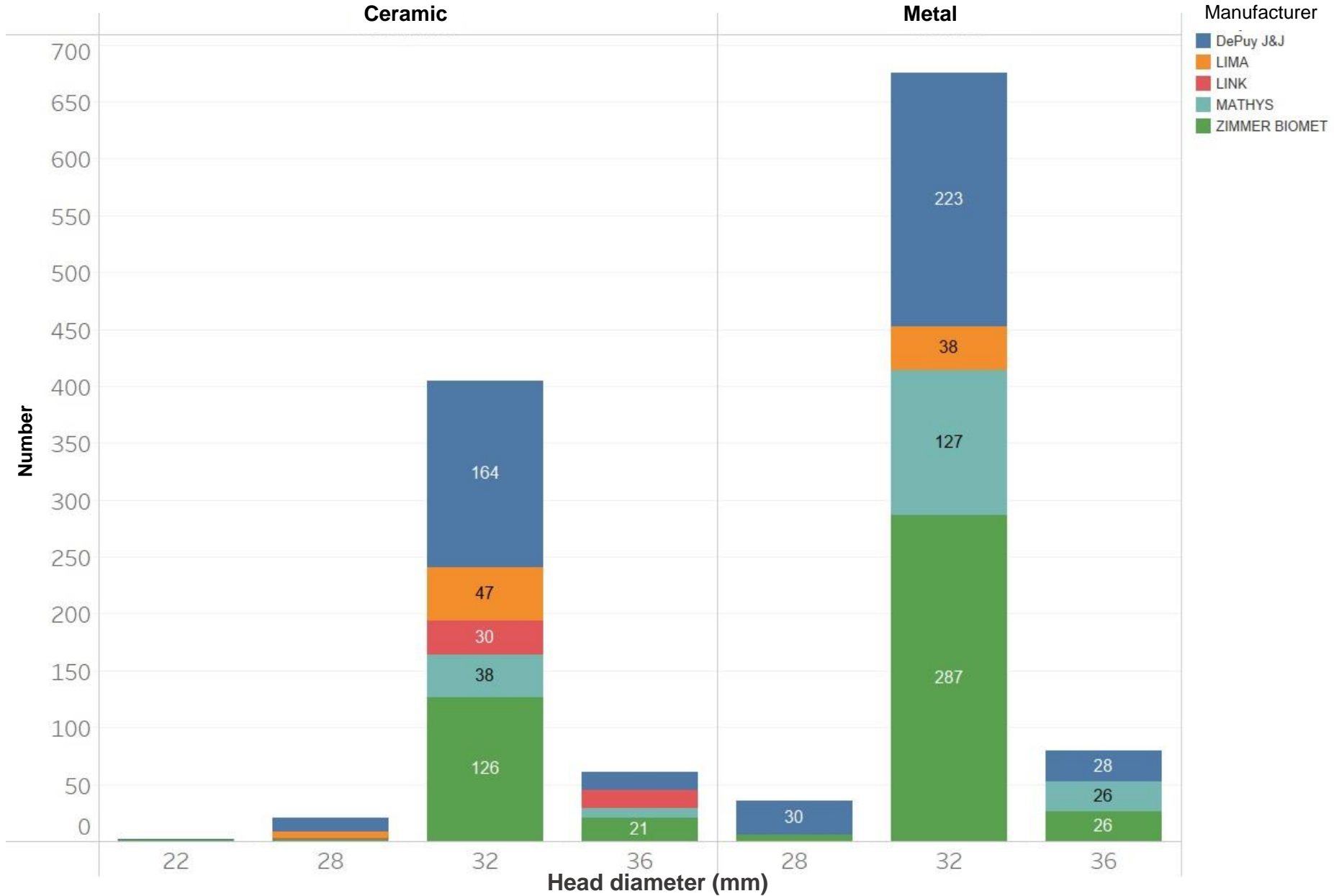


Cup fixation



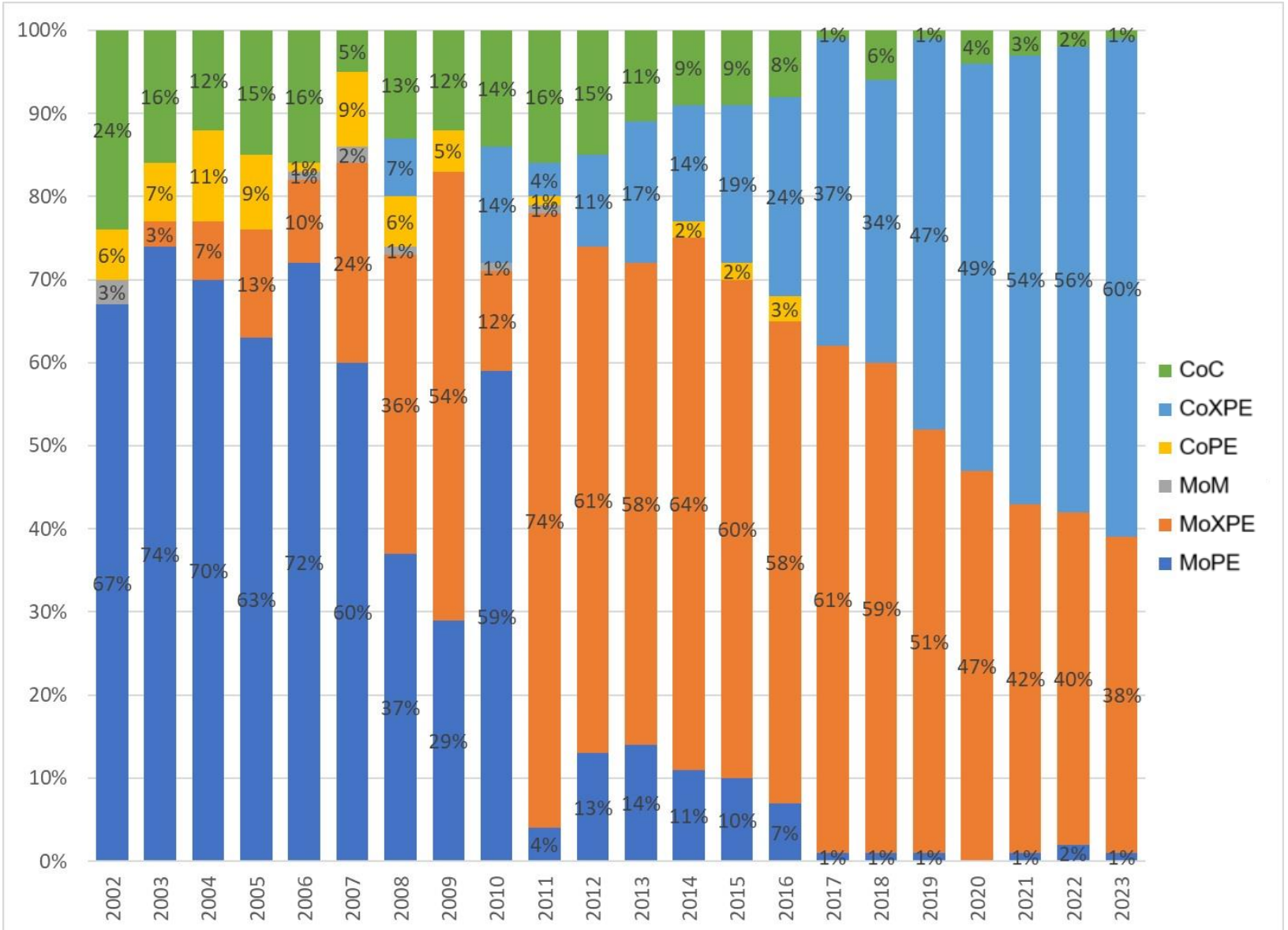
Primary total hip arthroplasty 2023

FEMORAL HEADS, n=1280



Primary total hip arthroplasty 2023

Bearing surface head/acetabular part, 2002-23

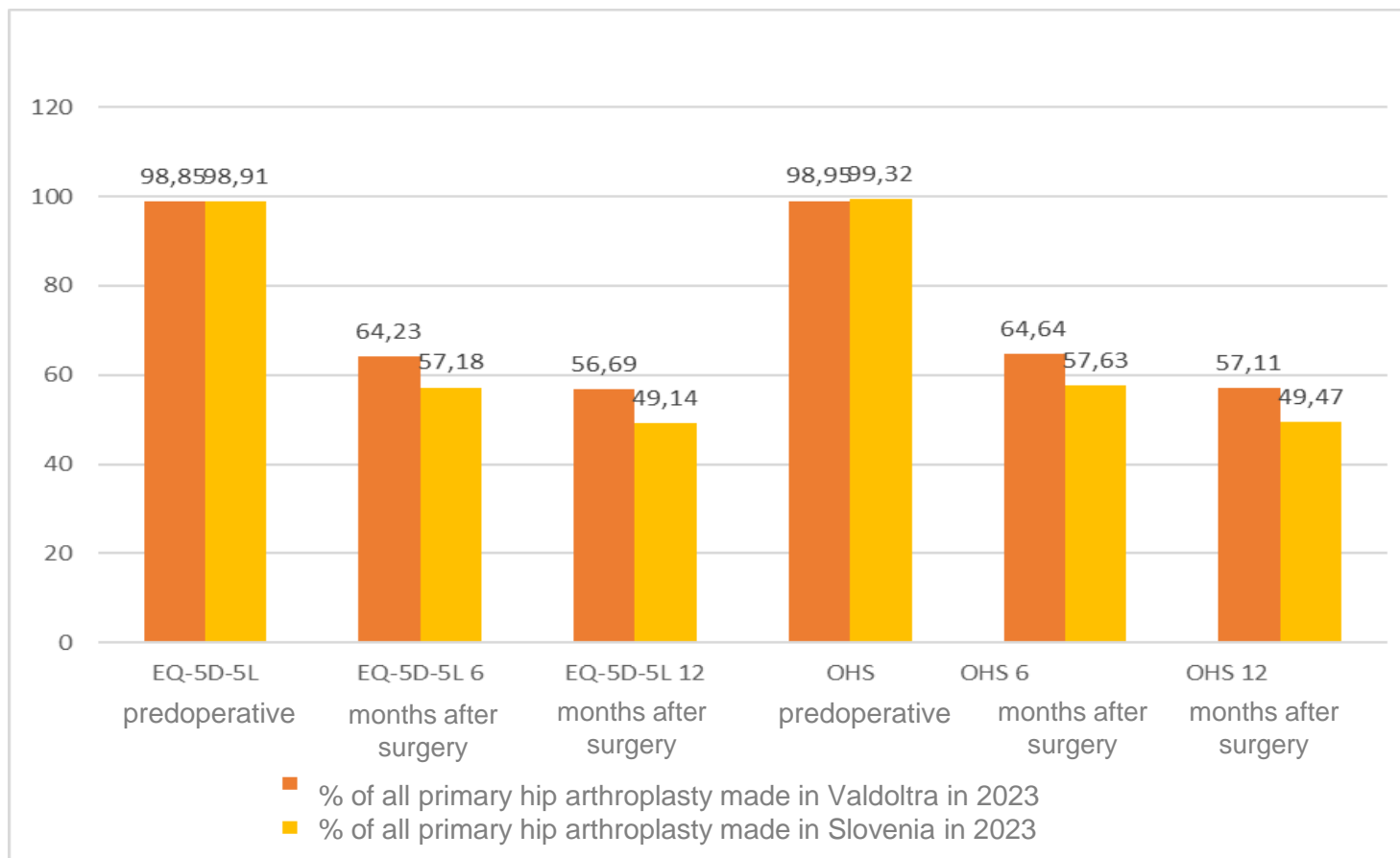


02

PROMs 2023

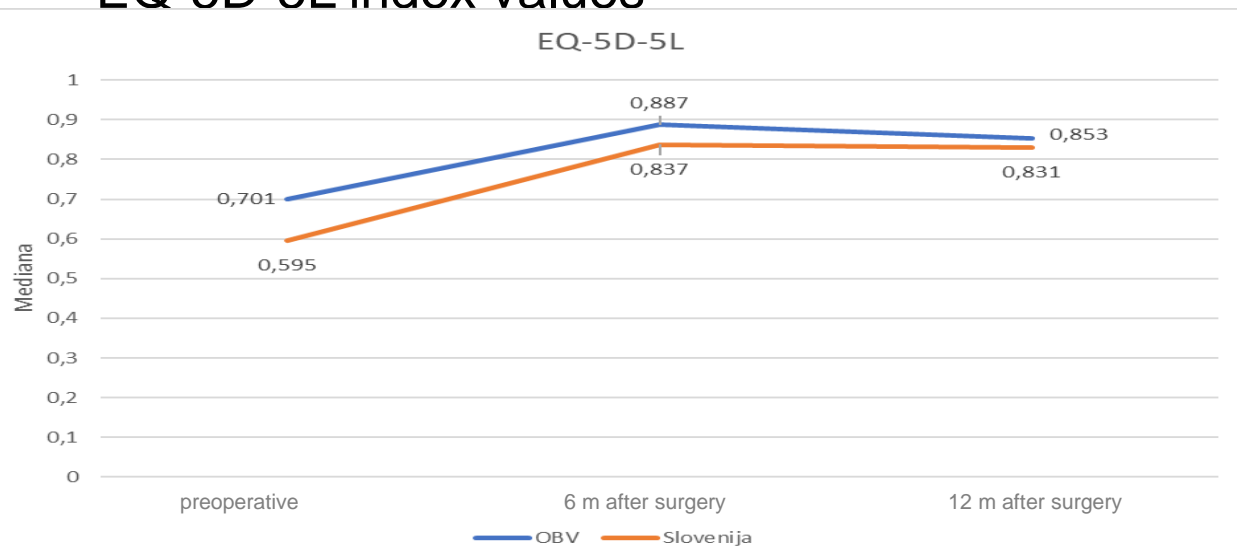
Primary total hip
