Valdoltra
Arthroplasty Registry

Valdoltra KNEE Arthroplasty Registry 2019

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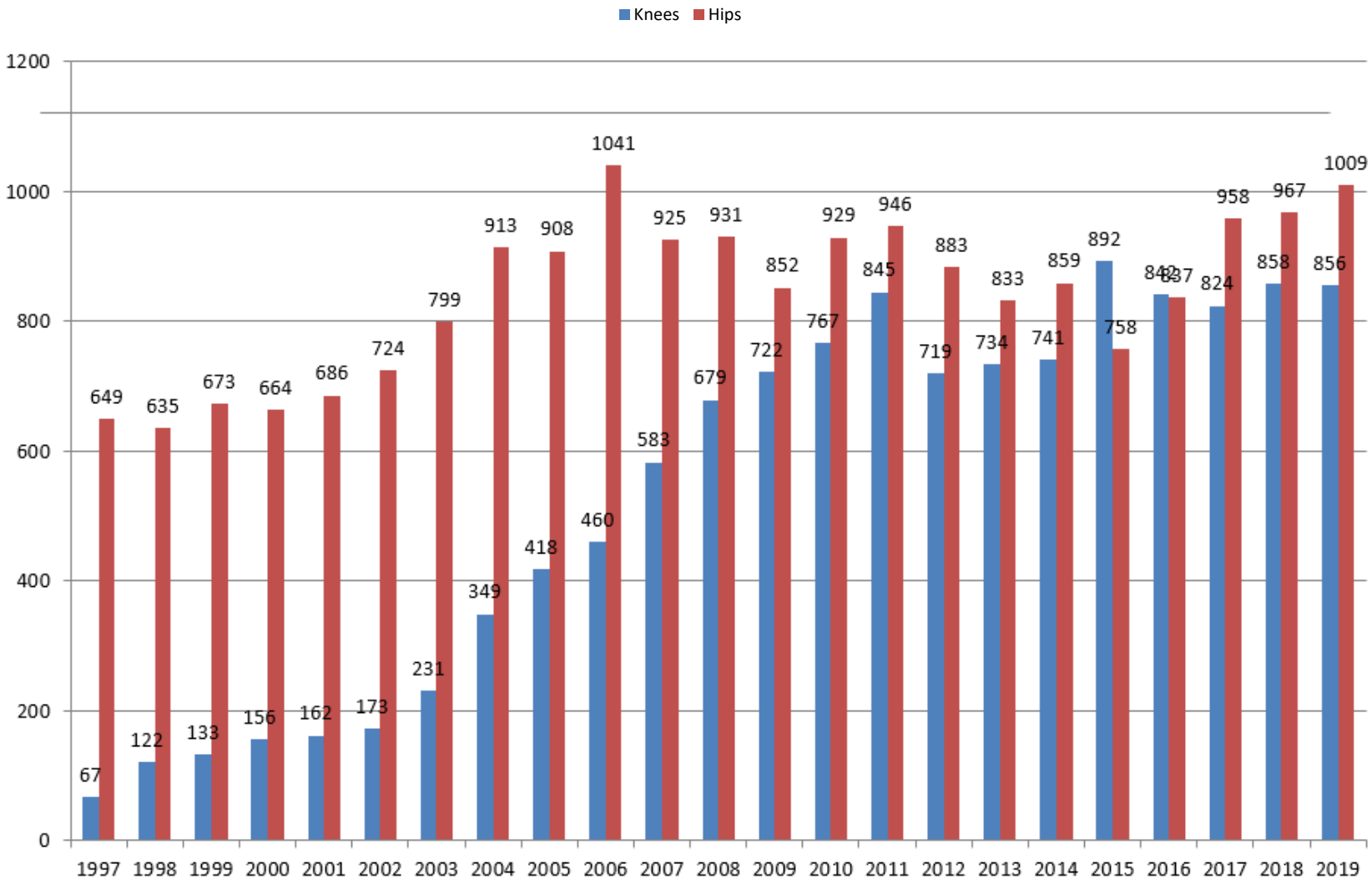
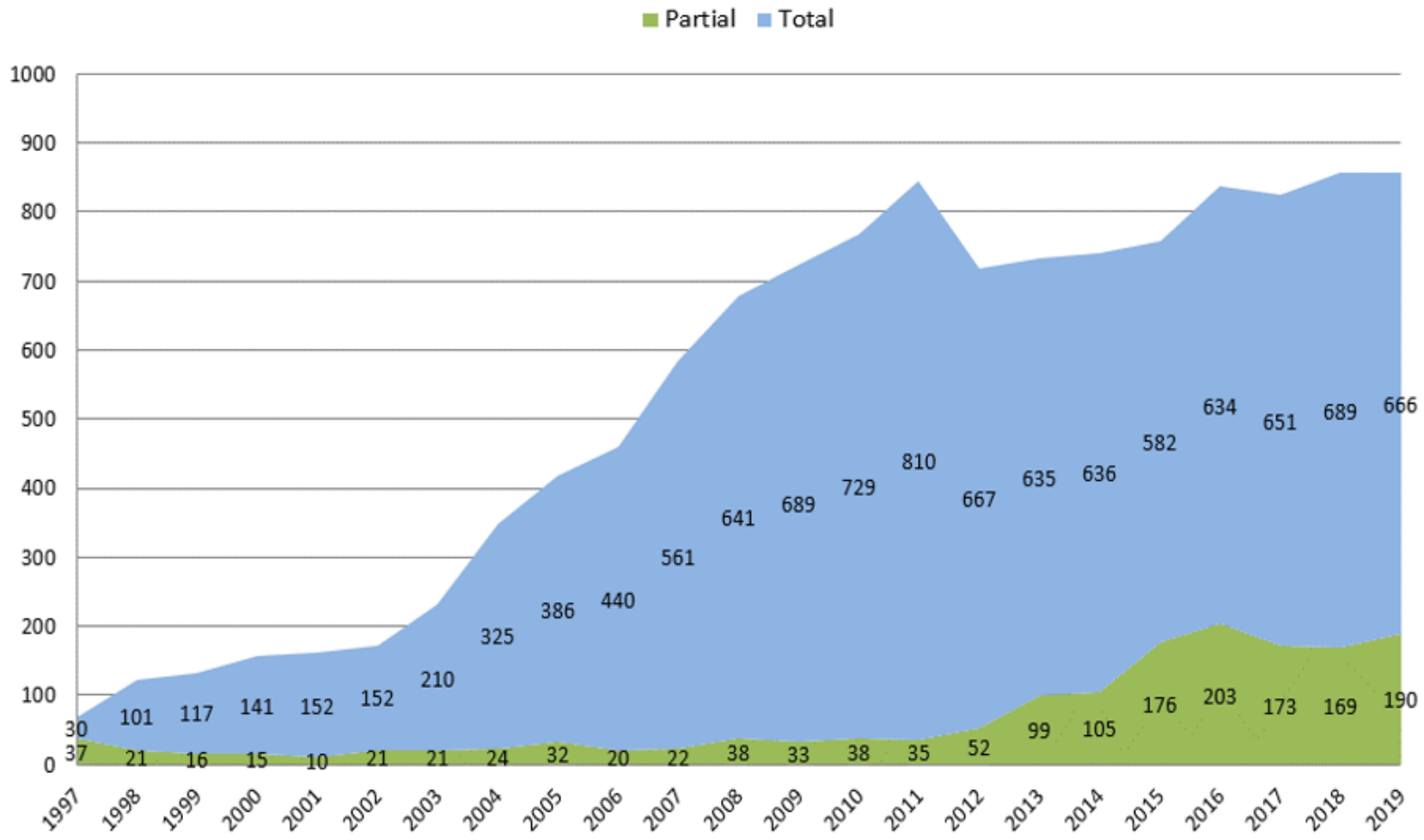
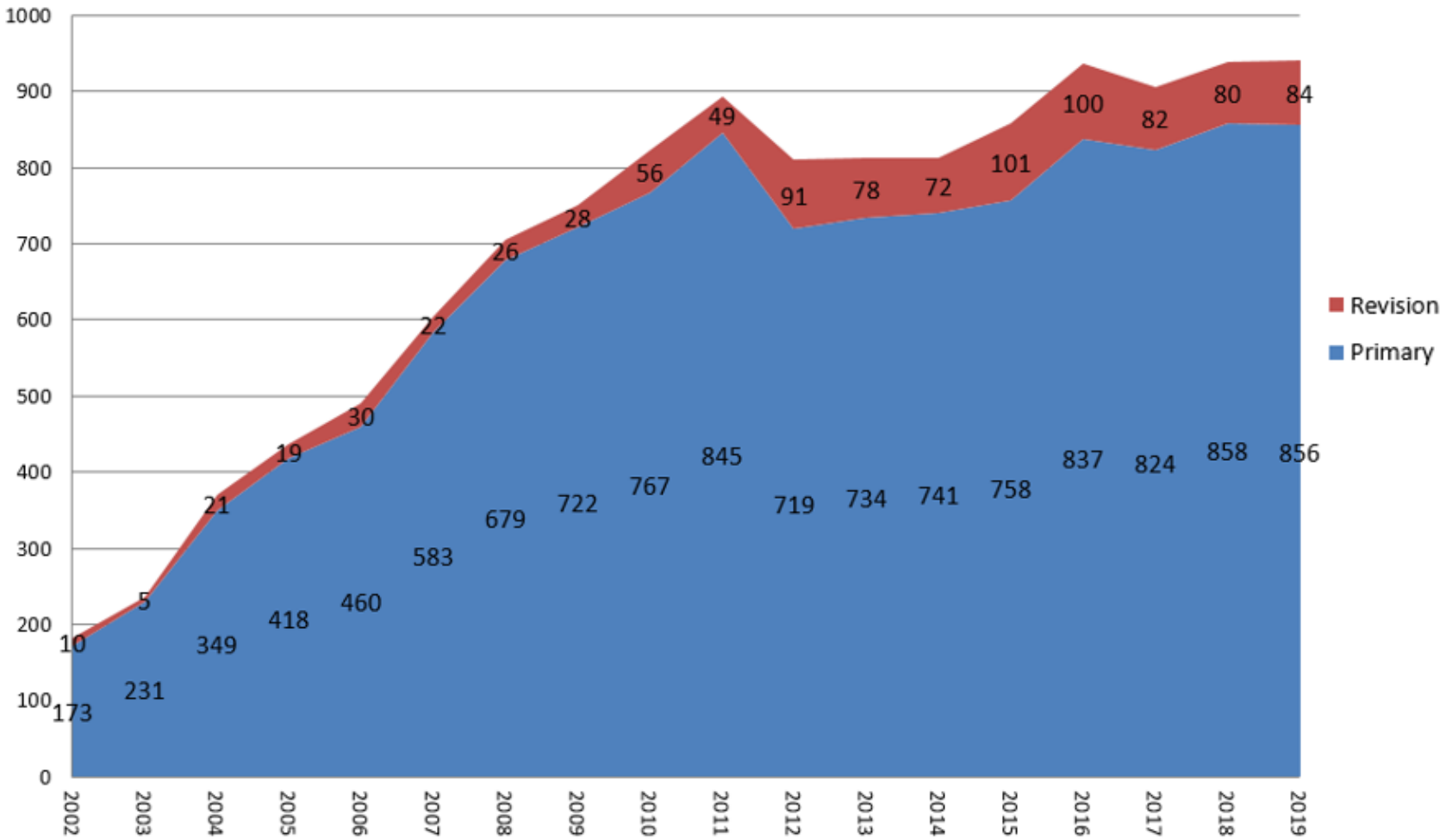
Primary Hip vs. Knee prostheses



