

VALDOLTRA HIP ARTHROPLASTY REGISTRY REPORT 2002-2020



Valdoltra
Arthroplasty Registry

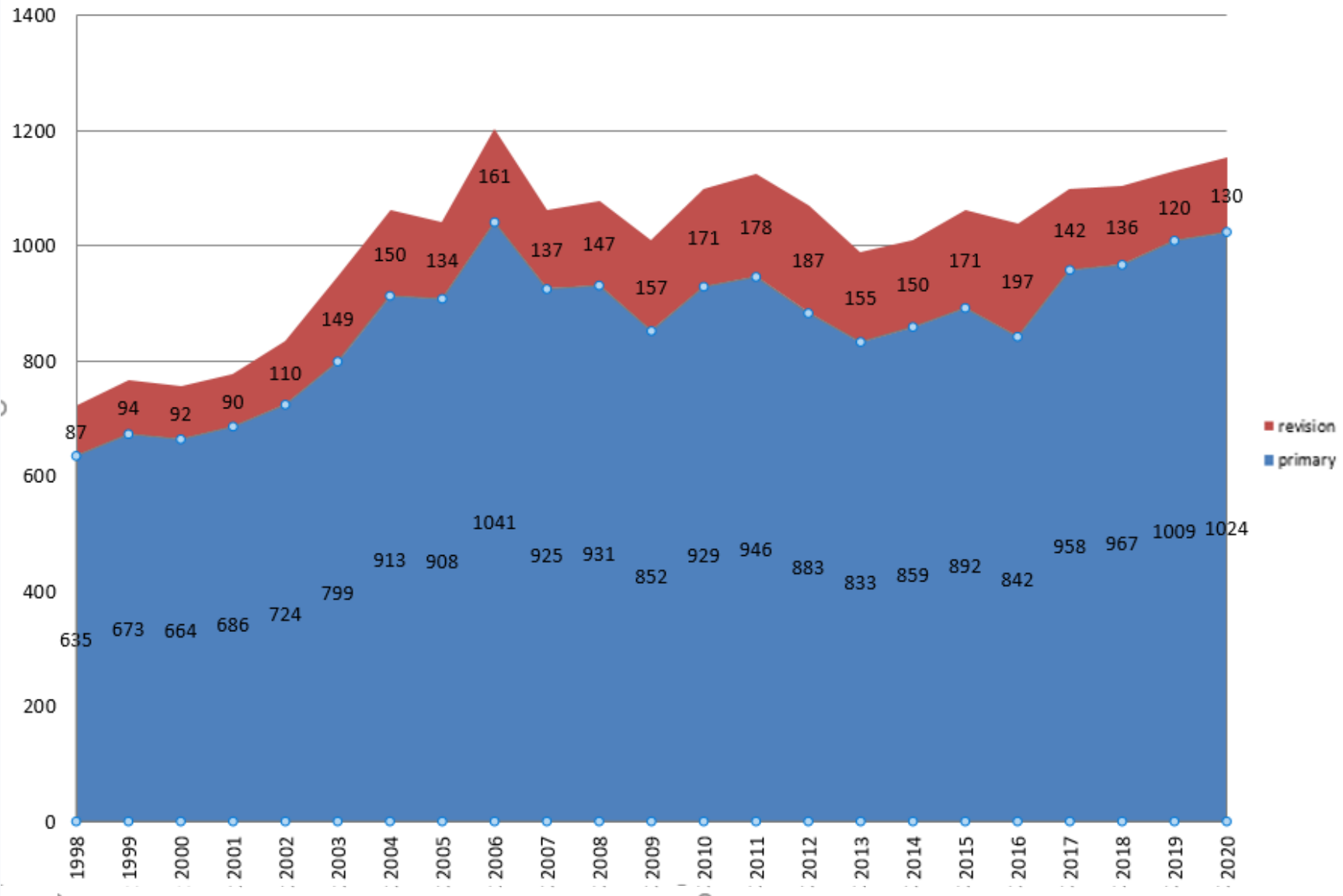
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October 2021

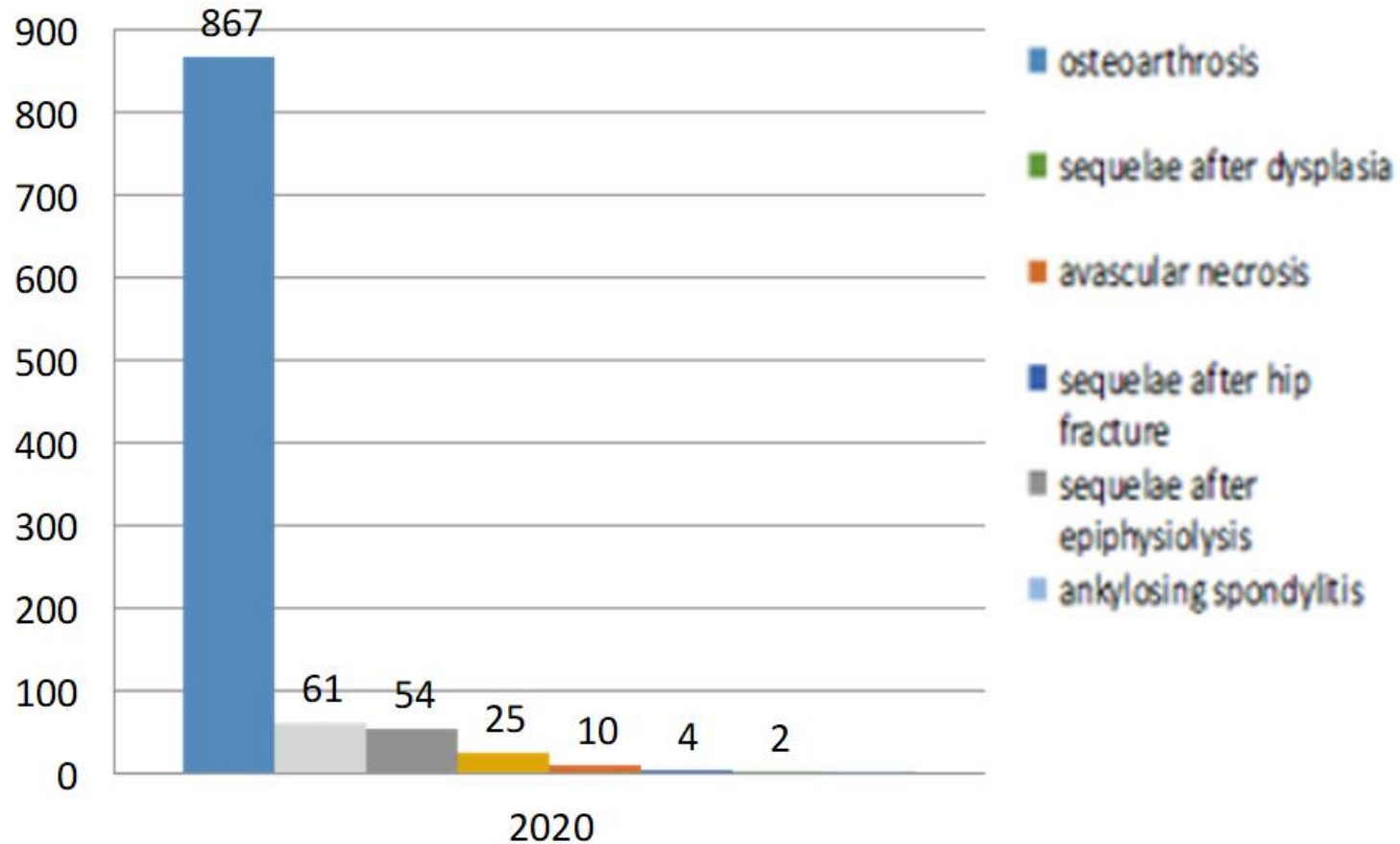
Primary and revision THR by year



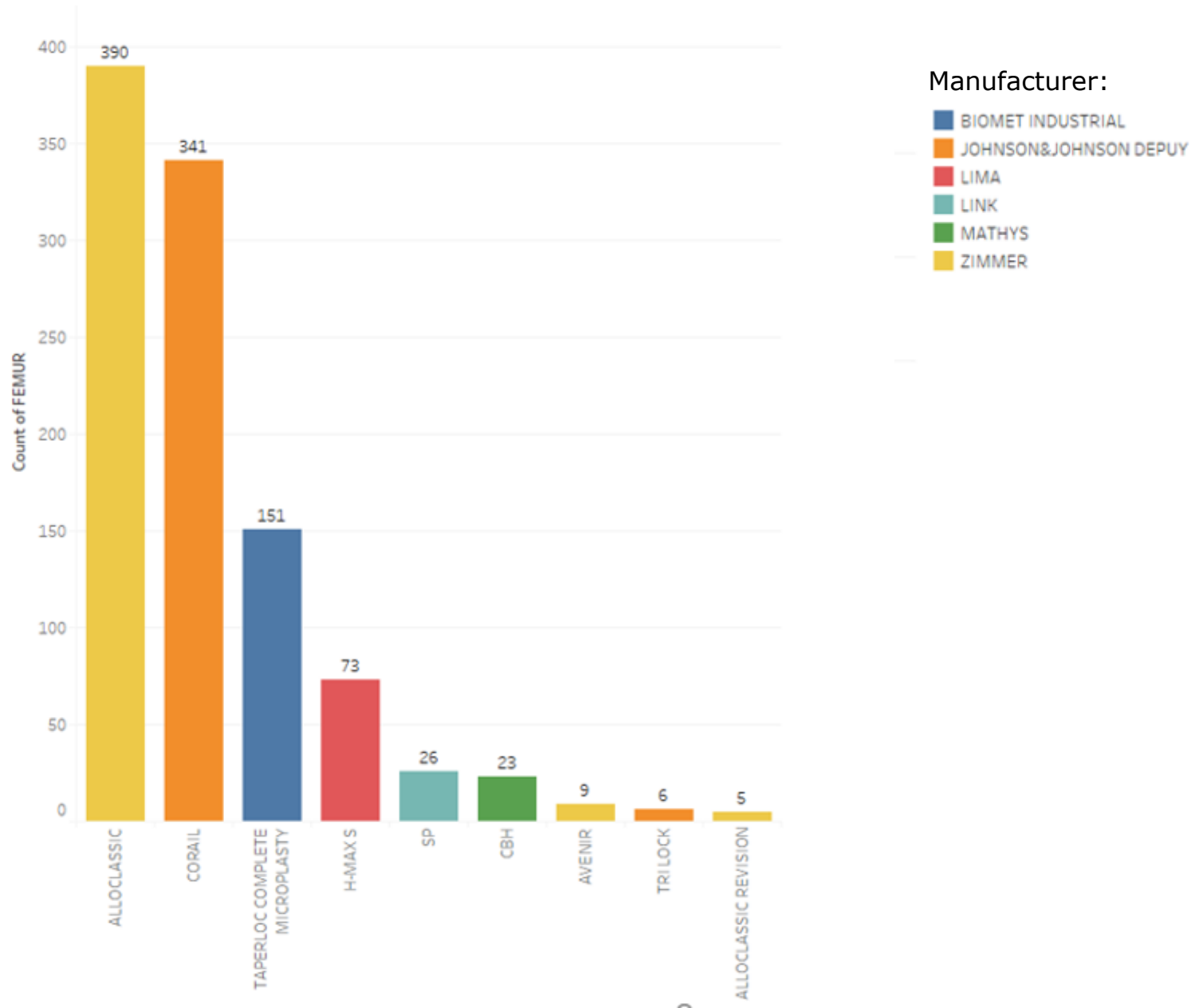
Patient data for primary THR 2020

- Men – Women = 48% to 52%
- Average age = 64 y men and 68 y women
- Right - left = 54% to 46%
- Average preoperative Harris Hip Score = 62 ± 14 pts
- 81 % overweight and obese ($BMI \geq 25$)
- Approach: 51 % direct lateral, 45 % anterior and 4 % anterolateral
- Average duration of operation 64 ± 16 min
- Systemic antibiotic prophylaxis at all operation