arthroplasty ,
primary osteoarthritis

% of retrieved EQ-5D-5L and OHS questionnaires

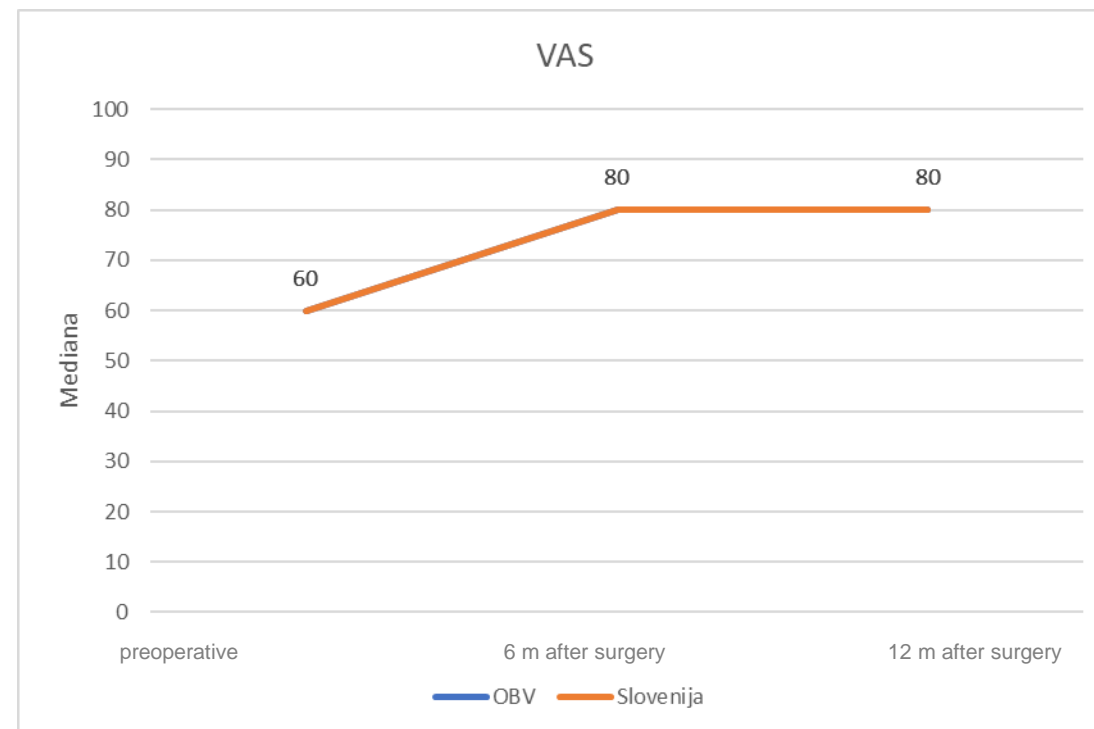


Primarne totalne artroplastike kolka 2023 - OA

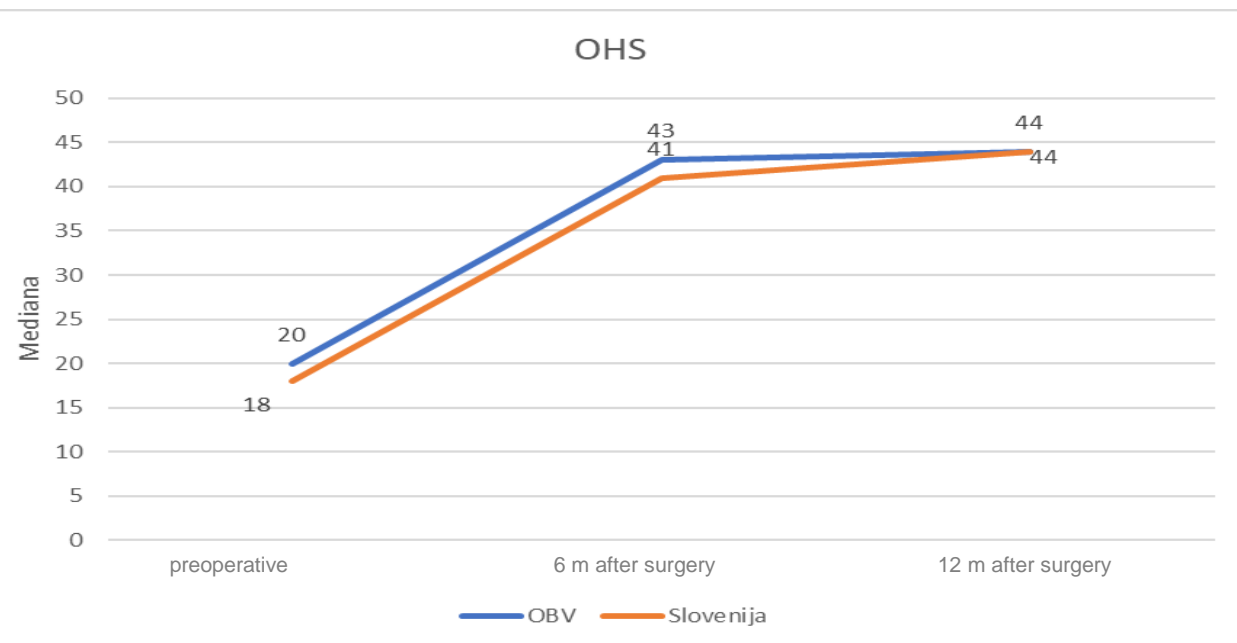
EQ-5D-5L index values



VAS index values



OHS index values



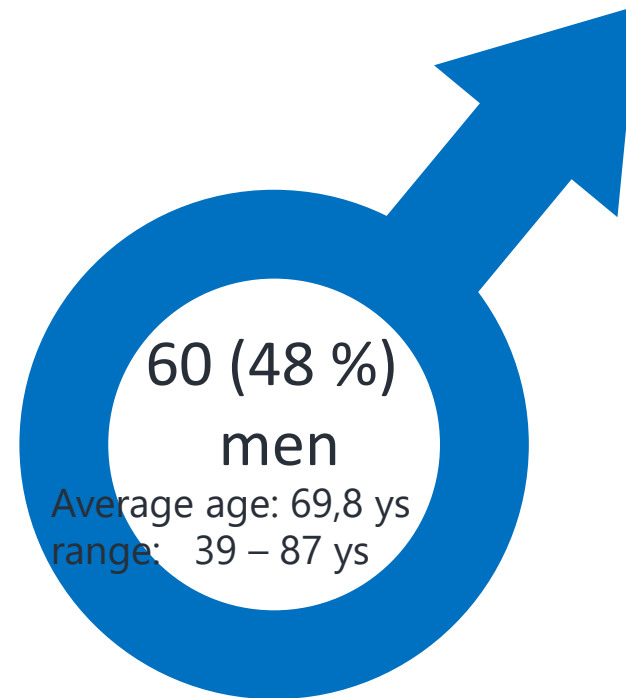
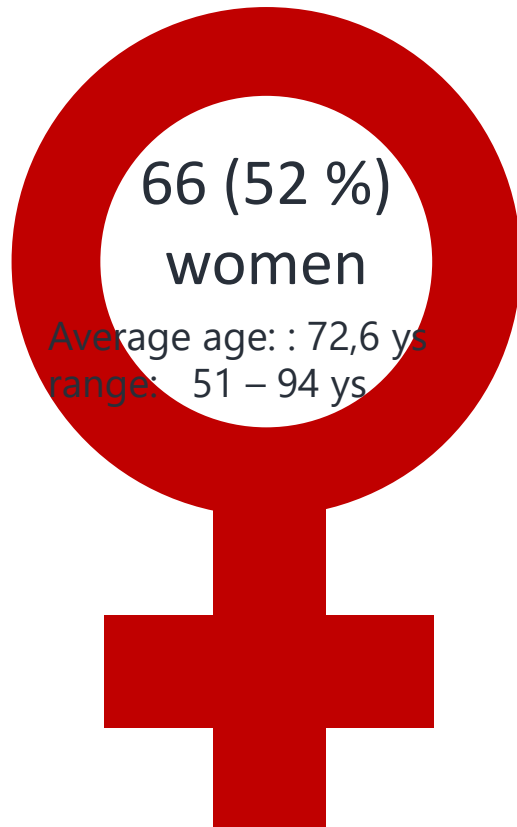
03