Total and Partial Knee Joint Replacement

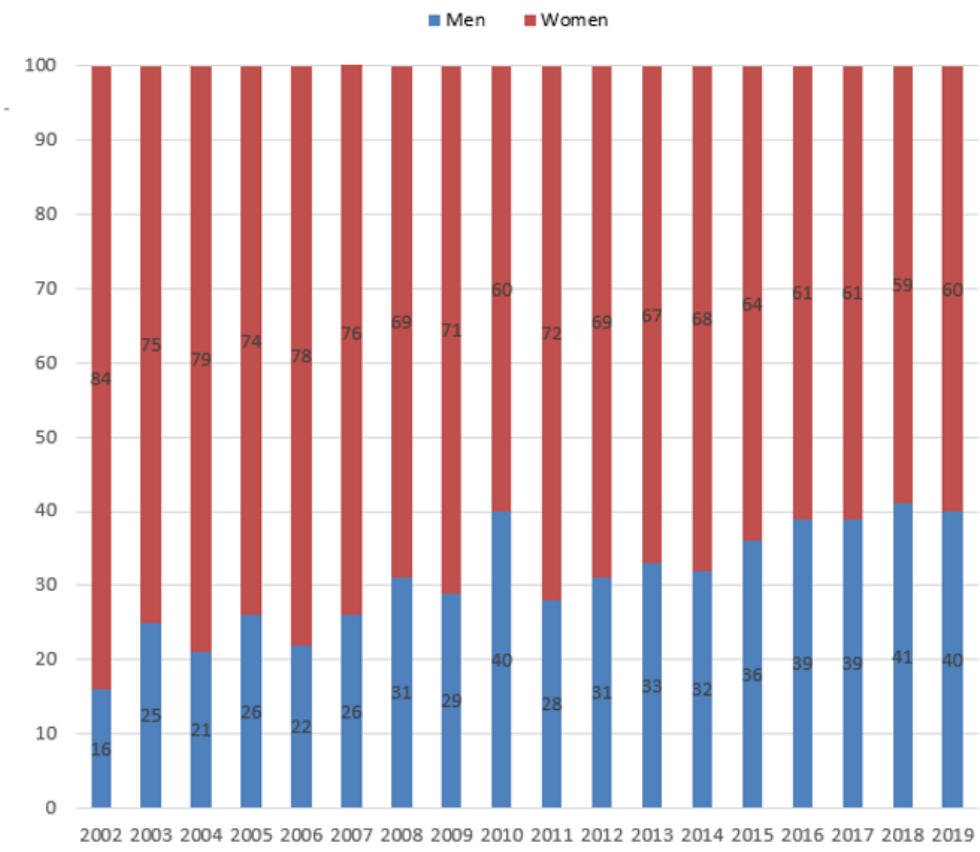


Primary vs. revision knee replacement

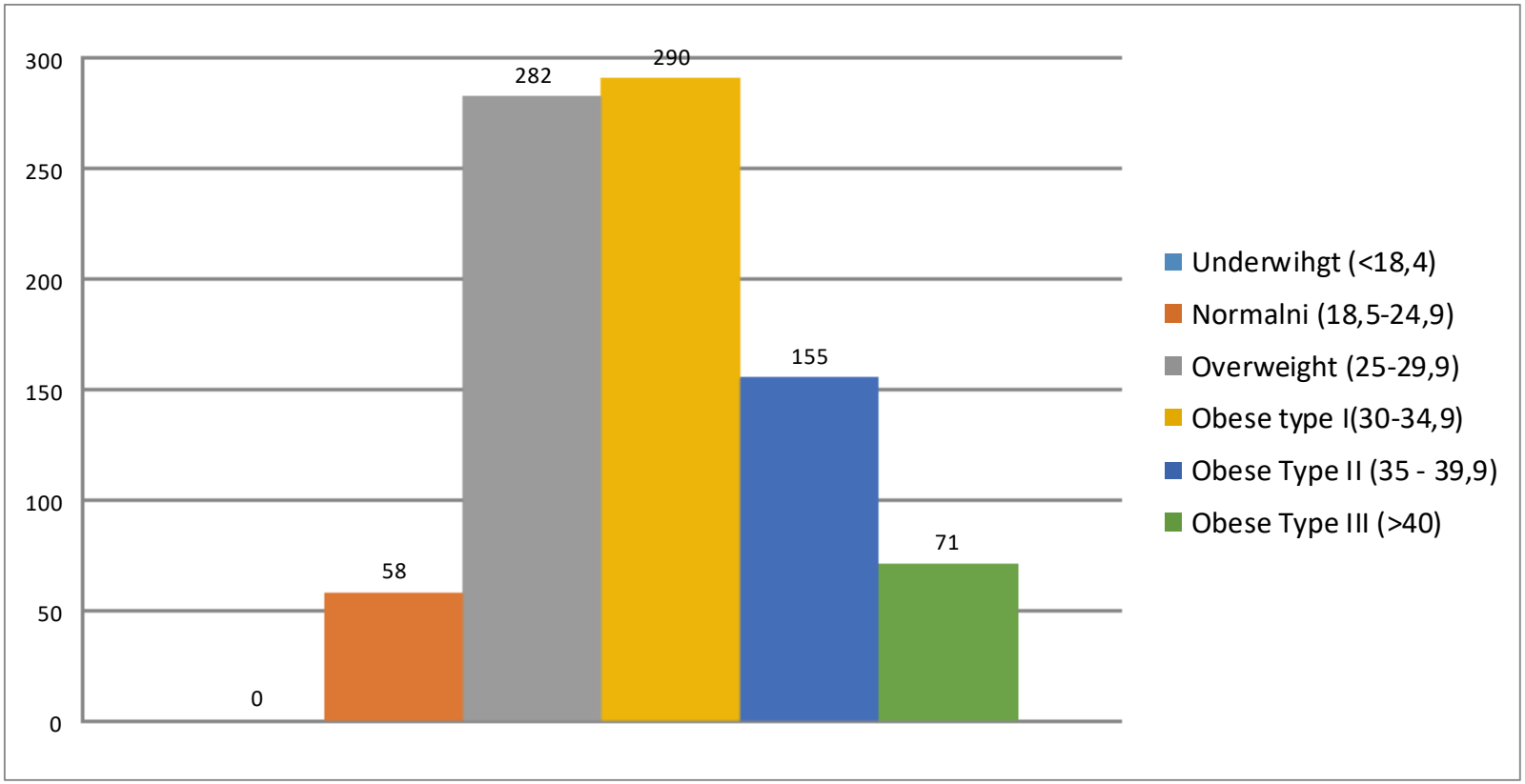


Patient data: age and gender at primaries

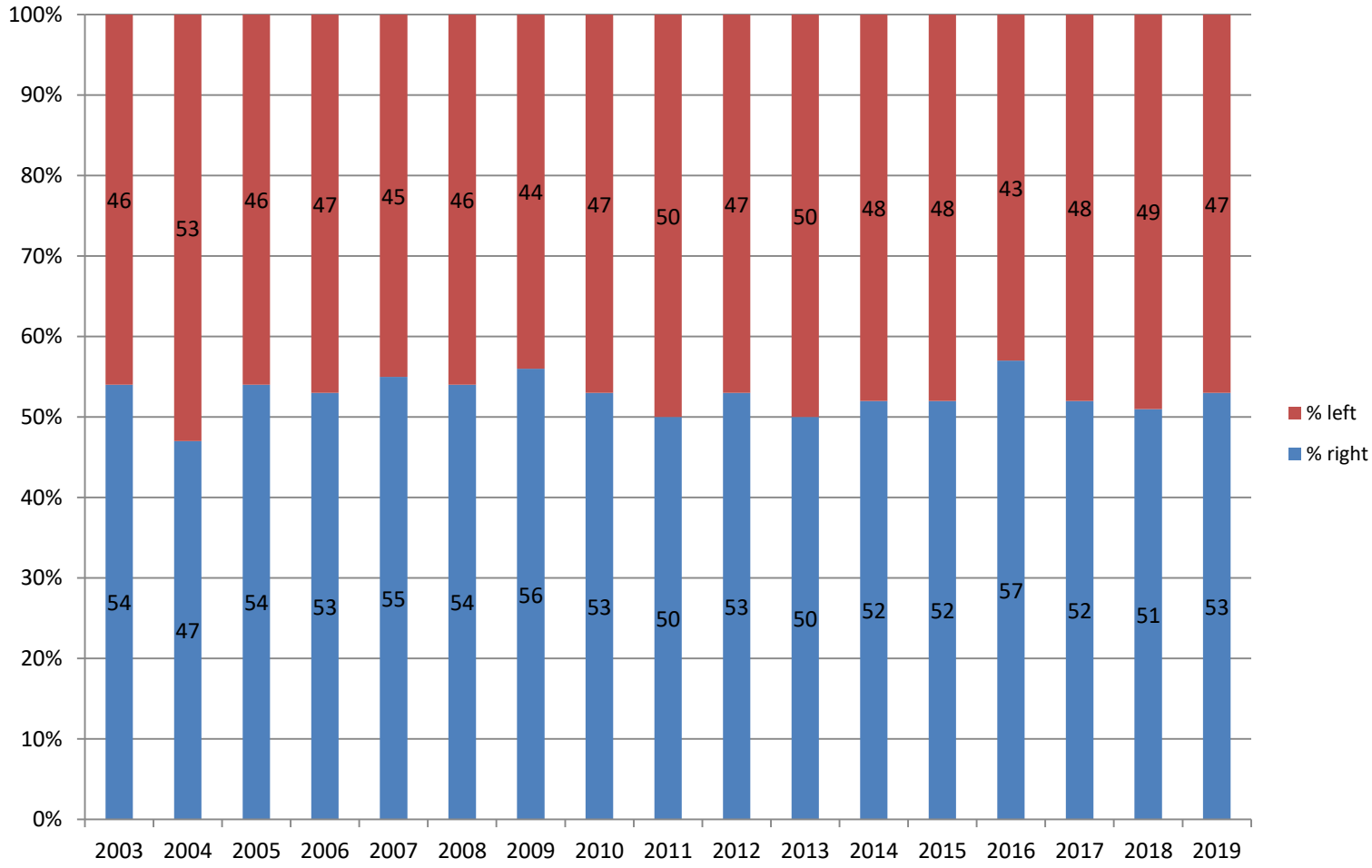
	Men	Women
2006	67 (40-80)	70 (43-84)
2007	69 (51-87)	71 (27-87)
2008	68 (40-85)	70 (32-87)
2009	68 (43-83)	71 (41-88)