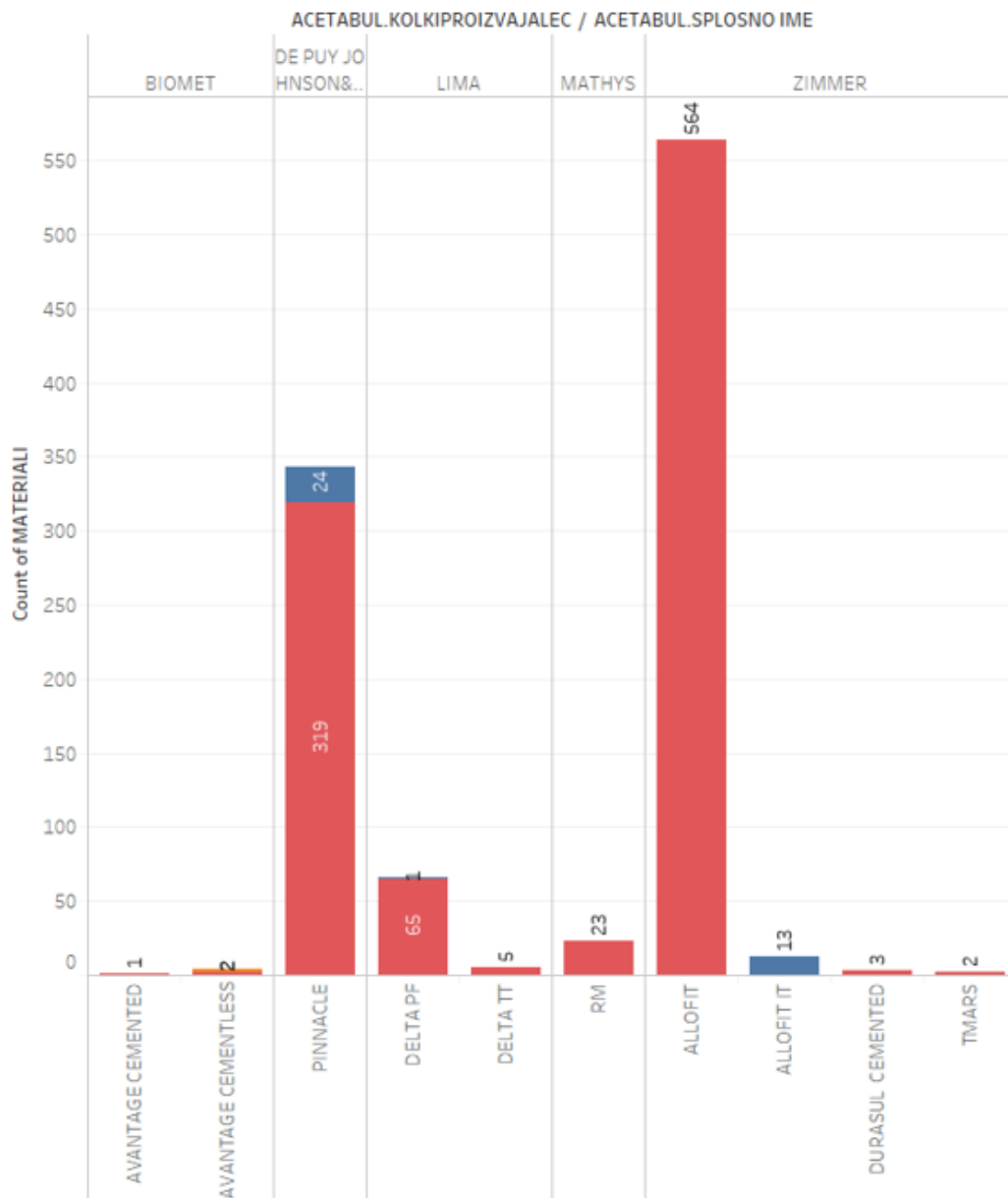
PREOPERATIVE DIAGNOSIS FOR PRIMARY THR IN 2020



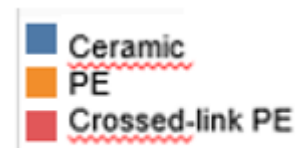
PRIMARY STEMS in 2020, sum 1024



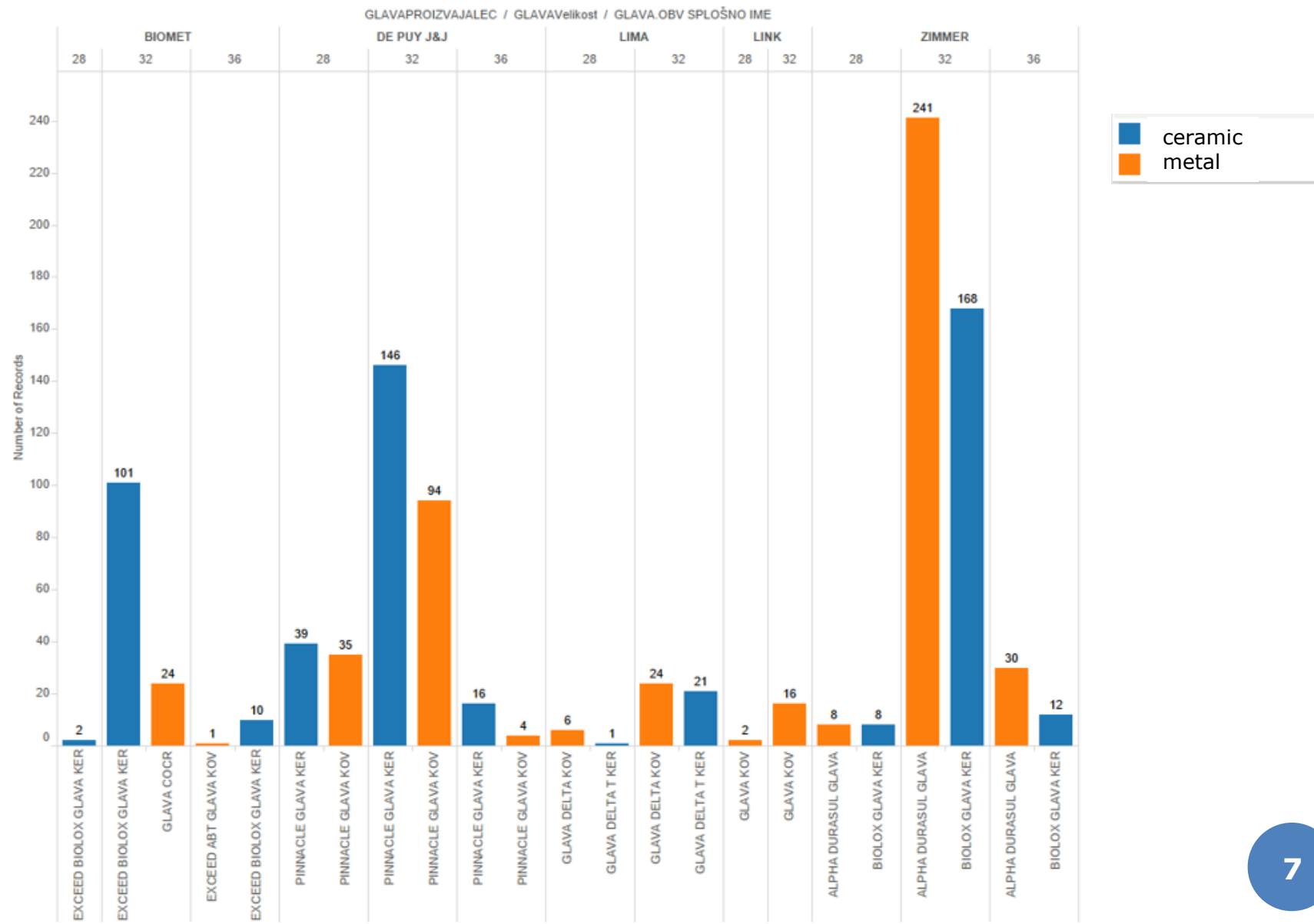
PRIMARY ACETABULAR COMPONENTS IN 2020, SUM 1024



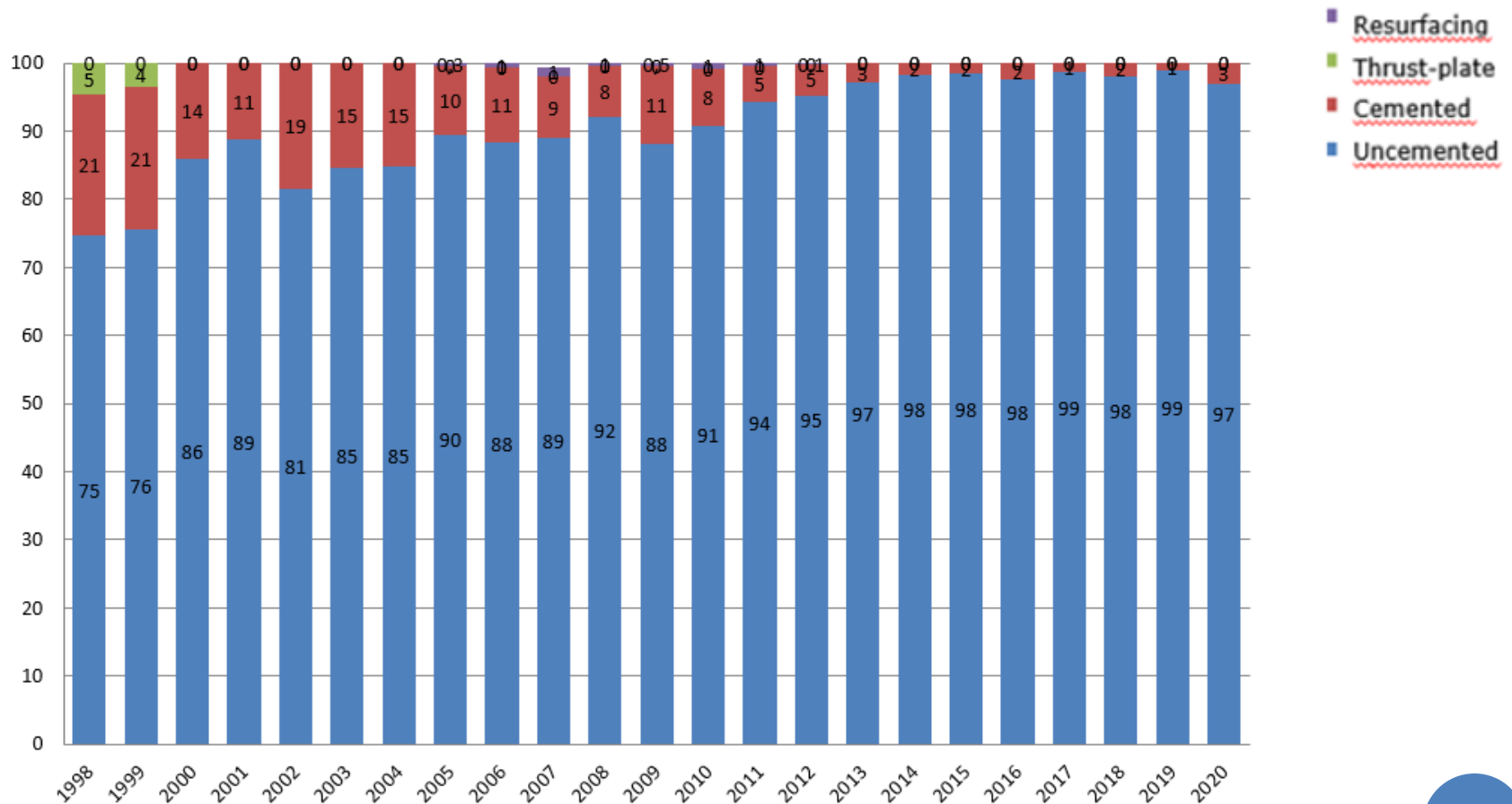
Inlay material:



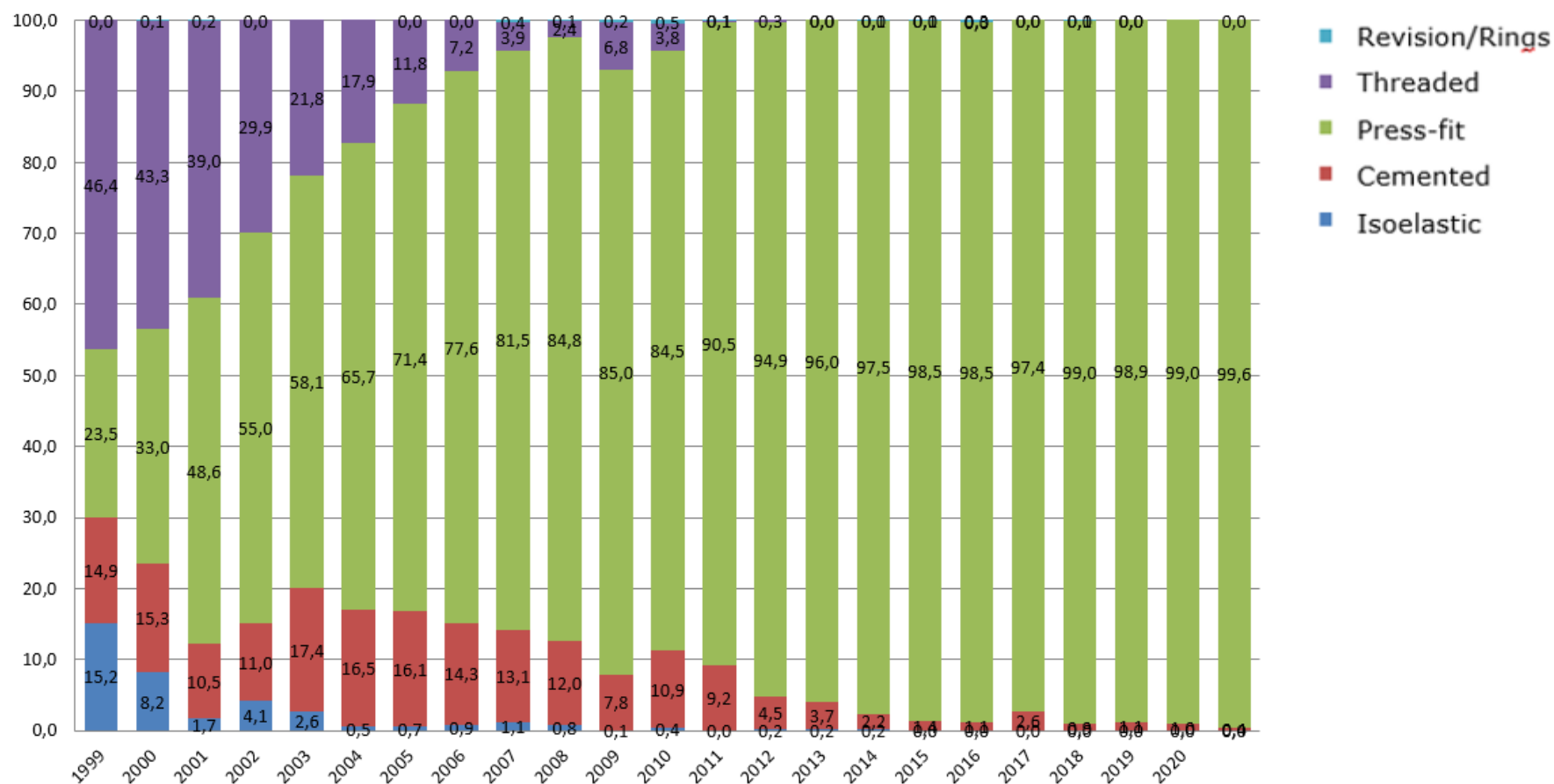
PRIMARY HEADS in 2020, sum 1024



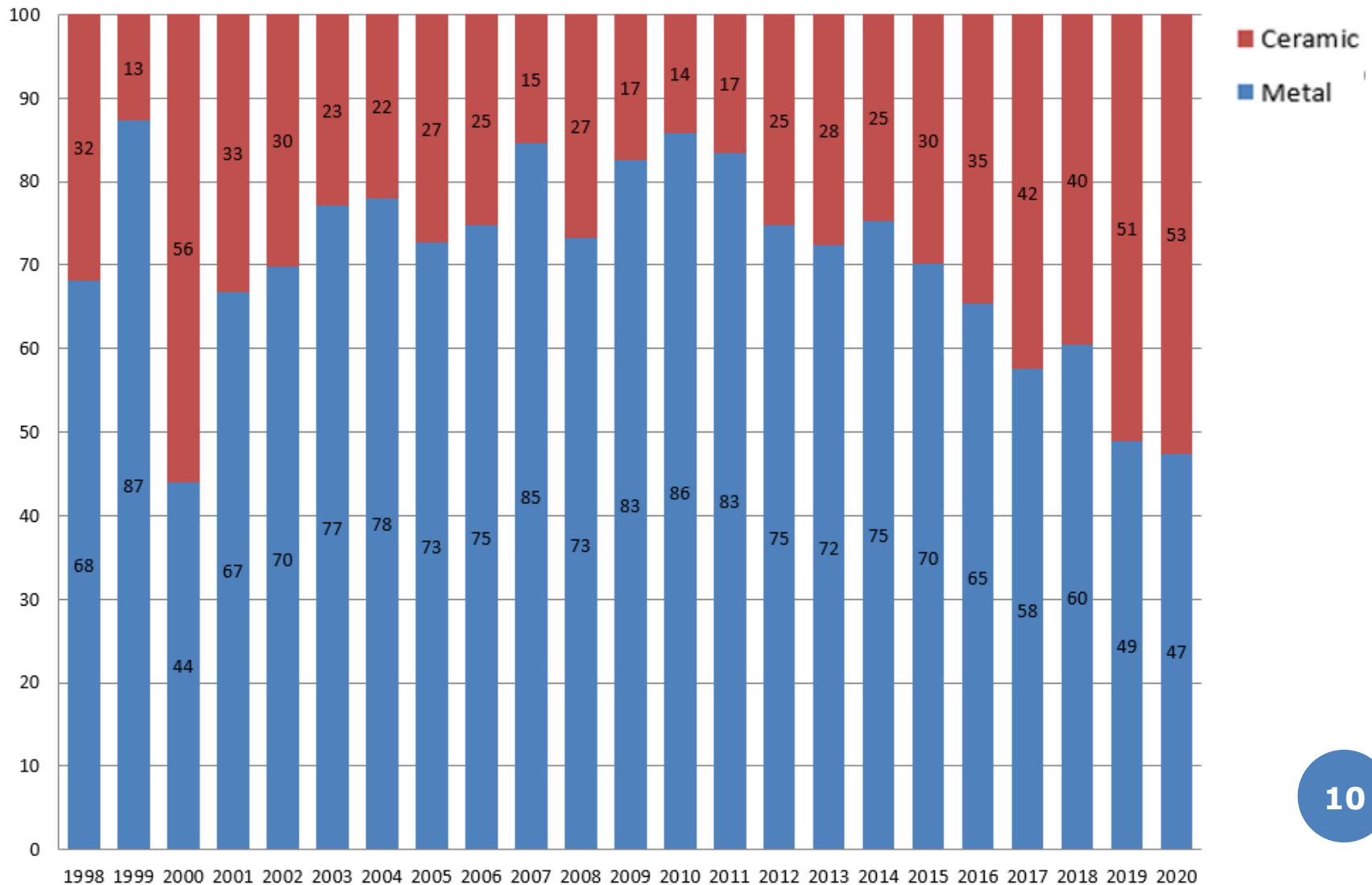
Cemented, uncemented stems, trust-plate and resurfacing prostheses 1998 - 2020