REVISIONS OF HIP ARTHROPLASTY 2023

Analysis

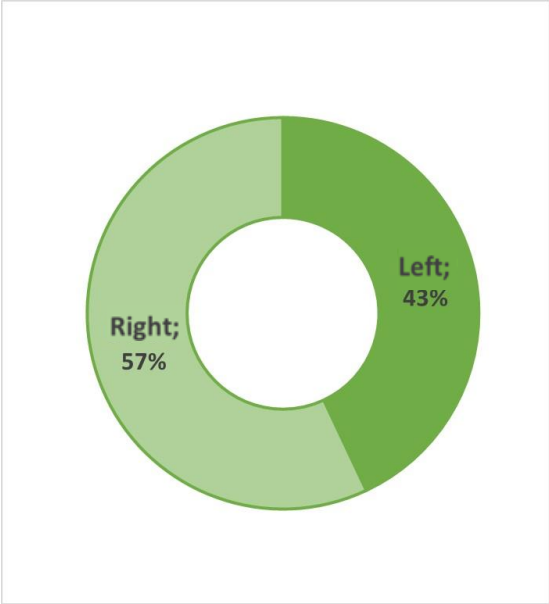
136 revision surgeries

126 patients (10 patients operated 2 times this year)

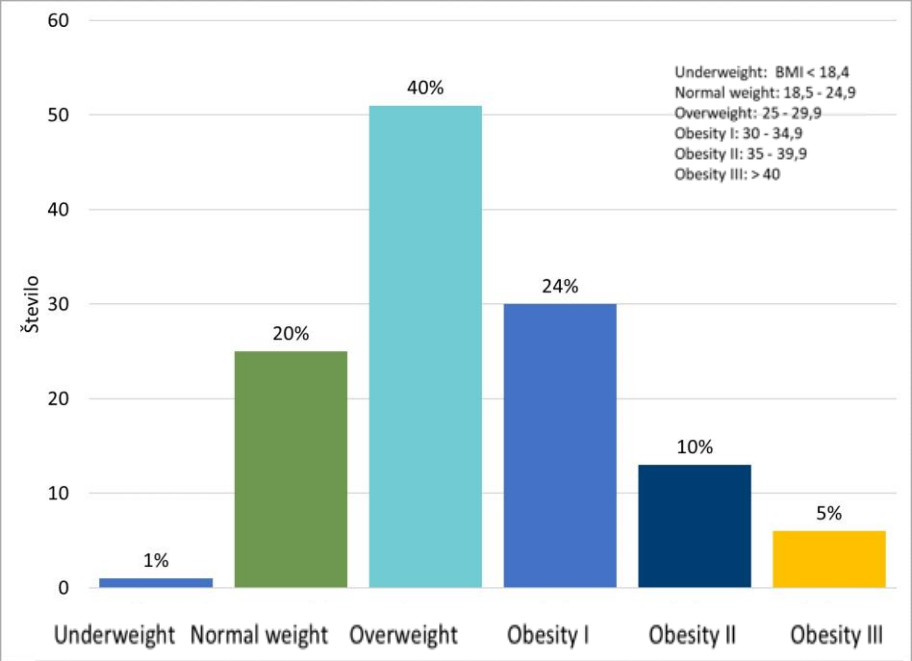


Revision hip arthroplasty 2023, št.=136

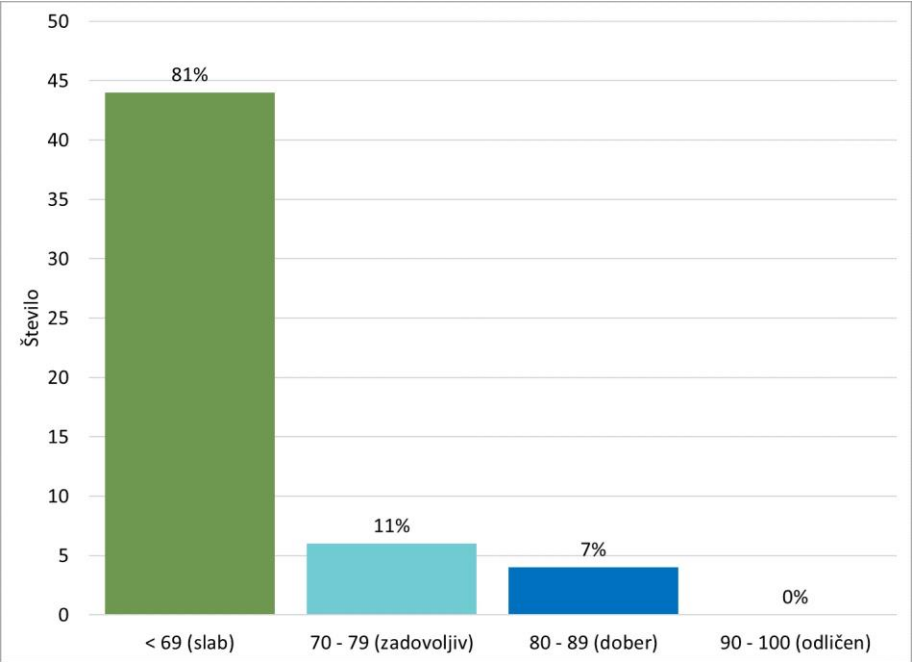
Surgery side



BMI, average: 29.6, range: 18 - 48

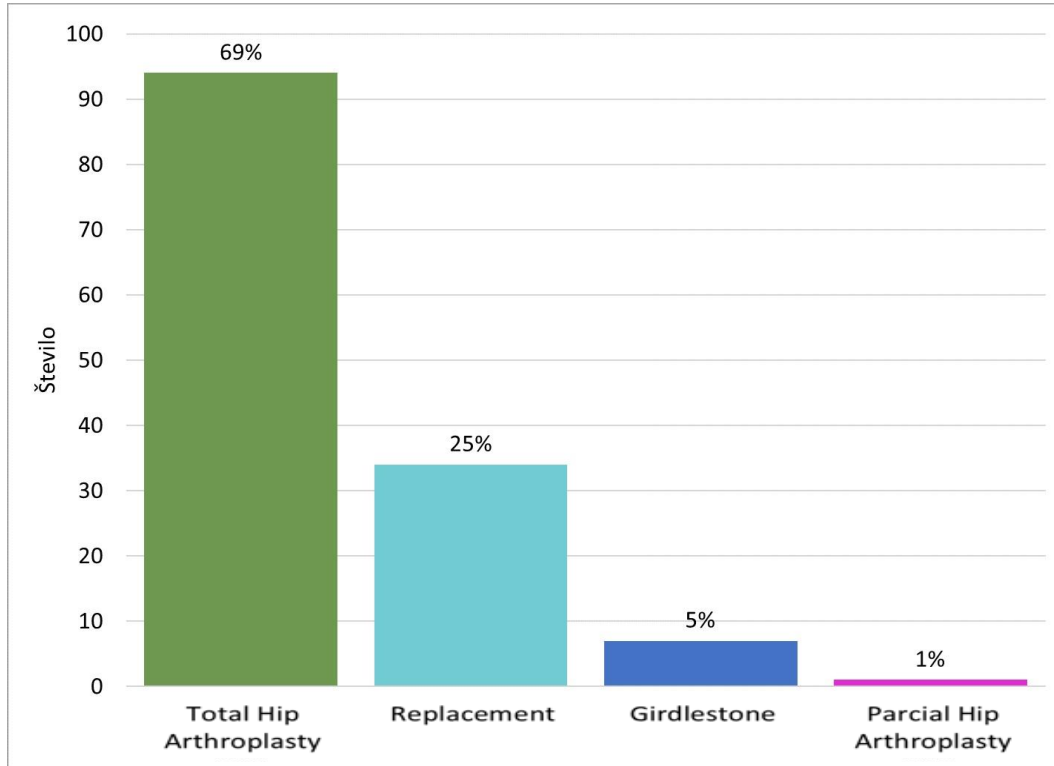


HHS preoperative*, average: 49.8, range: 0 - 84; n=54

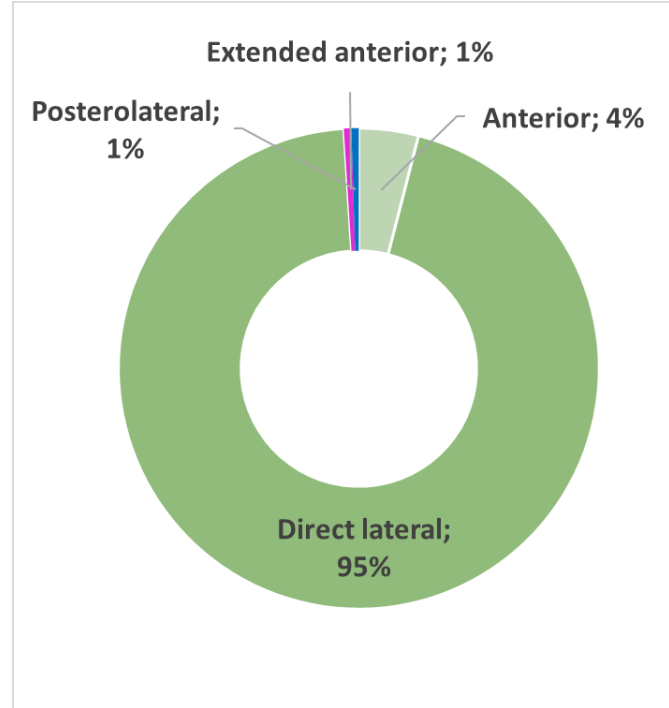


Revision hip arthroplasty 2023, n=136

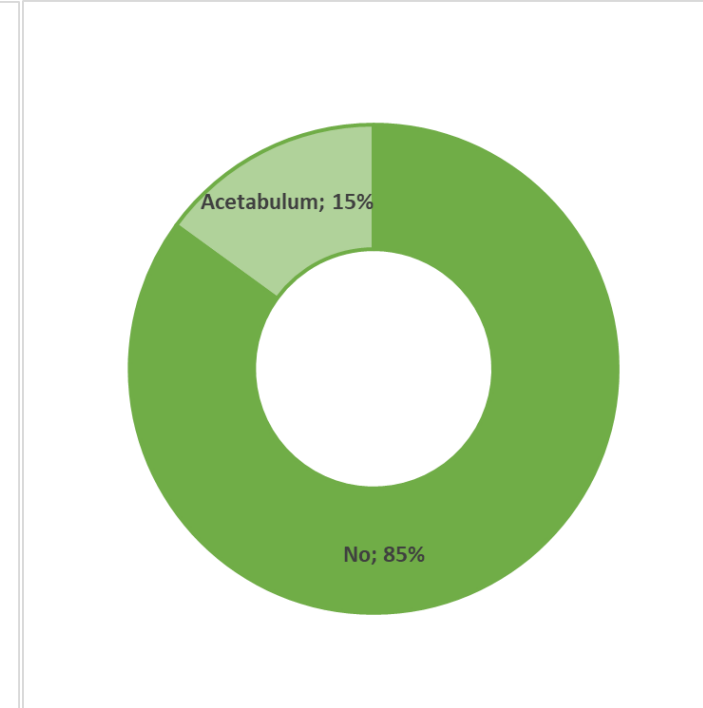
Previous procedures



Approach

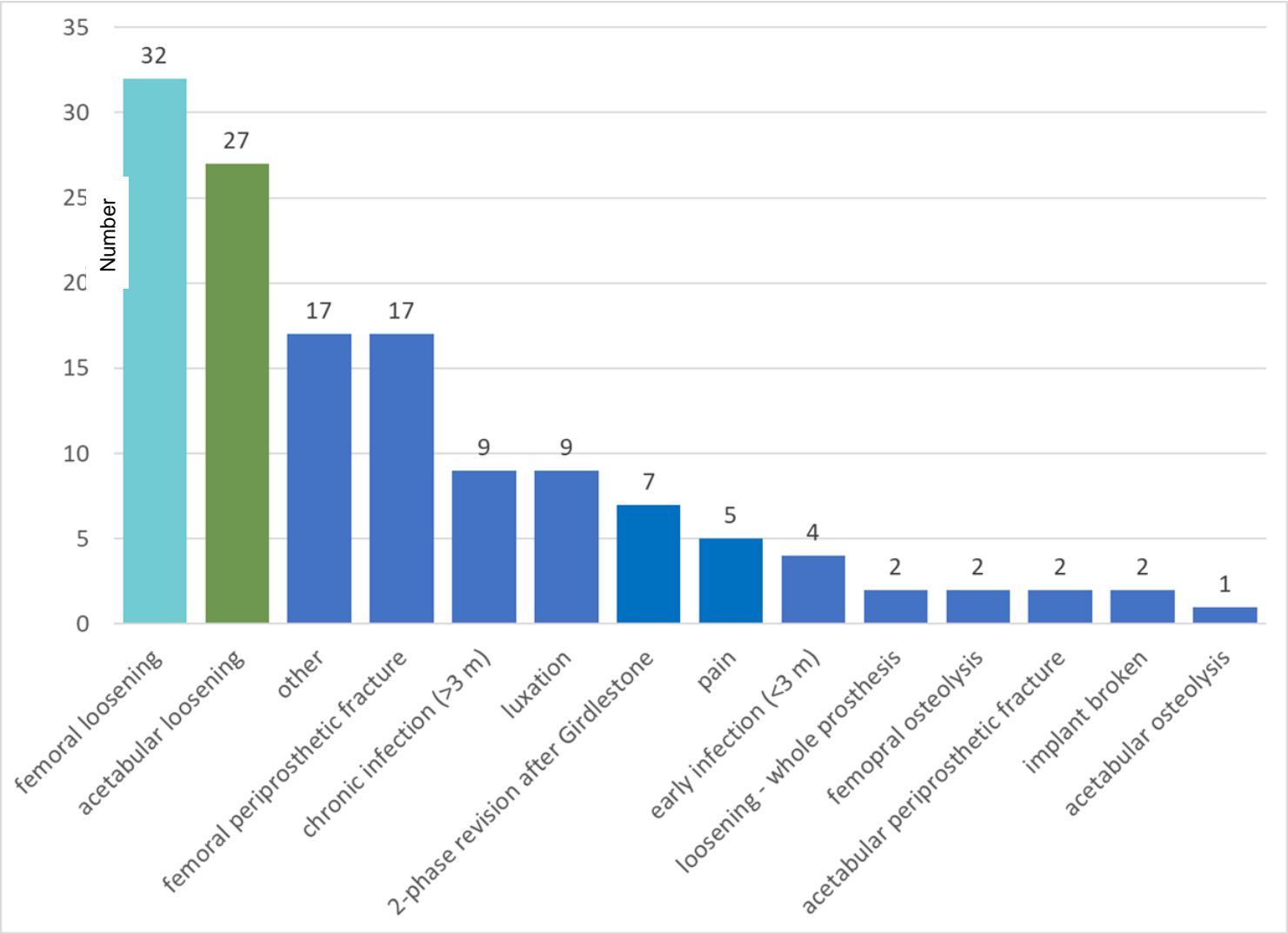


Bone transplant