2010	67 (33-86)	69 (40-87)
2011	67 (27-90)	70 (34-90)
2012	67 (41-82)	70 (48-89)
2013	67 (36-87)	70 (47-89)
2014	66 (30-87)	69 (41-89)
2015	67 (47-90)	70 (39-87)
2016	68(43-89)	70 (40-88)
2017	67(42-88)	70 (42-88)
2018	67 (29-88)	69 (28-91)
2019	66 (39-87)	68 (42-89)



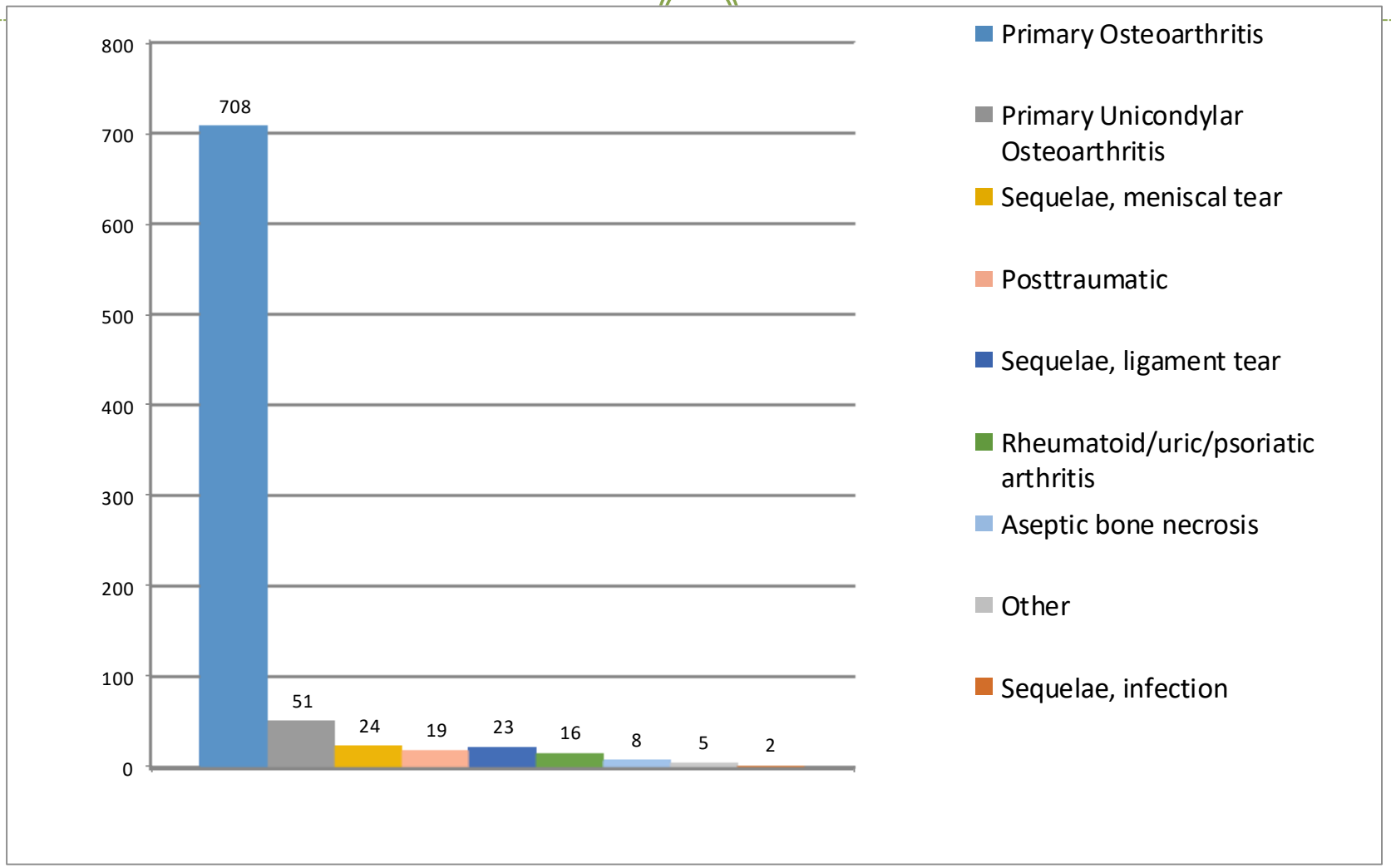
BMI of patients in 2019: average 31,9; min 19,6; max 50,5