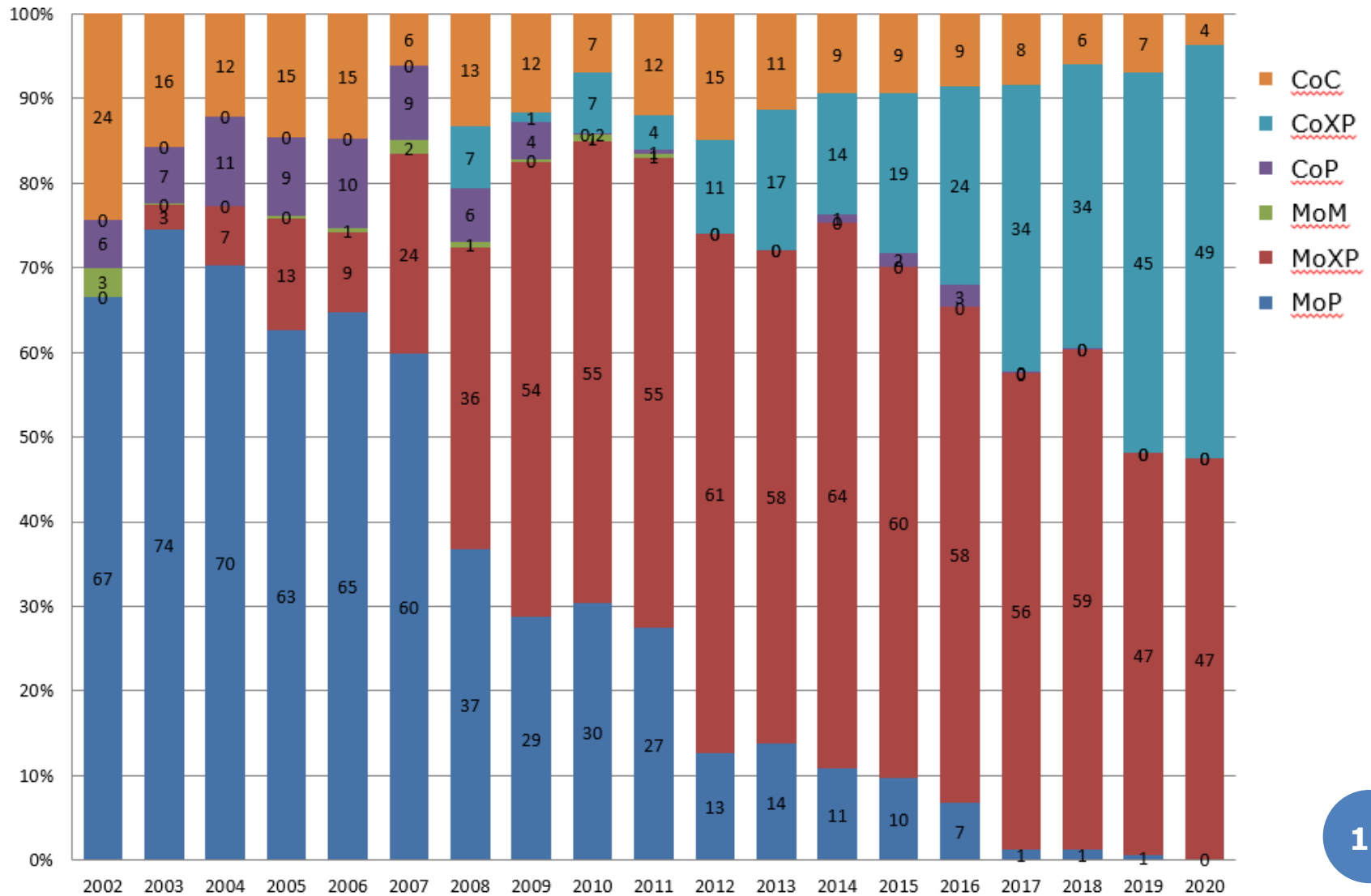
Primary cups by fixation 1998 - 2020



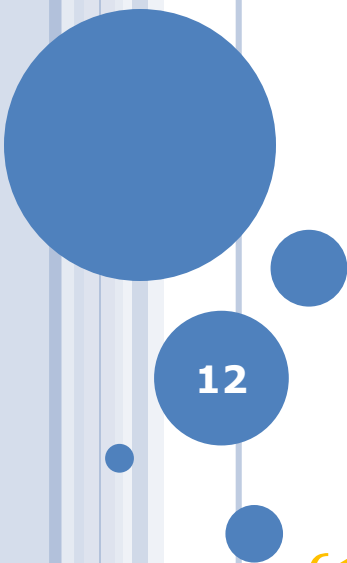
Percentage of metal and ceramic heads 1998 - 2020



BEARING SURFACE 2002 - 2020



REVISION OPERATIONS IN 2020



12

130 revision THRs at 114 patients
(13 patients revised 2x in this year, 1 patient
revised 3x om this year)

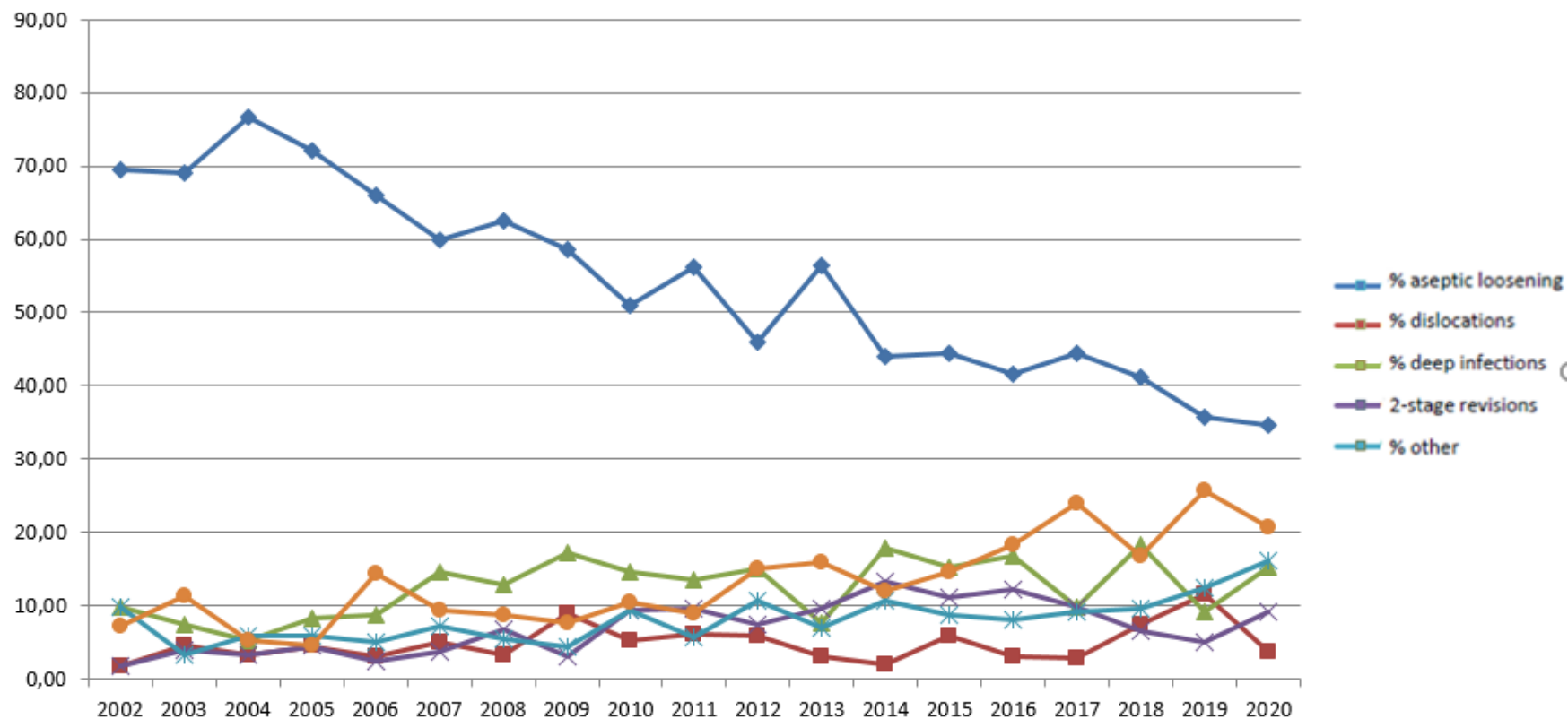
PATIENT DATA FOR REVISIONS 2020

- Men – Women = 35% to 65%
- Average age = 69 y men and 74 y women
- Right - left = 57% to 43%
- Average preoperative Harris Hip Score = 57 ± 16 pts
- 74 % overweight or obese ($BMI \geq 25$)
- Approach in 97 % direct lateral
- Average duration of operation 133 ± 44 min

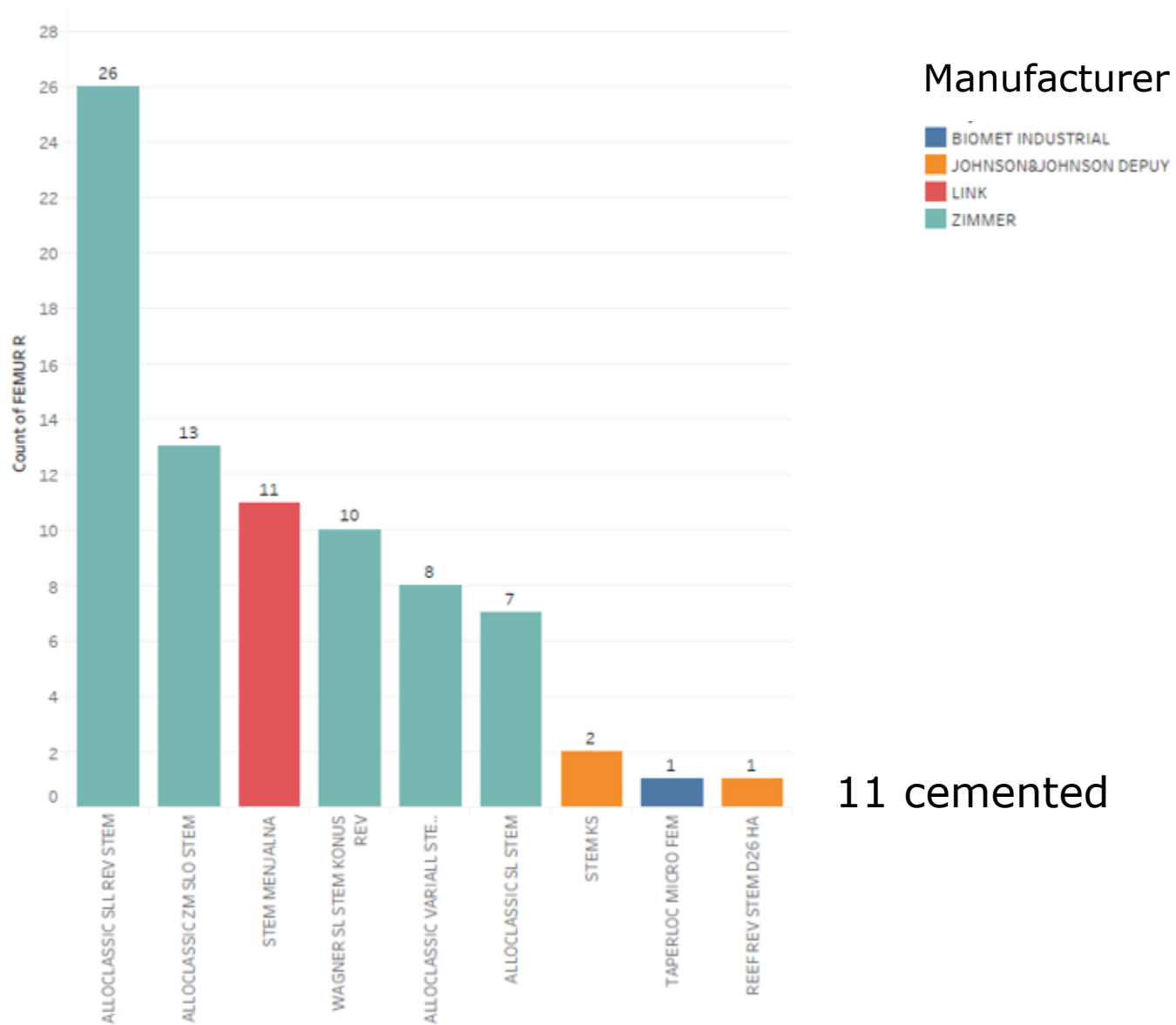
Reasons for revisions hips vs. knees 2002 - 2020

period 2002-2020	Hips (%)	Knees (%)
Aseptic loosening	54,2	20,2
Deep infection	12,5	25,0
Periprosthetic fracture	8,2	2,9
2-stage revision	7,0	13,2
Other	5,3	6,5
Dislocation	4,8	1,4
Implant broken	2,9	0,9
Osteolysis	2,4	0,0
Pain	2,4	8,3
Methalosis	0,2	0,0
Instability, malalignment, poor ROM	0,0	14,5
OA of the other compartment	0,0	7,1