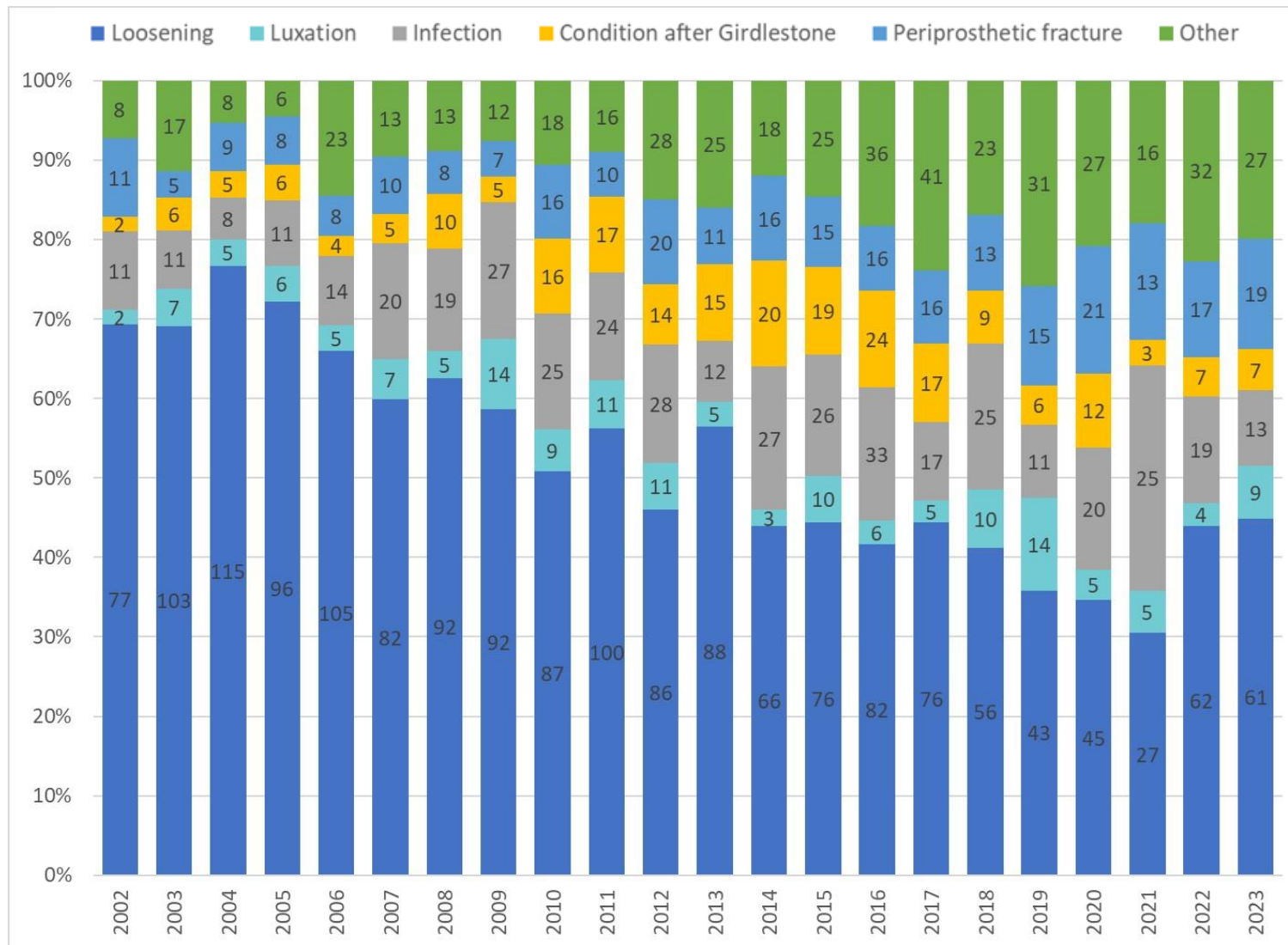
Revision hip arthroplasty 2023, n= 136

Reasons for revision



Revizije artroplastik kolka 2023

Reasons for revision 2002-2023



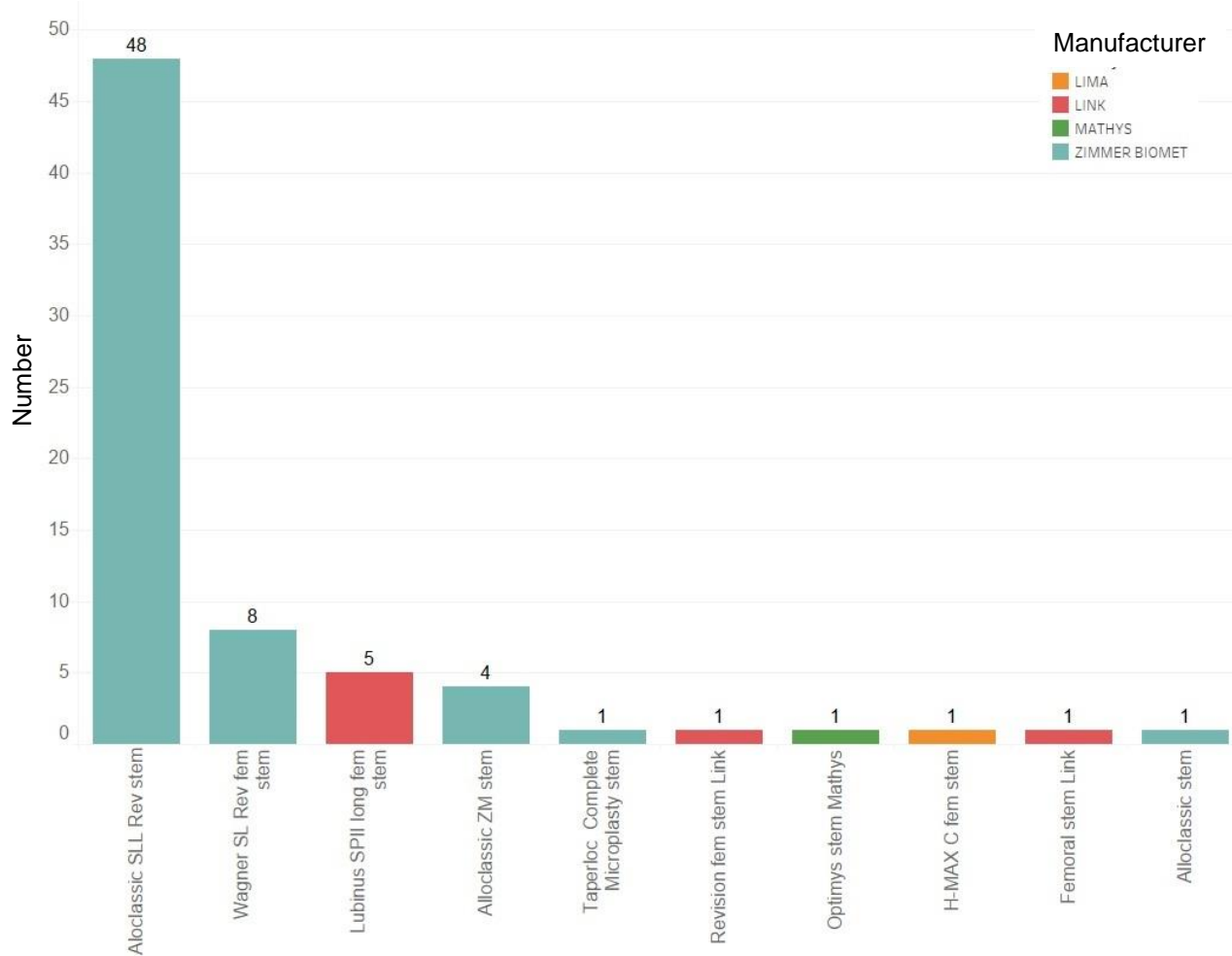
Revision hip arthroplasty 2023

Reasons for revision Hips vs. Knees 2002-2023

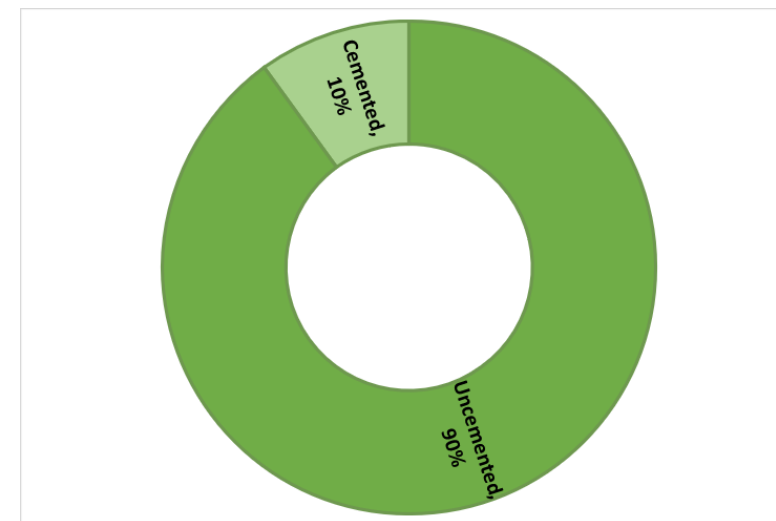
Period 2002 - 2023	Knees (%)	Hips (%)
Loosening	23,7	44,9
Periprosthetic fracture	4,4	14,0
Other	7,0	10,3
Deep infection	27,2	9,6
Luxation	1,8	6,6
2-stage revision (after Girdlestone)	13,2	5,1
Pain	4,4	3,7
Ostolysis	0,0	2,2
Implant broken	0,0	1,5
Metallosis	0,0	1,5
Instability, malposition, poor mobility	16,7	0,7
OA of other compartment	1,8	0,0