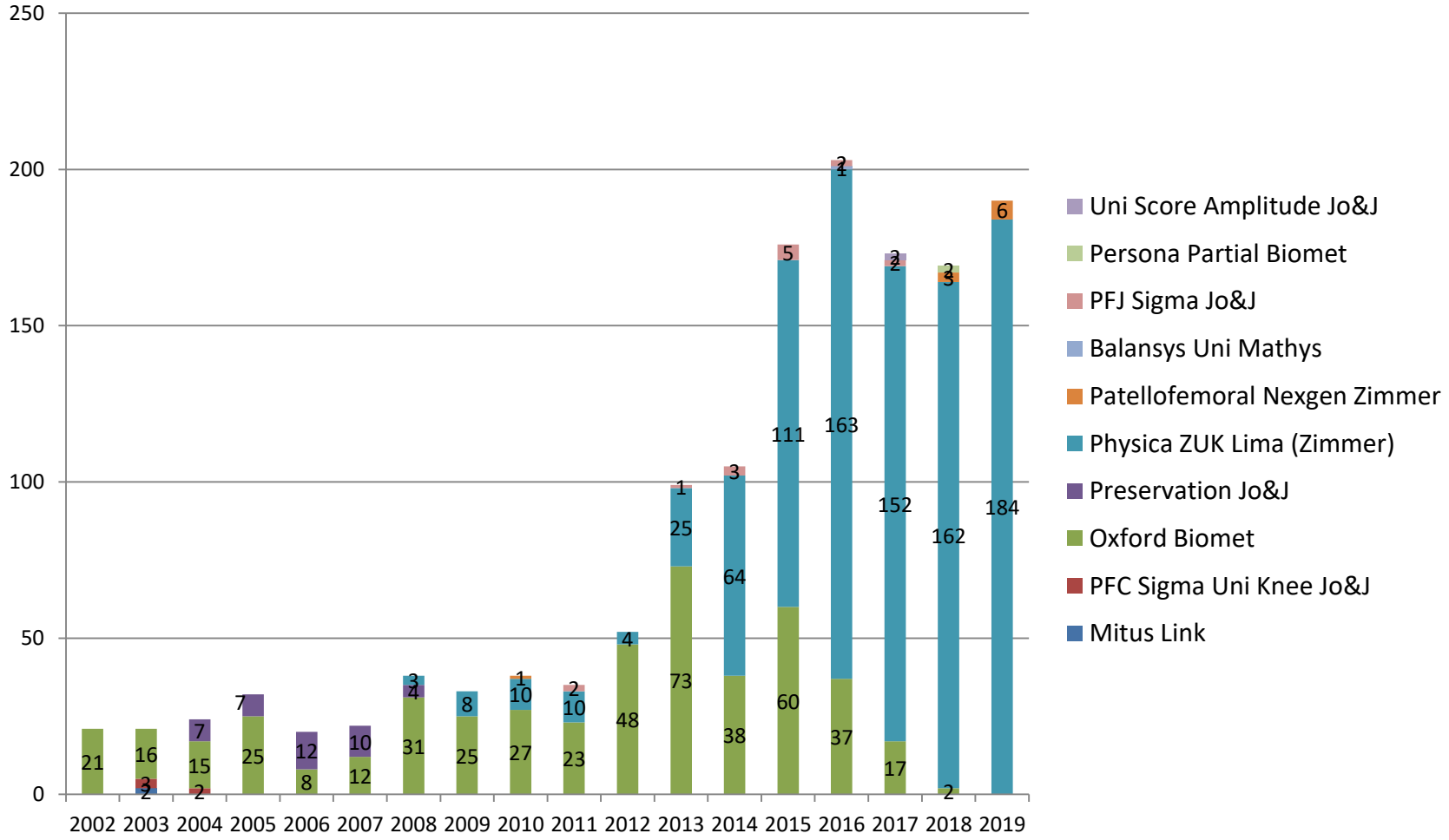
Side of operated knee 2003 – 19



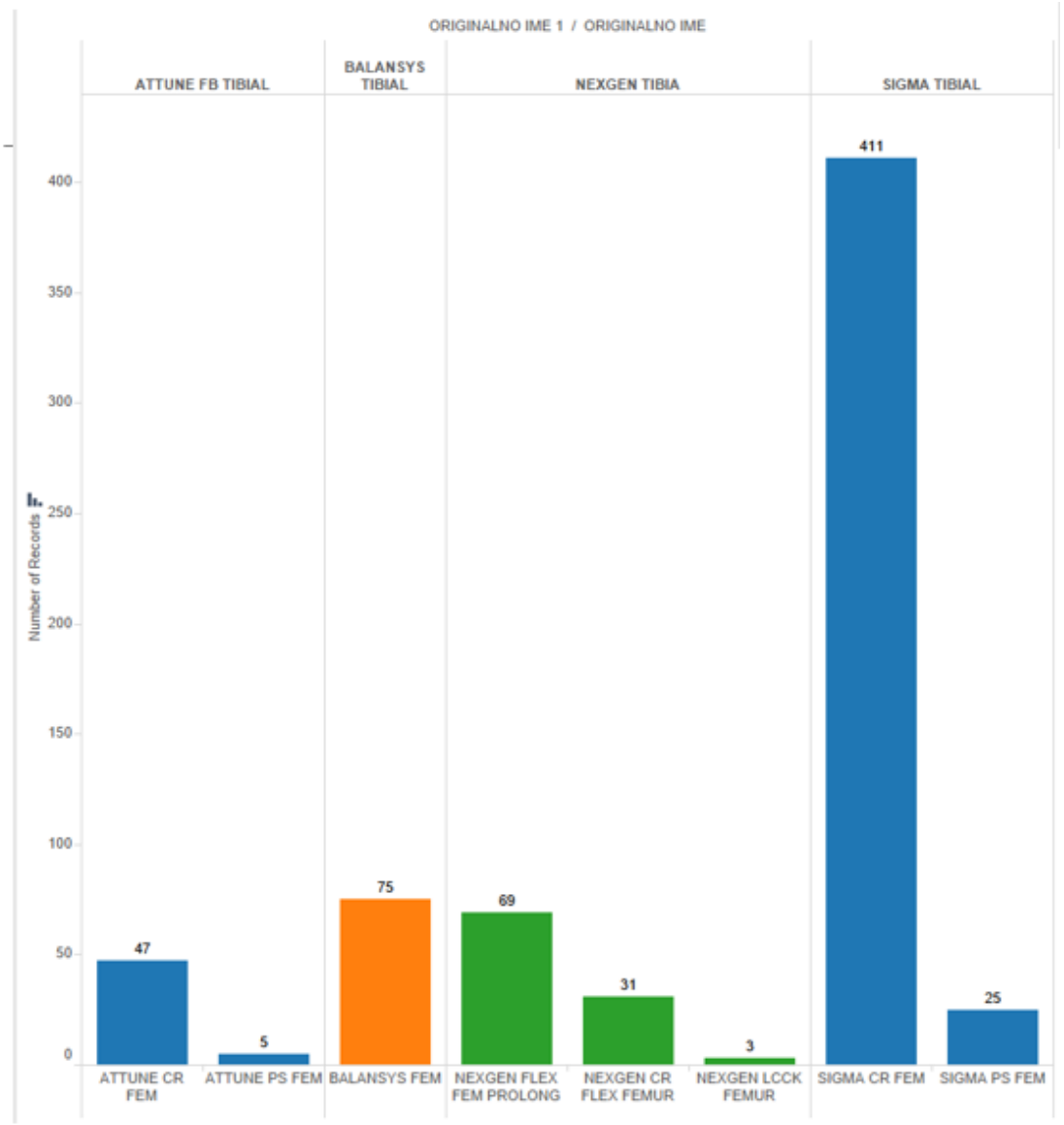
Preoperative diagnosis 2019



Unicondylar Knee Prostheses in 2019: sum 190

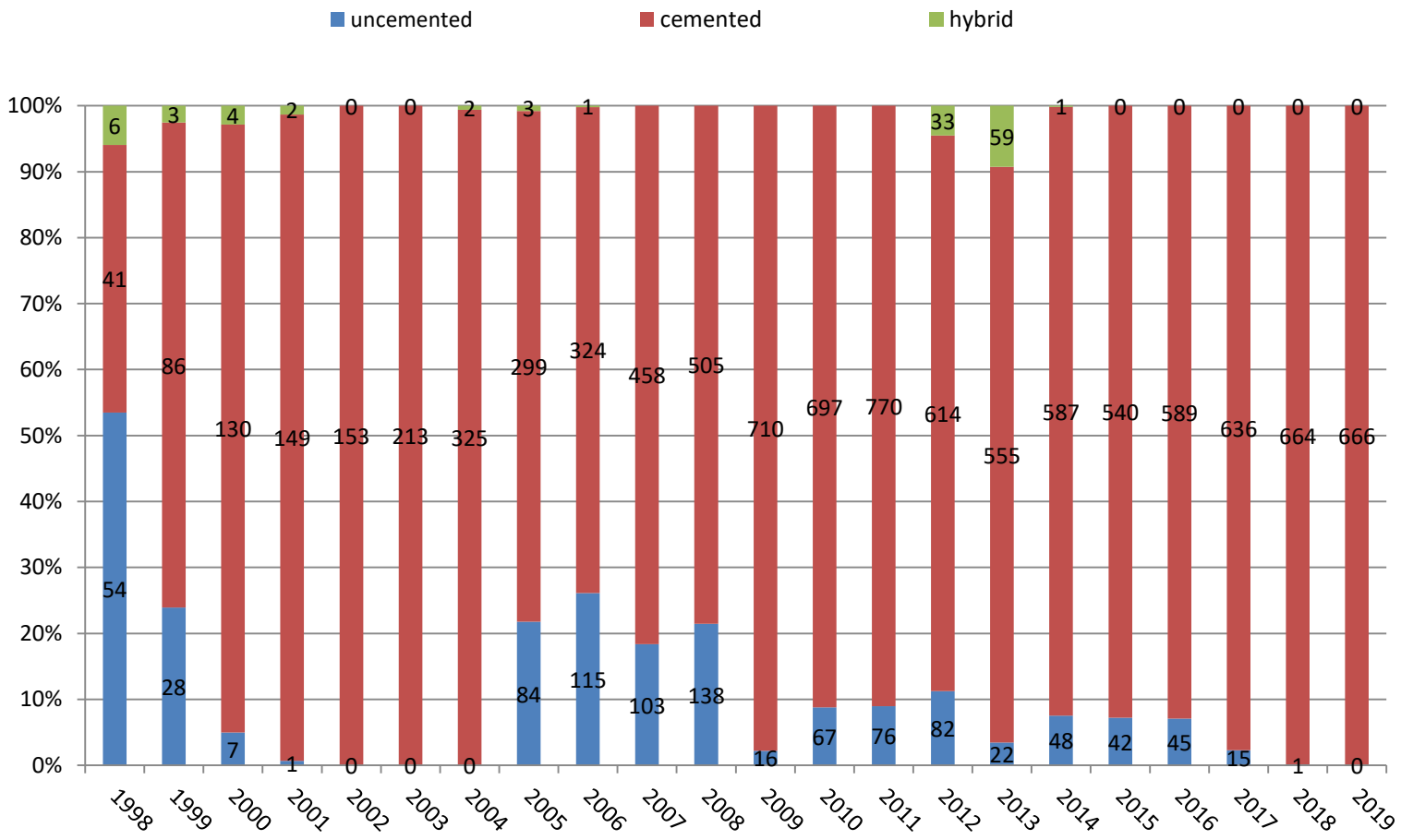


Primary TKR in 2019 by manufacturer



Implanted with patela: 20

Knee replacement by use of cement



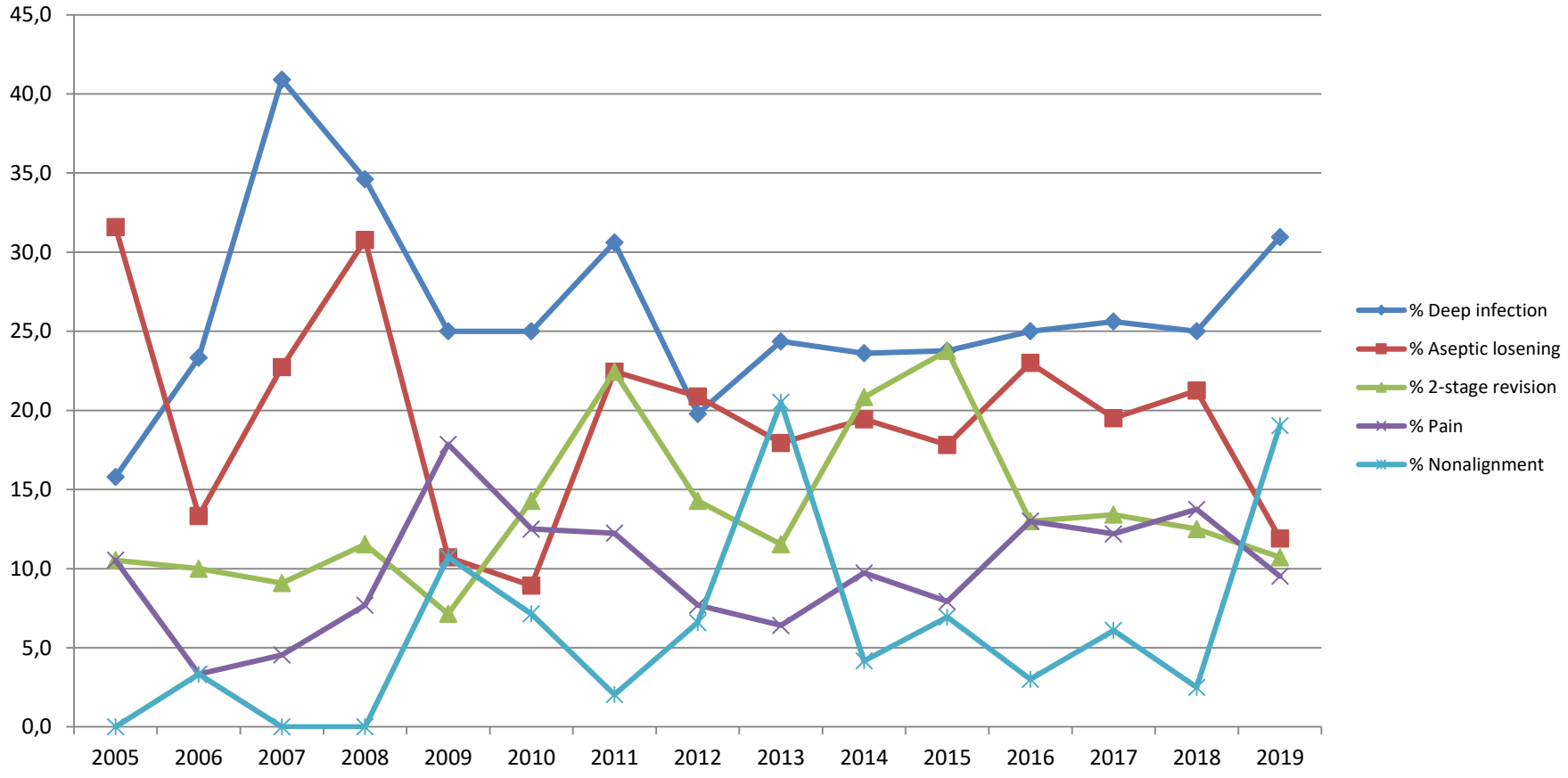
Revision operations of Knee joint replacements

2019: 84 REVISIONS IN 75 PATIENTS

Reasons for revision Knee vs. Hips 2002-2019

Period 2002-2015	Knee (%)	Hips (%)
Deep infection	24,6	12,4
Aseptic loosening	20,2	55,3
Nonalignment, malposition	14,4	0,0
2-stage revision	13,1	6,9
Pain	8,6	2,3
OA of other compartment	7,5	0,0
Other (wear of PE, …)	6,8	5,2
Periprosthetic fracture	2,6	7,7
Dislocation	1,4	4,8
Implant broken	0,9	2,9
Oteolysis	0,00	2,5

Reasons for revision TKR from 2002 to 2019 (%)



Revisions from other hospitals

Year	All revisions	Nº of revisions from other hospitals	%
2002	10	2	20 %
2003	5	1	20 %
2004	21	5	24 %
2005	19	2	11 %
2006	30	4	13 %
2007	22	2	9 %
2008	26	2	8 %
2009	28	2	7 %
2010	56	8	7 %
2011	49	6	12 %
2012	91	12	13 %
2013	77	17	22 %
2014	72	12	17 %
2015	101	15	15 %
2016	100	12	12%
2017	82	12	15%
2018	80	11	13%
2019	84	20	24%