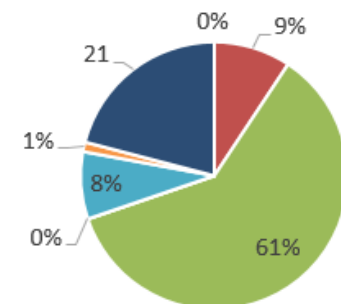
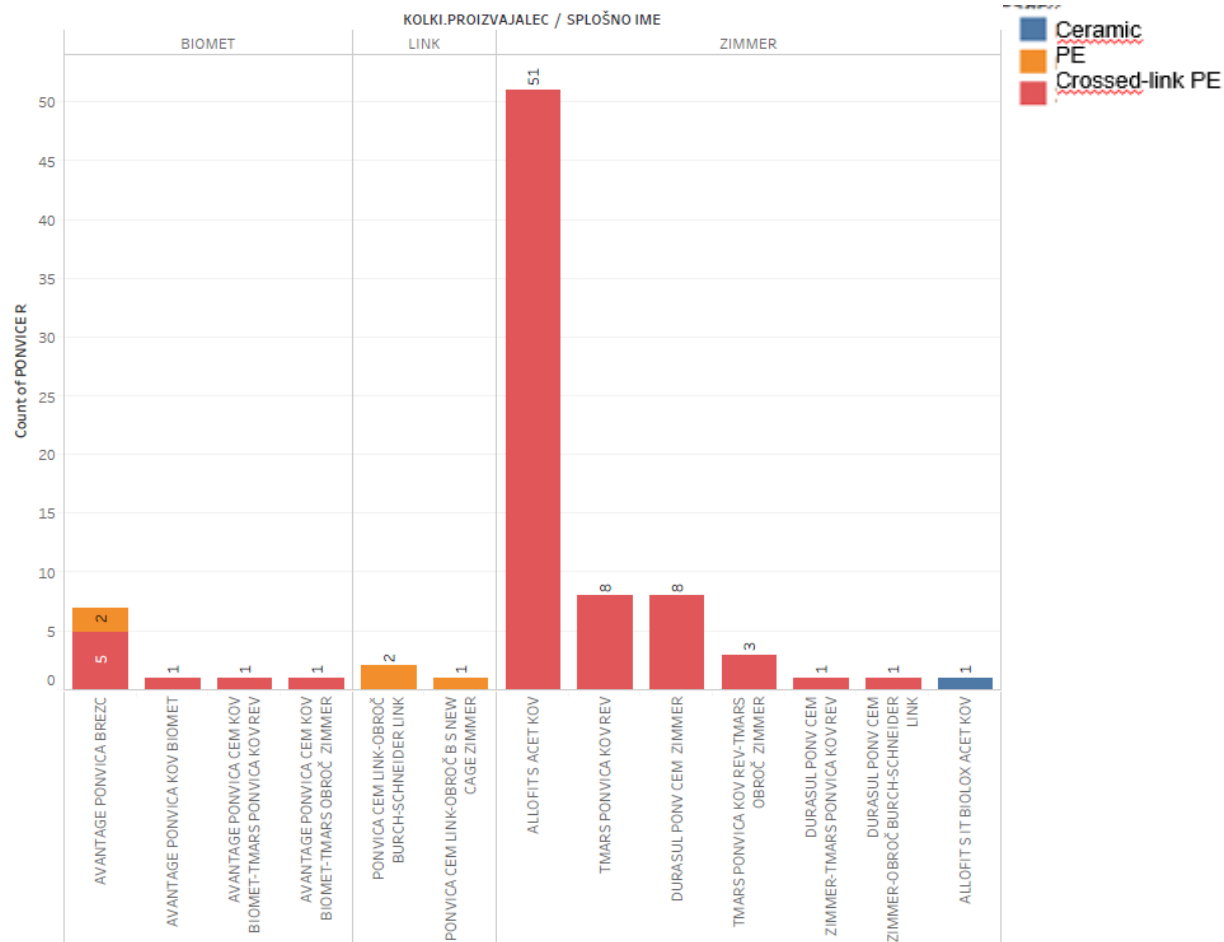
Reasons for revision THRs from 2002 to 2020



Stems, used in revisions 2020, sum 79

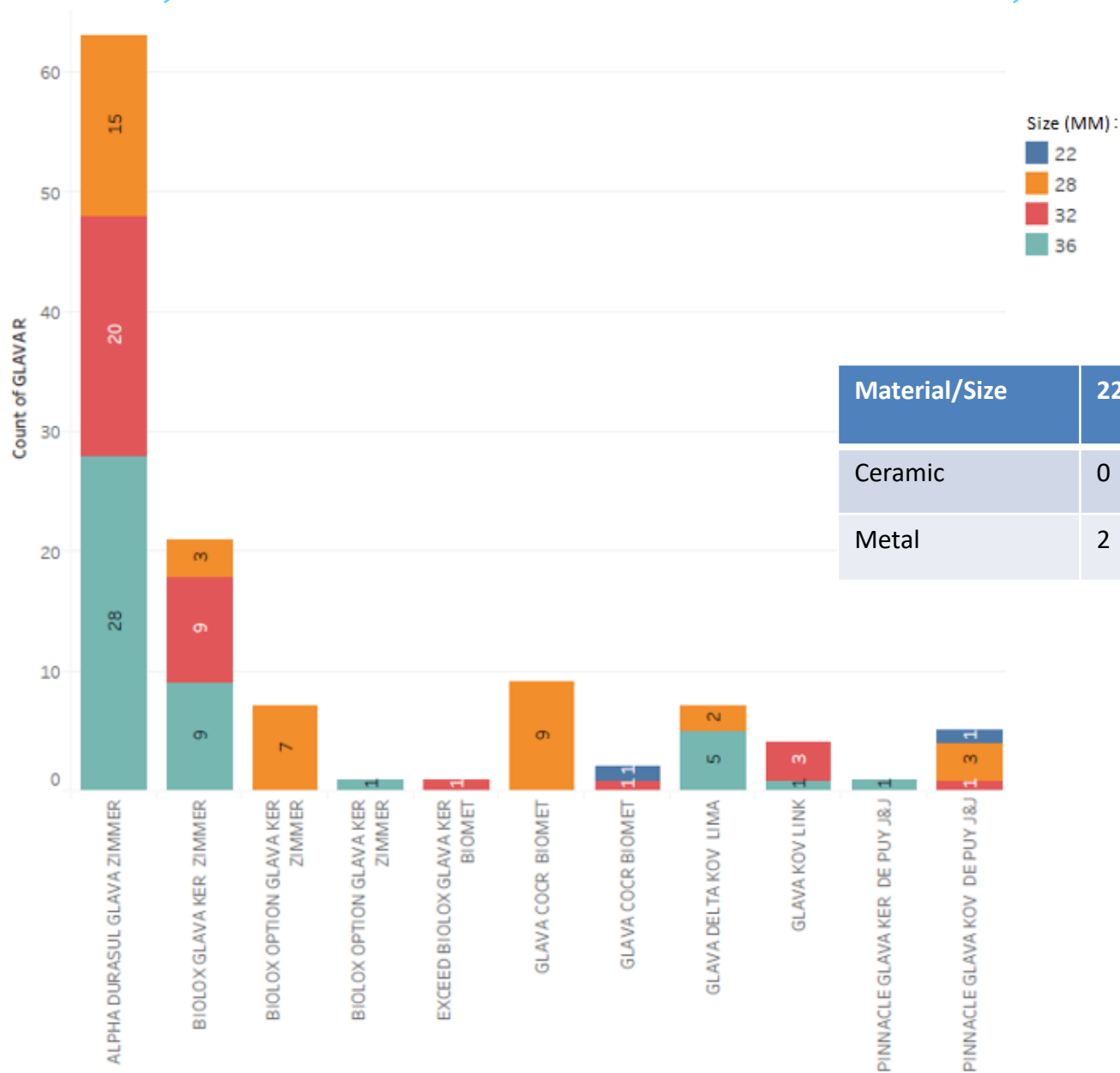


Cups, used at revisions 2020, sum 86



- Isoelastic
- Cemented
- Press fit
- Threaded
- Double mobility
- Revision-rings

Heads, used at revisions in 2020, sum 121



Material/Size	22	28	32	36
Ceramic	0	10	10	11
Metal	2	29	25	34

REVISION BURDEN FOR VALDOLTRA 2002 - 2020

Year	RB (revision burden) = N° of revisions*100/(N° of primaries+ N° of revisions) in %	N° of revisions for infection*100 / (N° of primaries+ N° of revisions) in %
2002	10,91	1,20
2003	12,66	0,63
2004	11,48	0,66
2005	11,14	0,67
2006	11,75	1,17
2007	11,68	1,79
2008	11,60	1,21
2009	13,59	1,79
2010	12,91	1,55
2011	13,17	1,51
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	12,33	1,72
2019	8,42	0,98
2020	8,15	0,87
Average OBV	11,82 %	1,39 %
20th AONJRR (data 2019)	10,81 %	1,97 %
Sweden SHAR 19	8,04 %	1,75 %

REVISIONS PER 100 OBSERVED COMPONENT YEARS - HIPS

Year	Mean FU (years)	Revision rate	Number of primary	Nº of all revisions	Nº of first revisions in this FU	Revision rate in FU period	Observed components years	Revisions per 100 observed component years
2002	0,53	12,45	724	103	6	0,73	384	1,56
2003	0,97	14,20	1523	252	14	0,79	1482	0,94
2004	1,41	14,16	2436	402	24	0,85	3428	0,70
2005	1,88	13,79	3344	535	30	0,77	6302	0,48
2006	2,31	13,66	4385	694	49	0,96	10140	0,48
2007	2,82	13,53	5310	831	75	1,22	14970	0,50
2008	3,32	13,55	6241	978	103	1,43	20749	0,50
2009	3,86	13,79	7093	1135	147	1,79	27410	0,54
2010	4,36	14,00	8022	1306	192	2,06	34961	0,55
2011	4,84	14,20	8968	1484	247	2,36	43442	0,57
2012	5,37	14,50	9851	1671	305	2,65	52888	0,58
2013	5,91	14,60	10684	1826	348	2,78	63182	0,55
2014	6,43	14,62	11543	1976	400	2,96	74250	0,54
2015	6,93	14,73	12424	2147	454	3,12	86136	0,53
2016	7,46	15,07	13266	2354	511	3,27	99009	0,52
2017	7,93	14,92	14235	2496	567	3,39	112845	0,50
2018	8,39	14,77	15190	2632	620	3,48	127451	0,49
2019	8,84	14,51	16211	2751	668	3,52	143245	0,47
2020	9,28	14,33	17235	2882	722	3,59	159963	0,45