Revision hip arthroplasty 2023

Implanted femoral stems, n=71

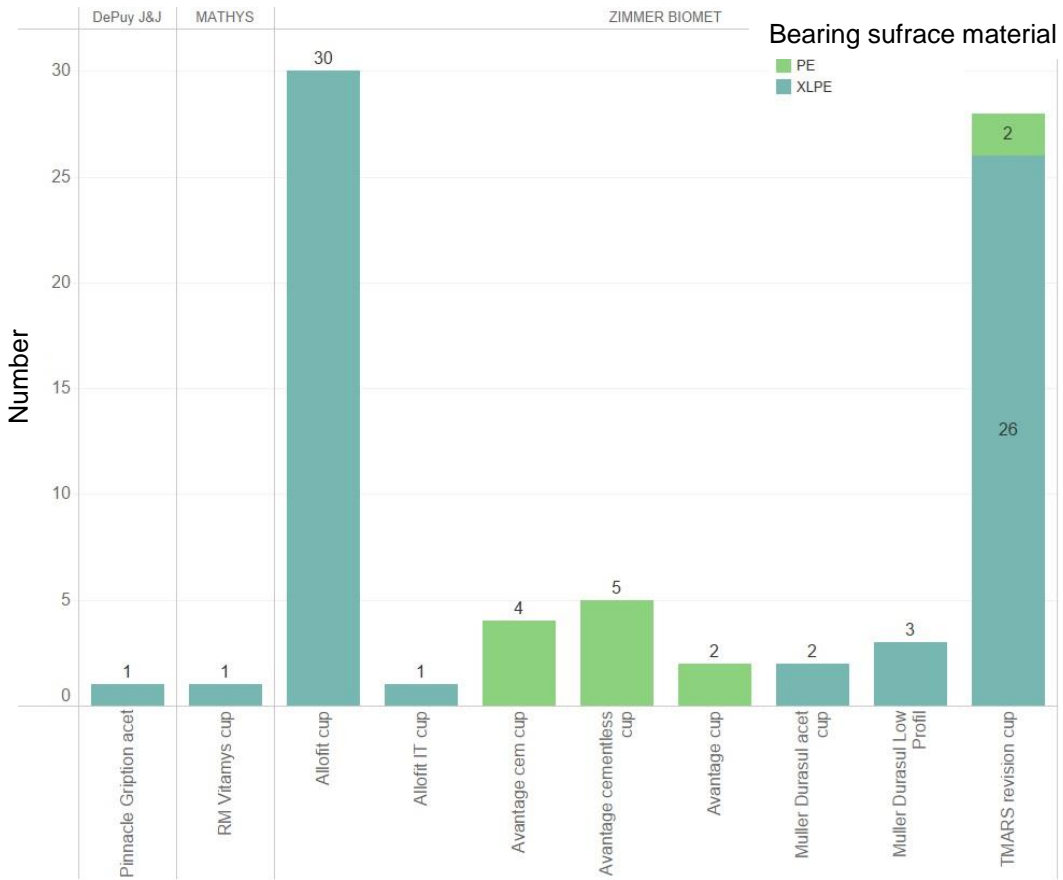


Revision stems fixation

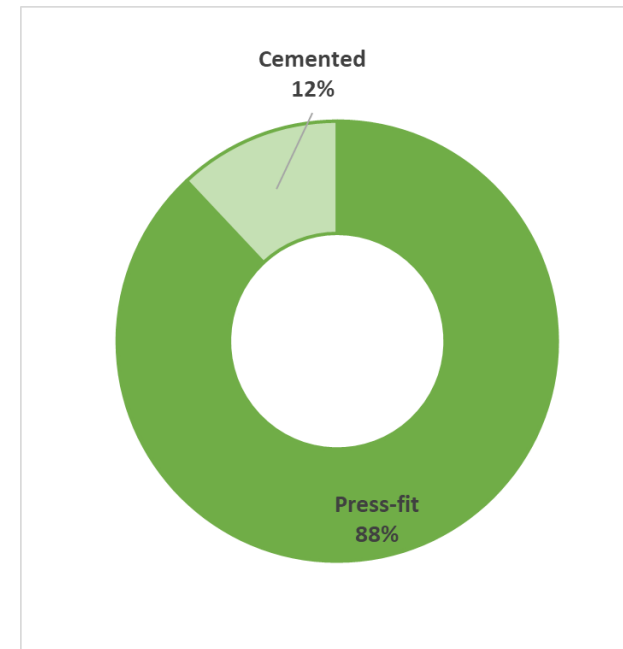


Revision hip arthroplasty 2023

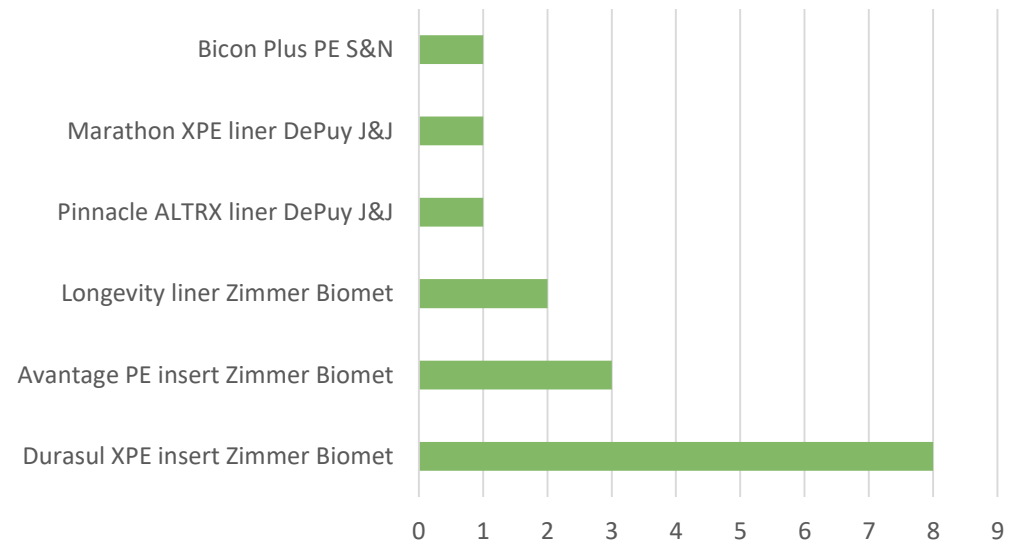
Implanted acetabular parts, n=77



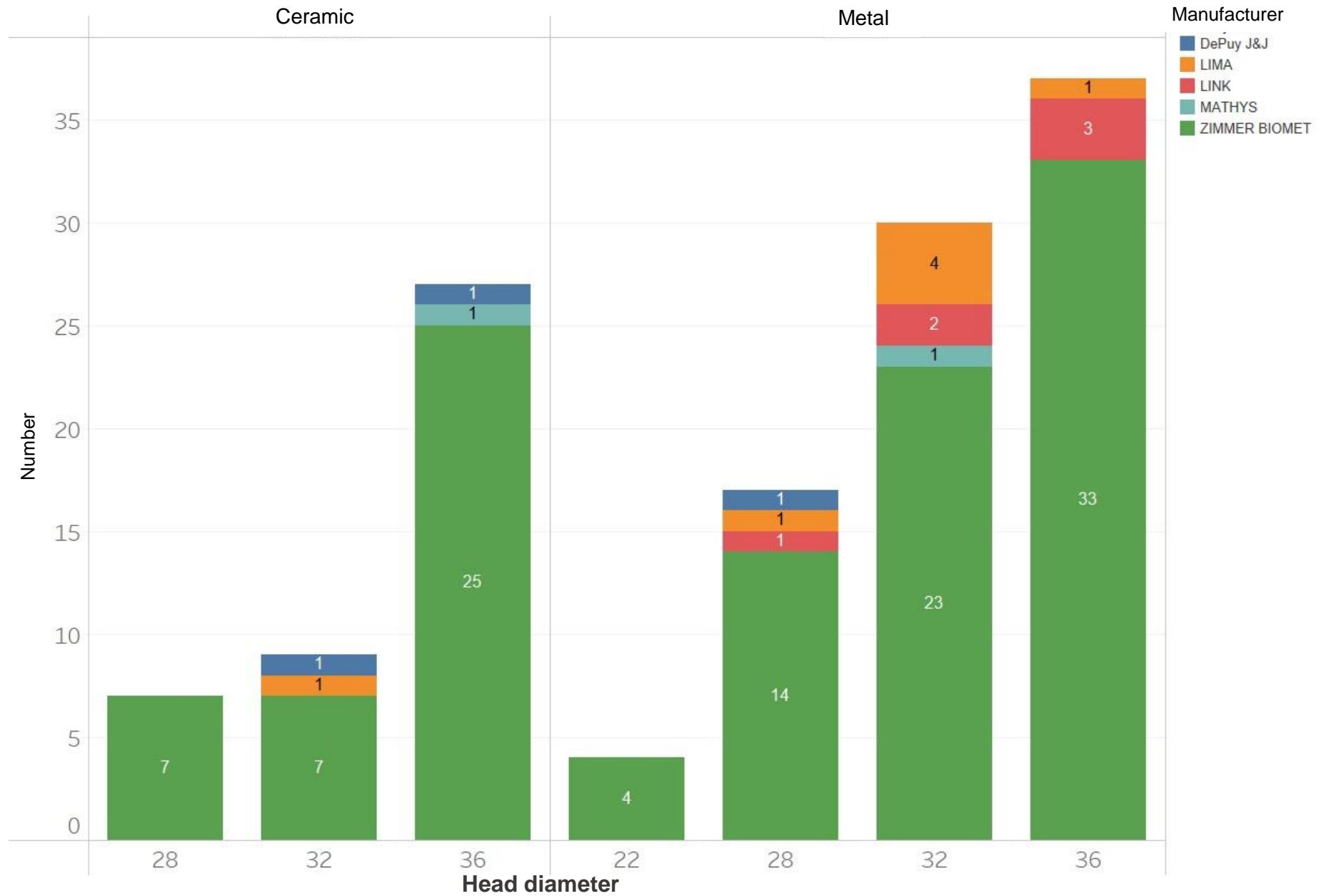
Fixation



Implanted acetabular inserts only, n=26



Revision hip arthroplasty 2023, N of heads=131



Revision burden 2002-2023

	N° of revisions in OBV x 100 / (N° of primaries + N° of hip revisions in this perion)	N° of revisions for infection in OBV x 100 / (N° of primaries + N° of hip revisions in this period)
2002-2011	12,09	1,21

Leto	N° of revisions in OBV x 100 / (N° of primaries + N° of hip revisions in this year)	N° of revisions for infection in OBV x 100 / (N° of primaries + N° of hip revisions in this year)
2012	13,74	2,15
2013	13,06	1,01
2014	12,00	2,08
2015	12,98	1,98
2016	15,21	2,60
2017	10,09	0,91
2018	9,97	1,72
2019	8,42	0,98
2020	8,15	0,87
2021	5,61	1,64
2022	7,15	0,84
2023	7,62	0,63
AVERAGE OBV 12-23	10,34	1,45

04

SURVIVAL ANALYSIS 2002-2023

Revision hip arthroplasty 2023

Survival table – cumulative percent of revision of femoral stems in the period 2002-23, new – used in the last 5 years

Femoral stem*	N° of primaries	N° of first revisions	Age	% of women	Time from primary implantation			
			Median (IQR)		1 yr	5 yr	10 yr	15 yr
Alloclassic - ZIMMER BIOMET	6641	101	67 (60-74)	54	0.64 (0.47 - 0.86)	1.12 (0.89 - 1.41)	1.7 (1.36 - 2.11)	2.77 (2.11 - 3.63)
Avenir cless - ZIMMER BIOMET	333	5	67 (60-74)	67	1.51 (0.63 - 3.58)			
CBH cless - MATHYS	701	24	69 (61-75)	53	0.57 (0.22 - 1.52)	2.38 (1.37 - 4.11)	4.92 (3.15 - 7.64)	
Corail - DePuy J&J	3554	28	65 (58-72)	50	0.29 (0.15 - 0.53)	0.65 (0.4 - 1.05)	1.2 (0.71 - 2)	2.38 (1.47 - 3.87)
H MAX cless - LIMA	584	5	71 (63-77)	58	0.68 (0.26 - 1.81)	1.07 (0.37 - 3.09)	1.11 (0.42 - 2.89)	
SP II - LINK	868	6	79 (75-83)	79	0.24 (0.06 - 0.97)	0.54 (0.2 - 1.45)	0.73 (0.3 - 1.78)	<i>0.73 (0.3 - 1.78)</i>
Taperloc Complete Microplasty - ZIMMER BIOMET	1018	5	66 (58-72)	54	0.41 (0.15 - 1.08)	0.68 (0.25 - 1.8)		

Only femoral stems, where the N° of implanted was at least 300. If the N° of implanted was less than 150, the cumulative percent is in italic.
IQR-Interquartile range

Survival table – cumulative percent of revision of femoral parts in the period 2002-23, older than 5

Femoral stem*	N° of primaries	N° of first revisions	Age	% of women	Time from primary implantation			
			Median (IQR)		1 yr	5 yr	10 yr	15 yr
Profemur Z - WRIGHT	1100	77	63 (55-70)	57	1.37 (0.83 - 2.26)	2.76 (1.94 - 3.92)	4.73 (3.61 - 6.20)	6.94 (5.48 - 8.78)
Versys - ZIMMER BIOMET	1015	40	68 (60-73)	59	0.49 (0.21 - 1.19)	1.52 (0.92 - 2.51)	2.77 (1.89 - 4.05)	3.59 (2.55 - 5.06)
SL-PLUS - S&N	2659	138	68 (60-73)	61	0.57 (0.34 - 0.94)	1.77 (1.33 - 2.36)	3.07 (2.46 - 3.83)	5.67 (4.76 - 6.74)

Only femoral stems, where the N° of implanted was at least 300. If the N° of implanted was less than 150, the cumulative percent is in italic.
IQR-Interquartile range

Revision hip arthroplasty 2023

Survival table – cumulative percent of revision of acetabular parts in the period 2002-23, new – used in the last 5 years

Acetabular part*	N° of primaries	N° of first revisions	Age		Time from primary implantation			
			Median (IQR)	% of women	1 yr	5 yr	10 yr	15 yr
Allofit - ZIMMER BIOMET	8939	98	68 (60 - 74)	56	0.54 (0.4 - 0.71)	0.92 (0.73 - 1.15)	1.3 (1.05 - 1.61)	1.68 (1.28 - 2.21)
Delta PF - LIMA	849	10	69 (61 - 76)	57	0.5 (0.19 - 1.32)	0.67 (0.28 - 1.63)	1.87 (0.92 - 3.76)	
IP - LINK	369	3	80 (77 - 83)	80	0.28 (0.04 - 1.94)	0.88 (0.28 - 2.7)	0.88 (0.28 - 2.7)	
Pinnacle - DePuy J&J	3530	14	65 (57 - 72)	49	0.09 (0.03 - 0.27)	0.45 (0.24 - 0.82)	0.71 (0.37 - 1.36)	
Muller cem - LIMA	338	22	78 (73 - 81)	77	0.31 (0.04 - 2.15)	1.36 (0.51 - 3.59)	4.80 (2.73 - 8.36)	
RM Vitamys - MATHYS	424	1	68 (60 - 77)	49	0.24 (0.03 - 1.71)			

Only acetabular parts, where the N° of implanted was at least 300. If the N° of implanted was less than 150, the cumulative percent is in italic.
IQR-Interquartile range

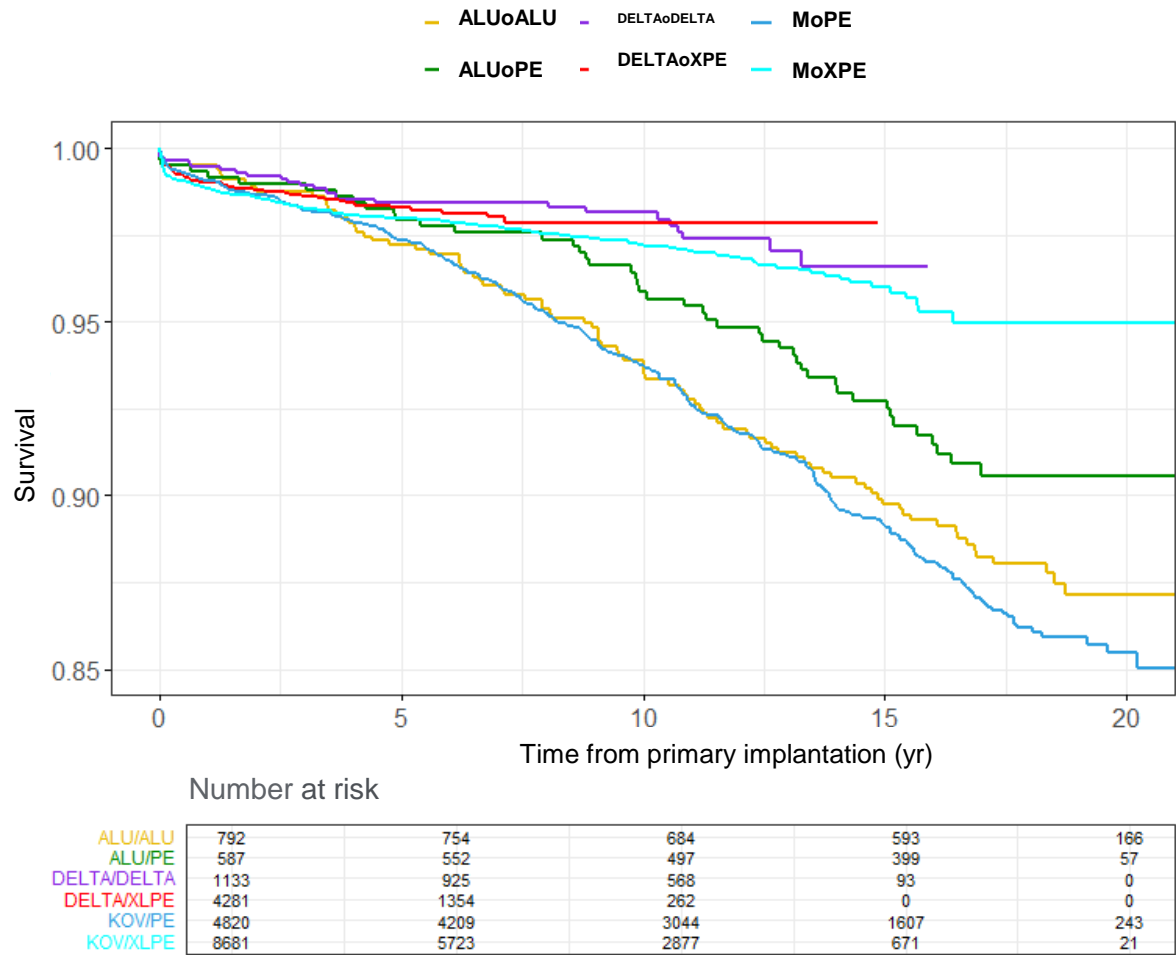
Survival table – cumulative percent of revision of acetabular parts in the period 2002-23, older than 5 years

Acetabular part*	N° of primaries	N° of first revisions	Age		Time from primary implantation			
			Median (IQR)	% of women	1 yr	5 yr	10 yr	15 yr
Duraloc - DePuy J&J	396	13	67 (59 - 72)	59	0.25 (0.04 - 1.78)	0.78 (0.25 - 2.39)	1.67 (0.75 - 3.68)	3.61 (2.06 - 6.29)
EHS E - WRIGHT	318	50	63 (55 - 69)	52	0	1.6 (0.67 - 3.81)	8.74 (6.03 - 12.58)	14.17 (10.58 - 18.85)
CFP - LINK	434	30	67 (62 - 71)	62	0.46 (0.12 - 1.84)	1.89 (0.95 - 3.74)	4.27 (2.67 - 6.78)	7.1 (4.87 - 10.29)
Doets - S&N	519	84	70 (66 - 74)	58	0.58 (0.19 - 1.8)	2.40 (1.37 - 4.19)	10.37 (7.89 - 13.58)	18.54 (15.01 - 22.78)
Triology AB - ZIMMER BIOMET	325	21	57 (49 - 62)	44	0.62 (0.15 - 2.44)	1.86 (0.84 - 4.08)	3.14 (1.7 - 5.75)	6.55 (4.27 - 9.98)
Triology - ZIMMER BIOMET	1416	41	68 (62 - 73)	56	0.28 (0.11 - 0.75)	0.43 (0.19 - 0.96)	1.50 (0.96 - 2.34)	2.95 (2.1 - 4.15)
Bicon - S&N	650	59	66 (57 - 72)	69	0.92 (0.42 - 2.05)	2.19 (1.30 - 3.67)	5.14 (3.64 - 7.23)	8.78 (6.69 - 11.49)

Only acetabular parts, where the N° of implanted was at least 300. If the N° of implanted was less than 150, the cumulative percent is in italic.
IQR-Interquartile range