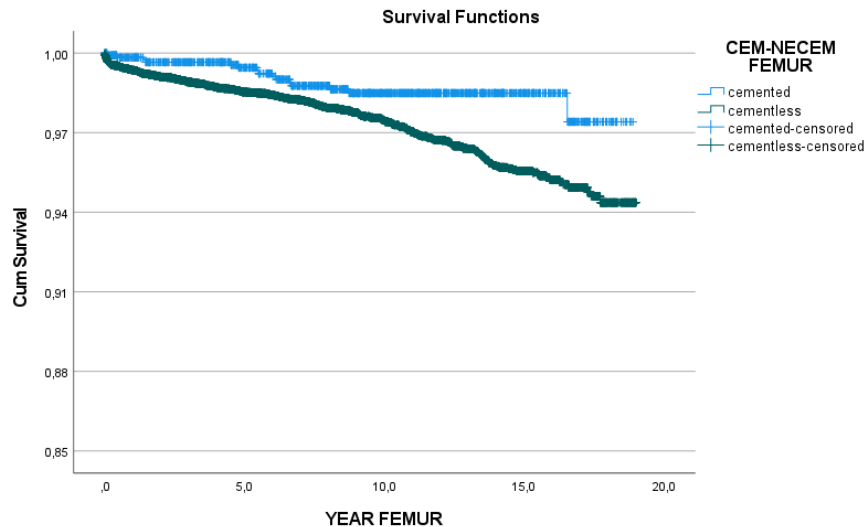
Name	All primaries 02-20	All removed 02-20	% revision
cem Conserve Wright	44	0	0,0
cem H-MAX stem Lima	7	0	0,0
cem Muller Merete Medical	7	0	0,0
Avenir Zimmer	9	0	0,0
Amis Medacta	3	0	0,0
Trilock stem DePuy JJ	234	1	0,4
cem SP Lubinus Link	763	5	0,7
Taperloc Micro Biomet	528	4	0,8
H-MAX S Lima	371	3	0,8
Corail DePuy Jo&J	2197	18	0,8
Alloclassic (Variall) stem Zimmer	5408	61	1,1
Fiber Metal Zimmer	69	1	1,4
Fitmore Zimmer	249	5	2,0
cem Basis SL Smith&Nephew	44	1	2,3
AHS Cremascoli	86	2	2,3
Elite Plus JJ	76	2	2,6
Exception stem Biomet	166	5	3,0
Versys Zimmer	1016	34	3,3
C2 LIMA	279	10	3,6
cem Metabloc Zimmer	24	1	4,2
Pipino FP LINK	69	3	4,3
ZM Endoplus (S&N)	2679	122	4,6
CBH stem Mathys	385	18	4,7
rebrasta LINK	135	7	5,2
Profemur Z Cremascoli	1107	68	6,1
Anca Cremascoli	16	1	6,3
Copf (Chendo+Unior)	128	8	6,3
cem ATL Unior	17	2	11,8
Quadra stem Medacta	15	3	20,0

Revision
rate for
femoral
stems
from 2002
to 20

Name	All primaries 02-20	All removed 02-20	% revisions
Conserve Wright	47	0	0,0
press fit G7 Biomet	57	0	0,0
press fit Selexys Mathys	129	0	0,0
press fit TMARS Zimmer	2	0	0,0
press fit Versafit Medacta	3	0	0,0
press fit Pinnacle DePuy J&J	2189	5	0,2
cem IP Link	347	2	0,6
press fit Exceed ABT Biomet	157	1	0,6
press fit Allofit Zimmer	7723	67	0,9
press fit Delta Lima	648	7	1,1
press fit Procoty Wright	149	2	1,3
press fit Duraloc DePuy J&J	388	7	1,8
cem Surgival	105	2	1,9
press fit Mallory Biomet	51	1	2,0
cem Apollo Biomet	174	4	2,3
press fit Trilogy Zimmer	1711	45	2,6
press fit ANCA Crem	37	1	2,7
press fit RM Mathys	310	10	3,2
cem LIMA	340	18	5,3
press fit Pipino CFP Link	444	25	5,6
press fit MPF Endoplus	212	12	5,7
press fit SPH Lima	46	3	6,5
cem S&N	45	3	6,7
cem Durasul Zimmer	85	6	7,1
navojna Bicon Endoplus	619	54	8,7
press fit EHS-E Crem/Wright	317	29	9,1
cem Ultima DePuy J&J	60	7	11,7
press fit Doets Endoplus	515	76	14,8
isoelastic Mathys	59	10	16,9

**Revision
rate for
acetabular
components
from 2002
to 2020**

SURVIVAL OF CEMENTED/UNCEMENTED FEMORAL STEMS



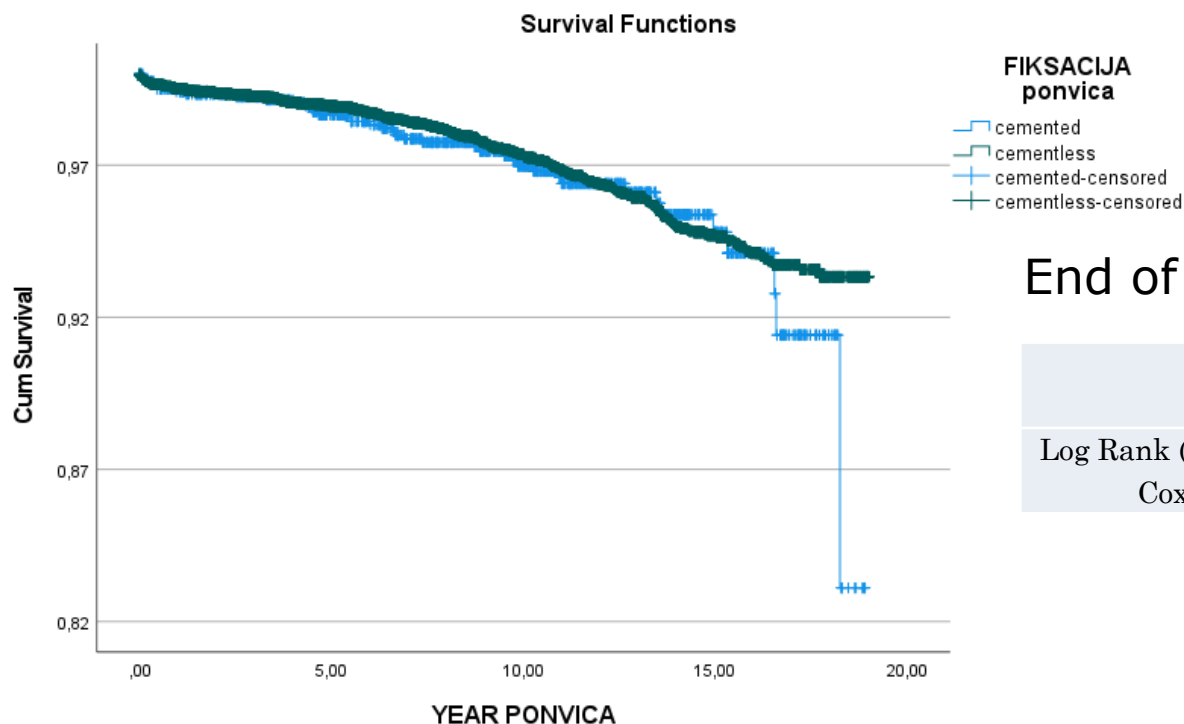
End of Follow-up: 31.12.2020

	Chi-Square	df	Sig.
Log Rank (Mantel-Cox)	9,184	1	0,002

Cemented: after **18,9** y observed survival is **97,4 %** (95 % CI = **95,2 % - 99,6 %**)

Uncemented. After **19,0** y observed survival is **94,4 %** (95 % CI = **93,4% - 95,4 %**)

SURVIVAL OF CEMENTED/UNCEMENTED ACETABULAR COMPONENTS



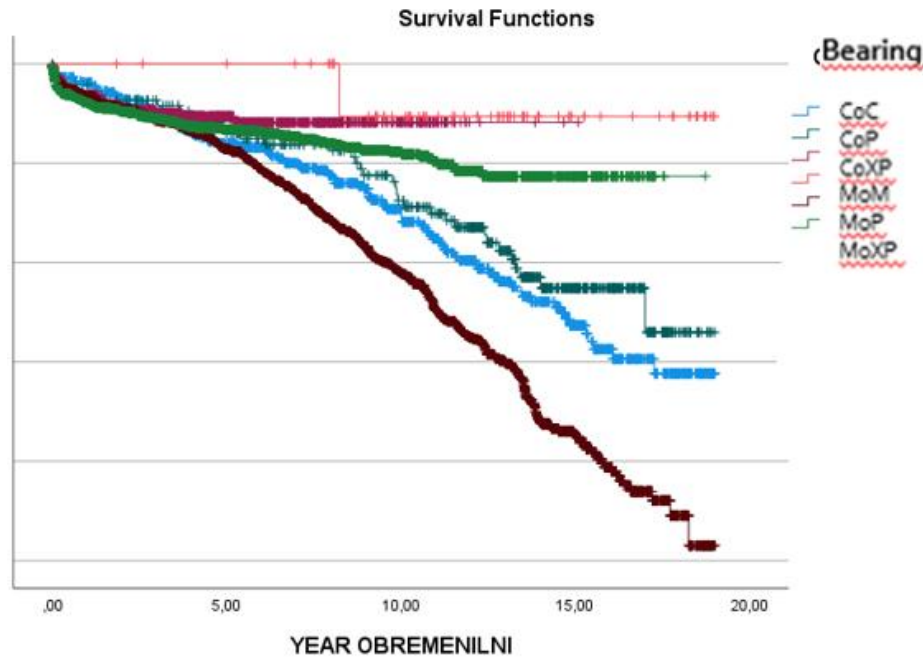
End of Follow-up: 31.12.2020

	Chi-Square	df	Sig.
Log Rank (Mantel-Cox)	0,421	1	0,516

Uncemented: After **18,9** y observed survival is **93,3 %** (95 % CI = **92,3 % - 94,3 %**)

Cemented: After **18,9** y observed survival is **83,1 %** (95 % CI = **67,0 % - 99,2 %**)

SURVIVAL OF DIFFERENT BEARINGS



End of follow-up 31.12.2020

	Chi-Square	df	Sig.
Log Rank (Mantel-Cox)	74,639	5	<0,001

(MoM: After 18,9 y observed survival is **98,4 %** (95 % CI = **95,3% - 101,5 %**))

CoXP: After 15,1 y observed survival is **98,2 %** (95 % CI = **97,6 % - 98,8 %**)

MoXP: After 18,7 y observed survival is **96,6 %** (95 % CI = **95,8 % - 97,4 %**)