Revision hip arthroplasty 2023

Bearings – survival curve

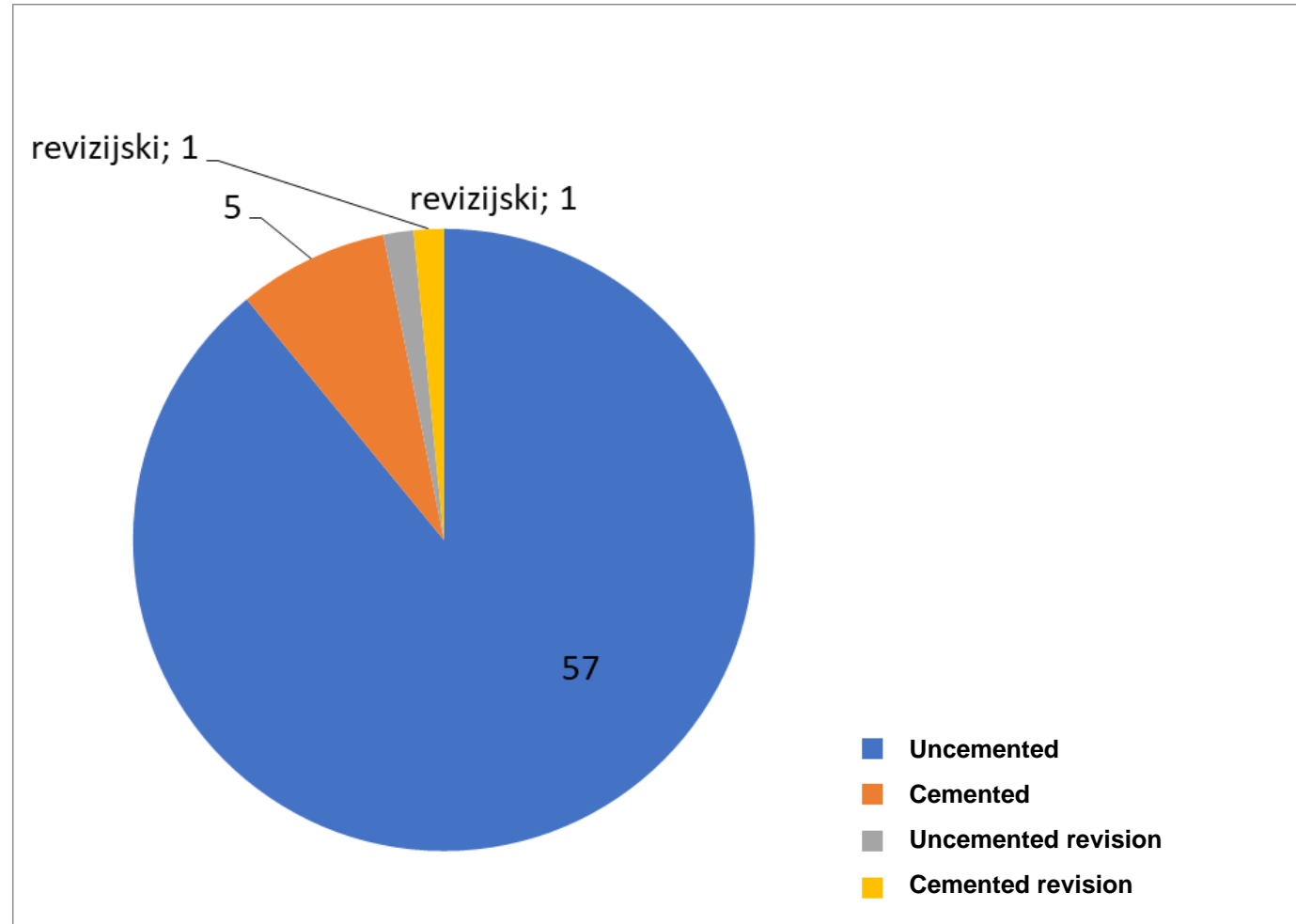


05

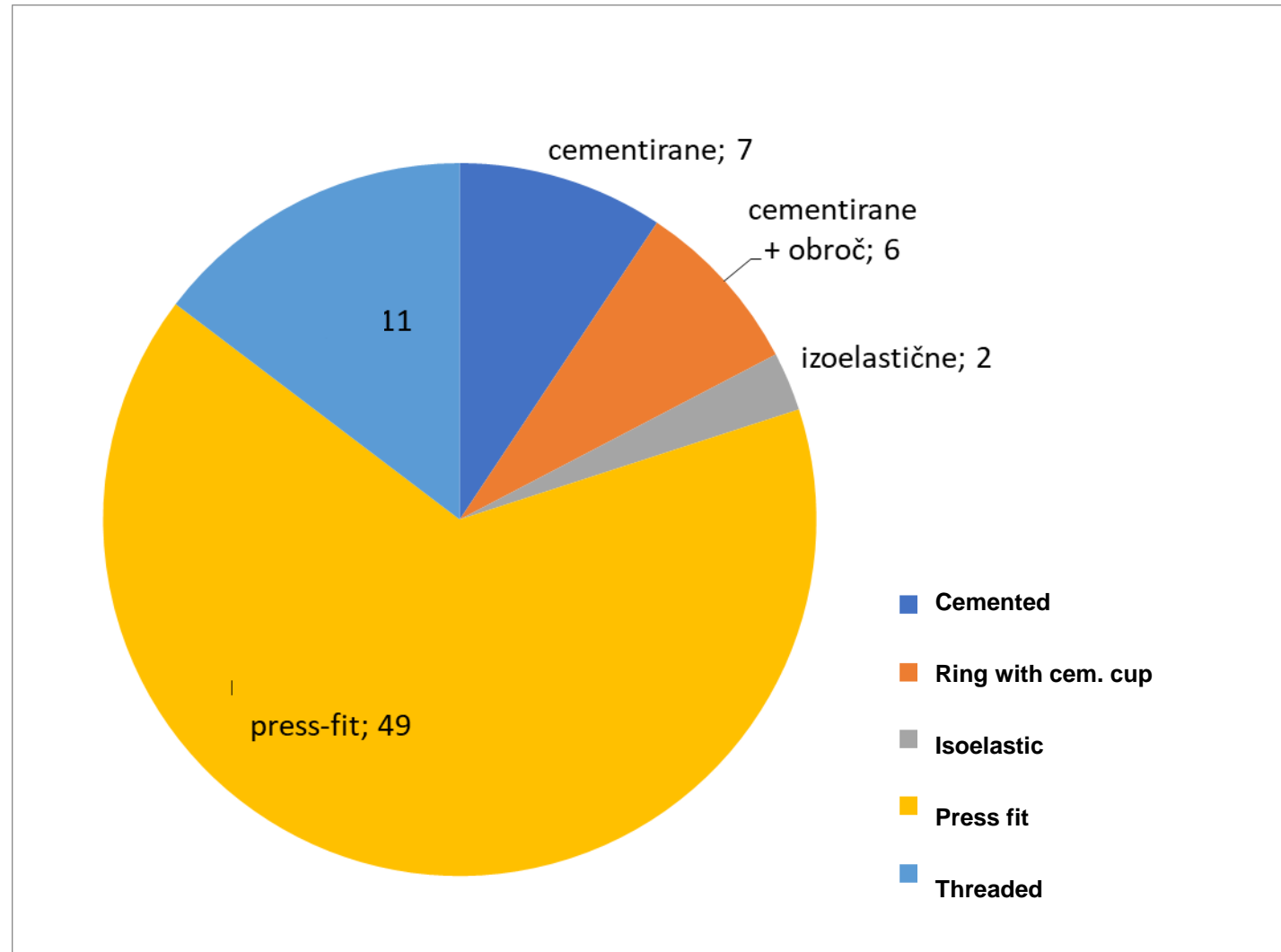
REVISION OPERATIONS 2023

Implant retrieval program

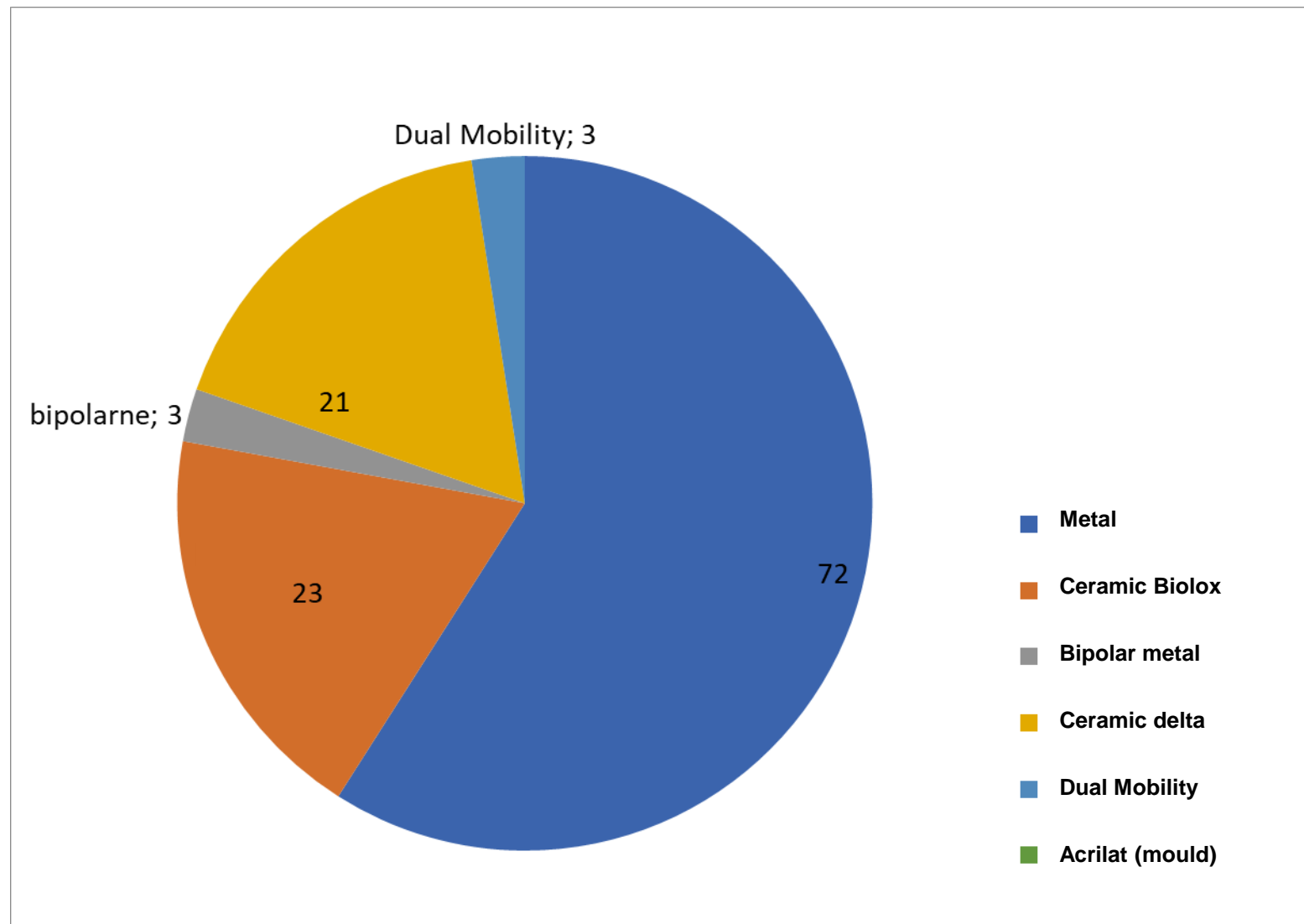
Removed and collected femoral components in 2023 (n=63)



Removed and collected acetabular components in 2023 (n=75)



Removed and collected femoral head components 2023 (n=122)

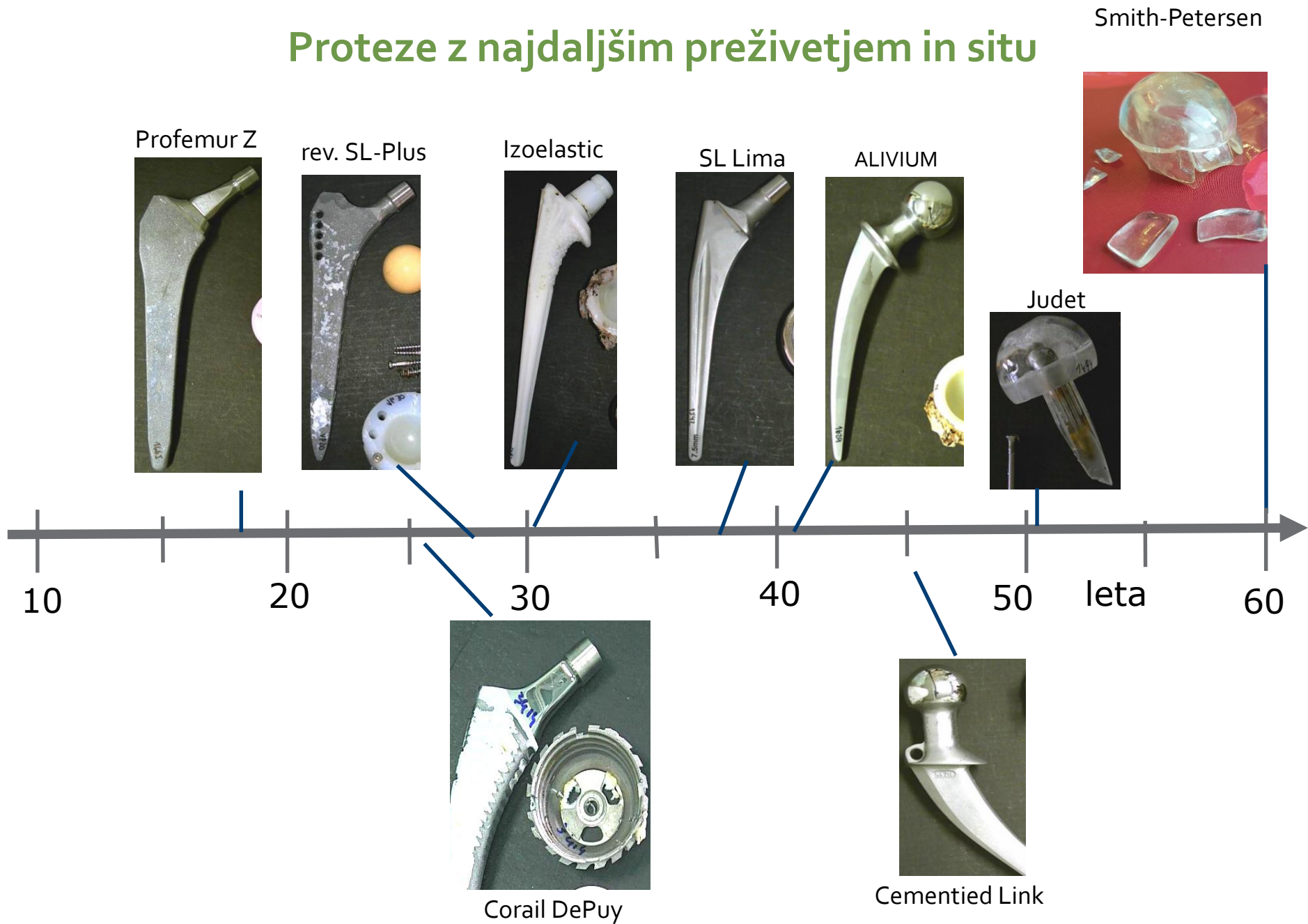




Removed stems – time in situ 2009-2023 (collected)

Charnley-Mueller stems (št. 59) (2009-2018)	23,5 ± 7,0 ys (10,8 – 41,1)
Izoelastic stems (št. 174) (2009-2021)	16,2 ± 5,0 ys (5,1 – 30,8)
straight SL cem. stems (št. 168) (2009-2019)	13,0 ± 6,5 ys (0,5 – 36,4)
SL-Plus ZM stems (št. 179) (2009-2022)	10,0 ± 6 ys (0 – 27,4)
Profemur stems (št. 77) (2009-2021)	7,3 ± 4,8 ys (0,1 – 17,5)

Proteze z najdaljšim preživetjem in situ





THANK YOU