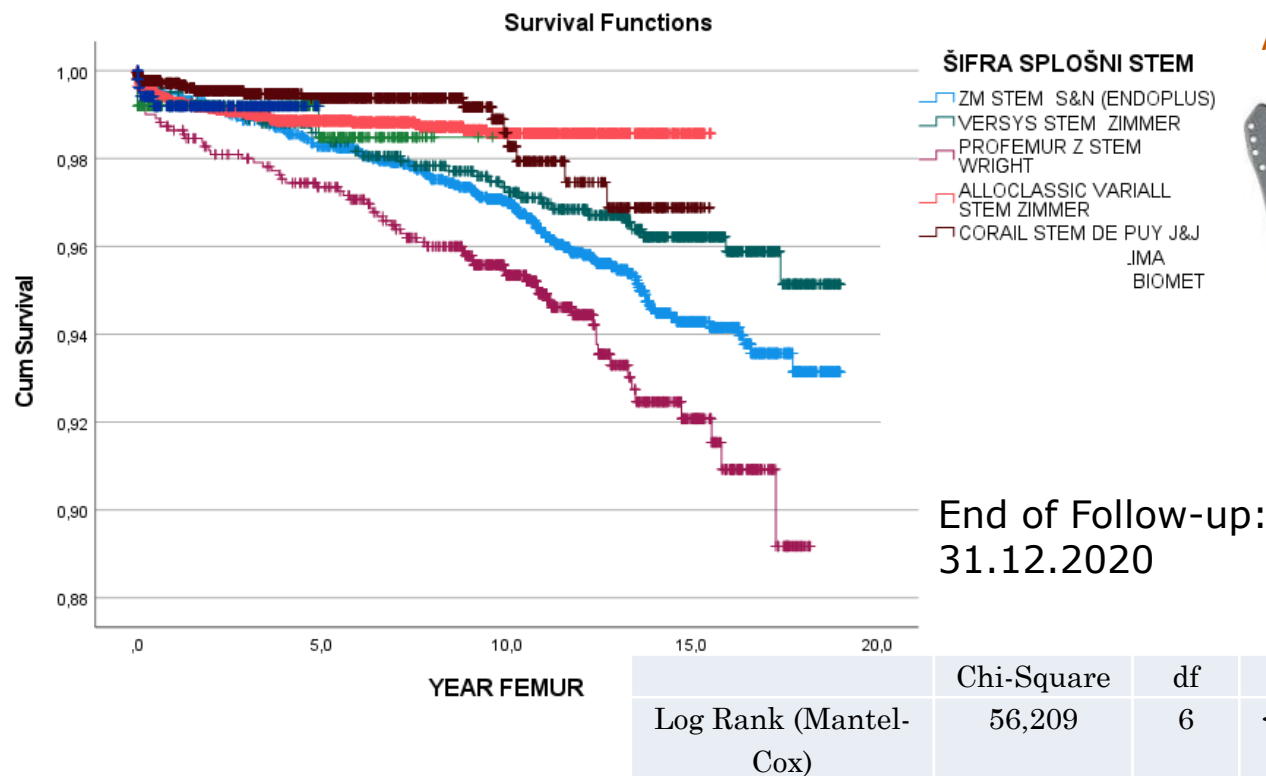
CoP: After 18,9 y observed survival is **91,9 %** (95 % CI = **88,6 % - 95,2 %**)

CoC: After 18,9 y observed survival is **90,7 %** (95 % CI = **88,5 % - 92,9 %**)

MoP: After 18,9 y observed survival is **85,5 %** (95 % CI = **83,0 % - 88,0 %**)

From 72 THR with MoM bearings is 44 resurfacing, no revised till now.

SURVIVAL OF THE 7 MOST COMMON FEMORAL STEMS



Taperloc Micro Biomet: After **4,9** y observed survival is **99,2** % (95 % CI = 98,4 % - 100,0 %)

Alloclassic: After **15,5** y observed survival is **98,6** % (95 % CI = 98,2 % - 99,0 %)

H Max CLESS Lima: After **9,6** y observed survival is **98,5** % (95 % CI = 96,9 % - 100,1 %)

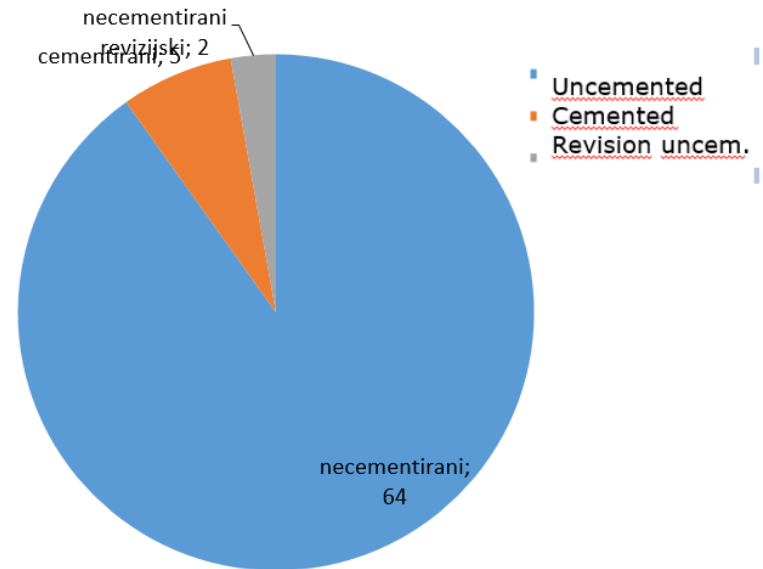
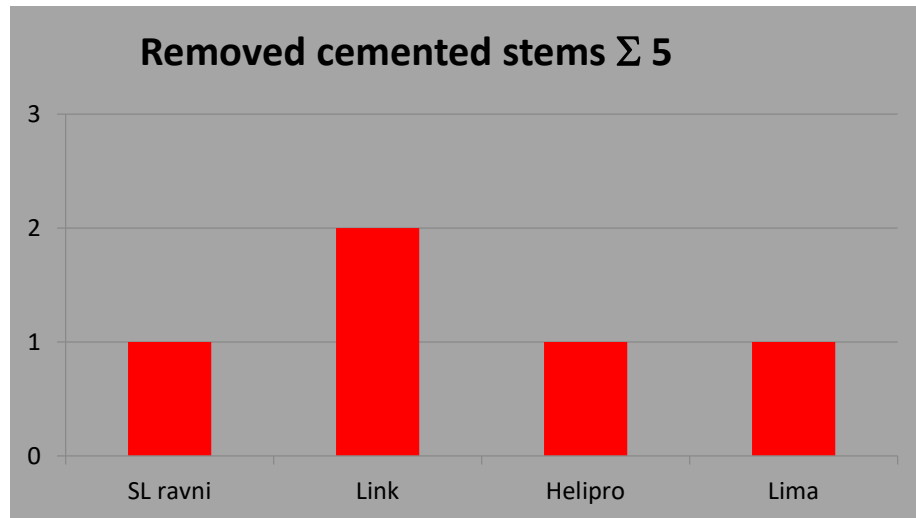
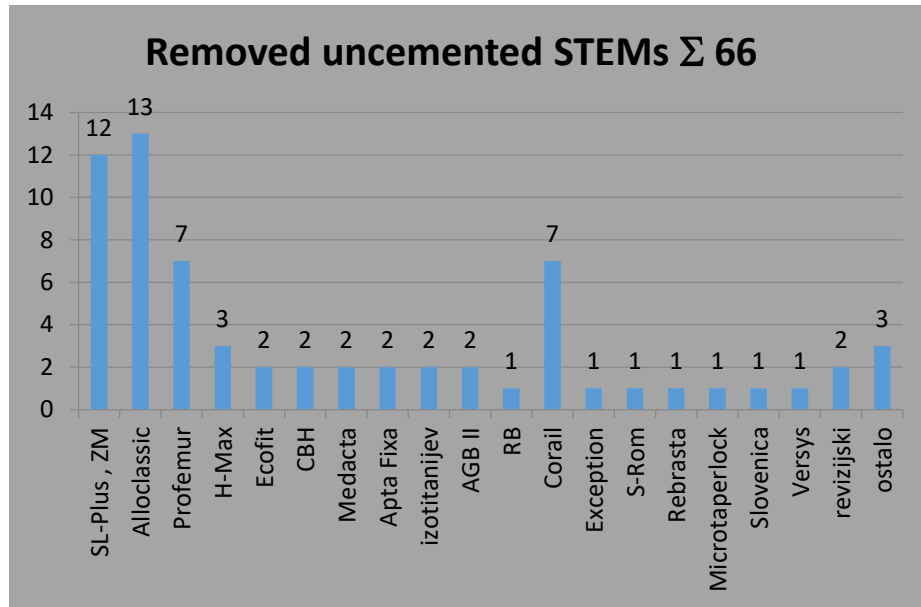
Corail: After **15,5** y observed survival is **96,9** % (95 % CI = 94,9 % - 98,9 %)

Versys: After **18,9** y observed survival is **95,1** % (95 % CI = 93,1 % - 97,1 %)

SL-Plus (ZM): After **18,9** y observed survival is **93,1** % (95 % CI = 91,5 % - 94,7 %)

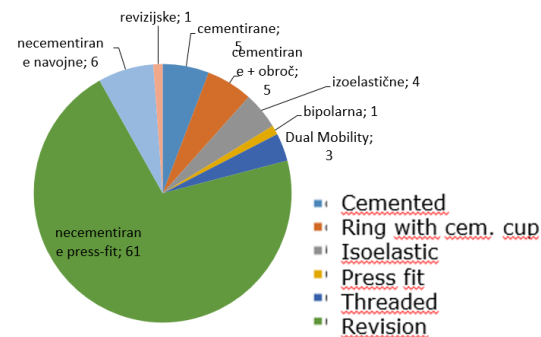
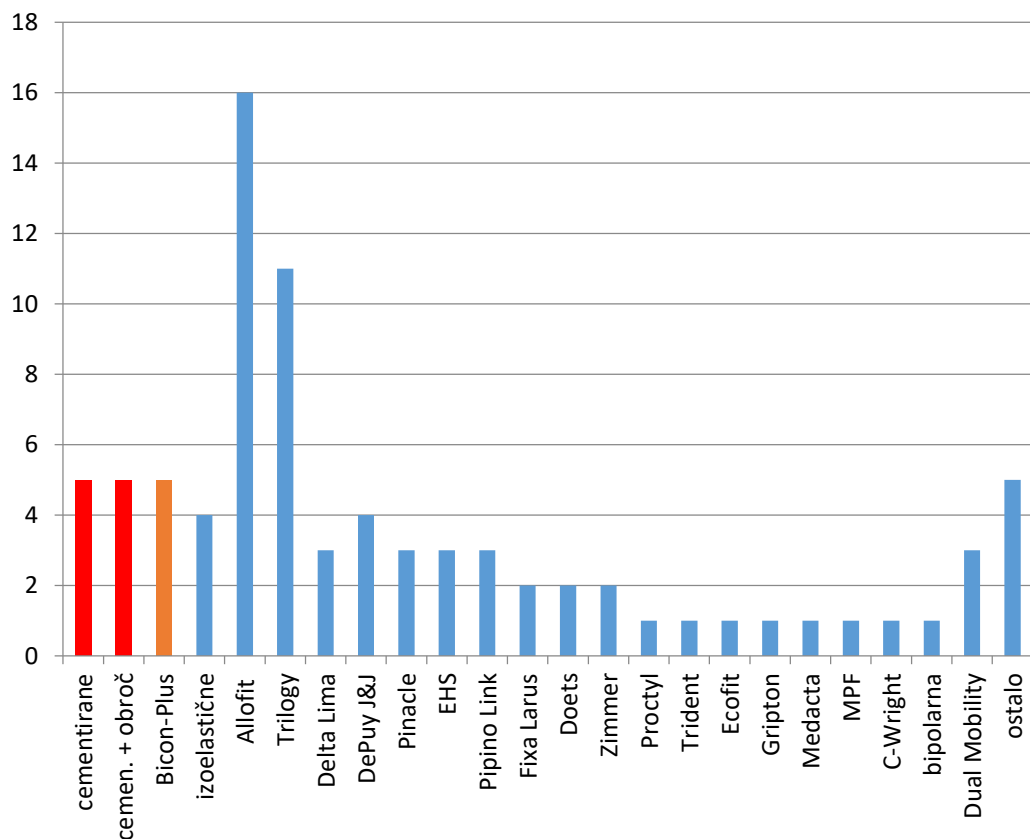
Profemur Z: After **18,1** y observed survival is **89,2** % (95 % CI = 84,9 % - 93,5 %)

Removed and collected femoral components in 2020 (N° 71)

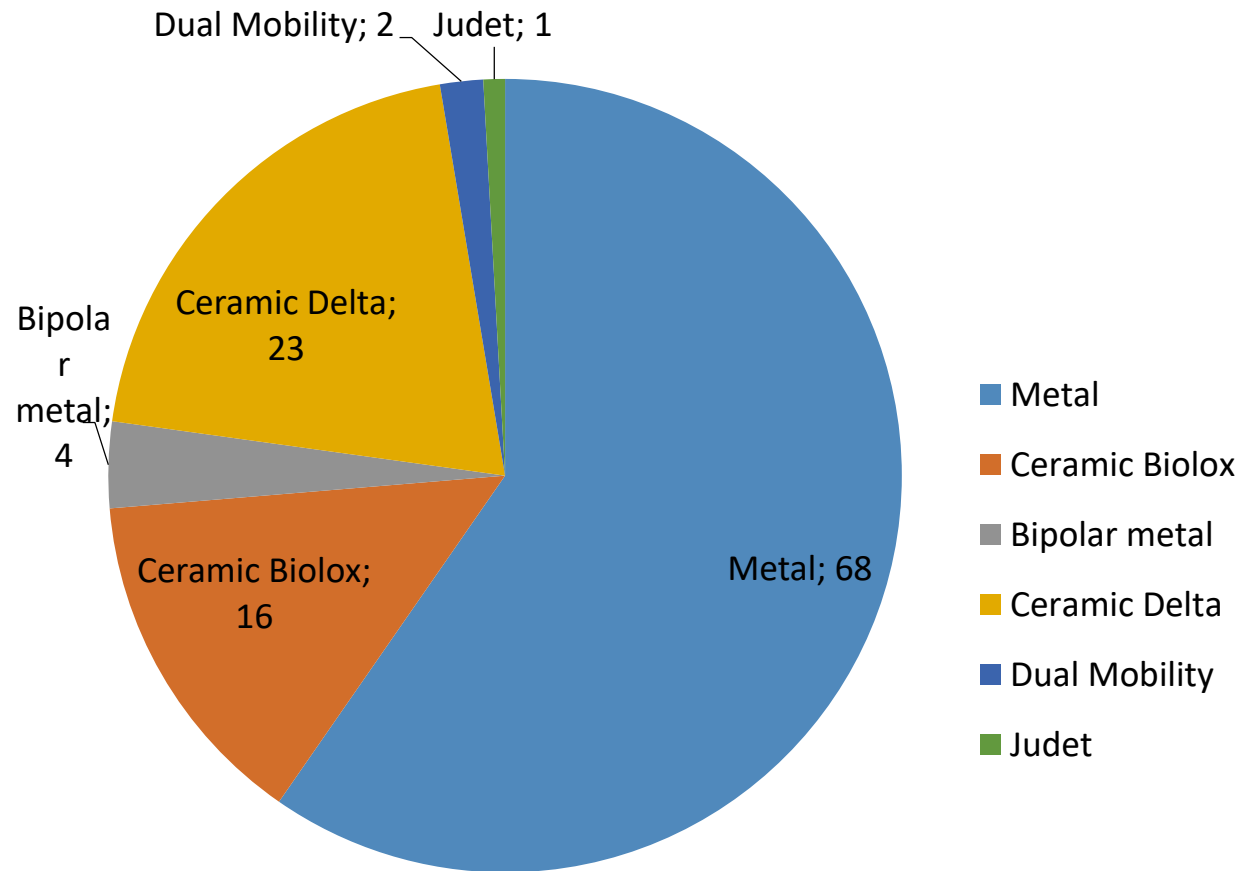


Removed and collected acetabular components: cemented, threaded and press-fit in 2020 (N° 86)

Removed acetabul Σ 86



Removed and collected head components in 2020 (N°114)





Removed stems – time in situ 2009-2020 (collected)

Charnley-Mueller stems (N° 59) (2009-2018)	23,5 ± 7,0 y (10,8 – 41,1)
Isoelastic stems (N° 181) (2009-2020)	16,2 ± 4,8 y (5,1 – 28,1)
Straight SL cem. stems (N° 168) (2009-2019)	13,0 ± 6,5 y (0,5 – 36,4)
SL-Plus ZM debla (N° 182) (2009-2020)	9,5 ± 5,6 y (0 – 27,0)
Profemur debla (N° 72) (2009-2020)	7,0 ± 4,6 y (0,1 – 17,5)

„The longest time in situ“

Smith-Petersen



Profemur Z
Cremascoli/
Wright



ZM Endoplus (S&N)
(rev.)



Isoelastic
Mathys



SL Lima



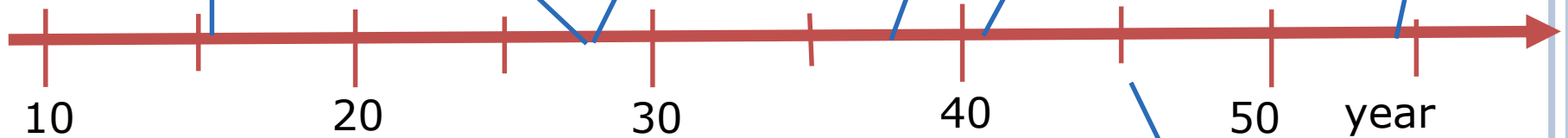
Charnley -
Muller



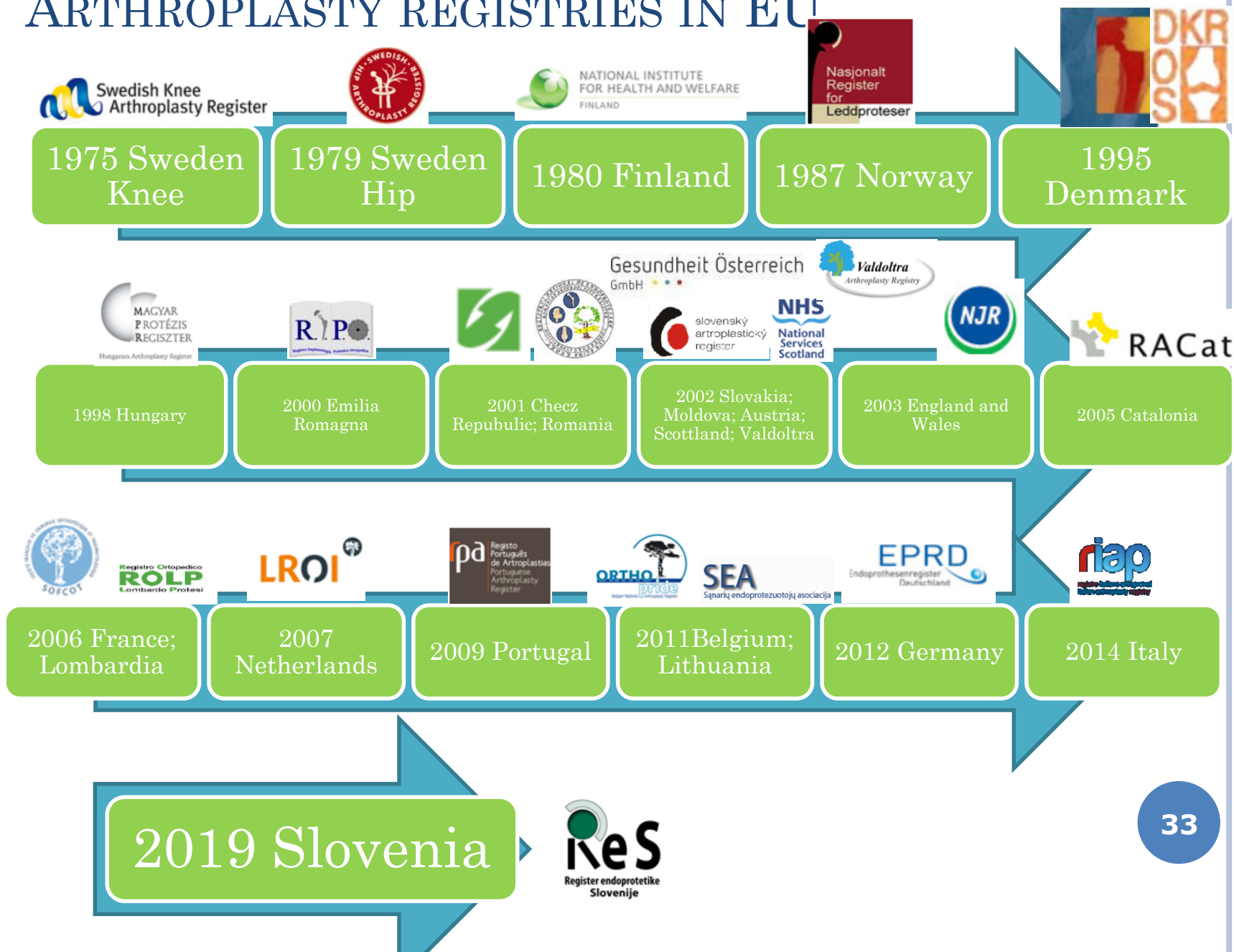
Judet



Cemented Link



ARTHROPLASTY REGISTRIES IN EU





Valdoltra

Arthroplasty Registry

Citation:

Levašič V, Milošev I. Valdoltra Arthroplasty Registry [Internet]. Orthopaedic Hospital Valdoltra. [cited 2021 October 19]. Available from: <http://www.ob-valdoltra.si/sl/international>