Revision burden – all revisions

Year	RB (revision burden) = Nº of revisions*100/(Nº of primaries+ Nº of revisions) in %	Nº of revisions for infection*100 / (Nº of primaries+ Nº of revisions) in %
2002	5,46	1,09
2003	2,12	0,00
2004	5,68	0,81
2005	4,35	0,92
2006	6,12	1,22
2007	3,64	1,49
2008	3,69	1,28
2009	3,73	0,93
2010	6,80	1,46
2011	5,48	1,23
2012	11,23	1,98
2013	9,61	1,60
2014	8,91	1,86
2015	11,76	2,56
2016	9,39	2,24
2017	7,73	1,99
2018	7,57	2,03
2019	6,81	2,34
Avarage Valdoltra	5,86	1,50
Norway 20	7,94	1,27
NJR 19	5,98	0,83

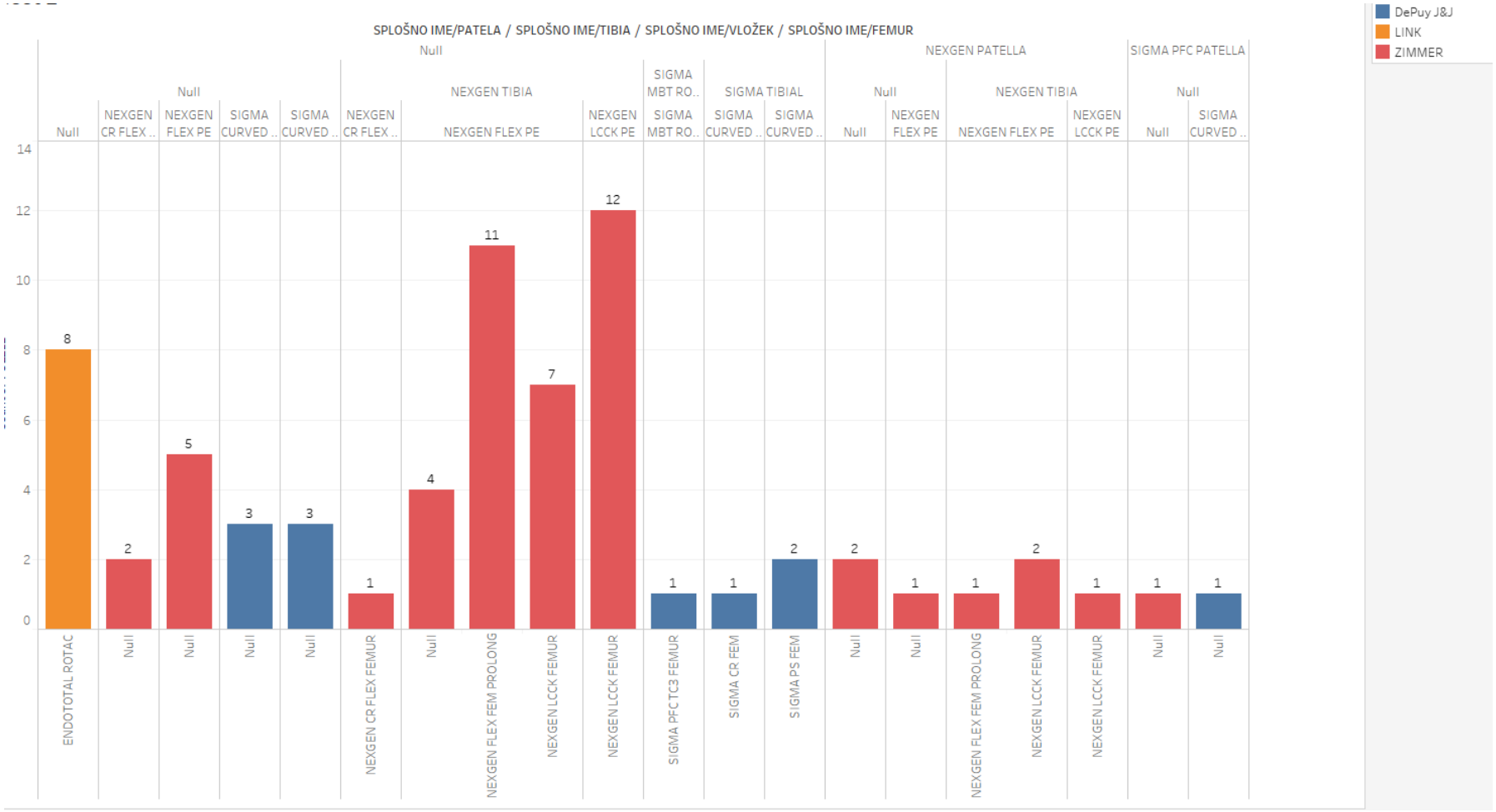
Revisions per 100 observed components years - knees

Year	Mean Follow up period (years)	Revision rate	Number primary cases	Number of all revisions	Number of first revisions in this FU period	Revision rate for revisions in this FU period	Observed component years	Revisions per 100 observed component years
2002	0,46	**5,46**	173	10	0	**0,00**	79,81	**0,00**
2003	0,88	**3,58**	404	15	0	**0,00**	354,16	**0,00**
2004	1,22	**4,56**	753	36	6	**0,76**	922,31	**0,65**
2005	1,60	**4,49**	1171	55	12	**0,98**	1873,54	**0,64**
2006	2,03	**4,95**	1631	85	21	**1,22**	3305,12	**0,64**
2007	2,36	**4,61**	2214	107	29	**1,25**	5216,43	**0,56**
2008	2,69	**4,40**	2893	133	39	**1,29**	7771,63	**0,50**
2009	3,05	**4,26**	3615	161	54	**1,43**	11015,85	**0,49**
2010	3,43	**4,72**	4382	217	82	**1,78**	15008,65	**0,55**
2011	3,79	**4,84**	5227	266	99	**1,80**	19818,78	**0,50**
2012	4,27	**5,66**	5946	357	136	**2,16**	25414,18	**0,54**
2013	4,75	**6,11**	6680	435	172	**2,42**	31728,17	**0,54**
2014	5,23	**6,40**	7416	507	208	**2,63**	38776,10	**0,54**
2015	5,69	**6,92**	8174	608	258	**2,94**	46528,03	**0,55**
2016	6,11	**7,28**	9016	708	320	**3,29**	55131,48	**0,58**
2017	6,56	**7,43**	9840	790	364	**3,42**	64524,19	**0,56**
2018	6,99	**7,52**	10698	870	410	**3,54**	74777,85	**0,55**
2019	7,43	**7,63**	11554	954	453	**3,62**	85880,35	**0,53**

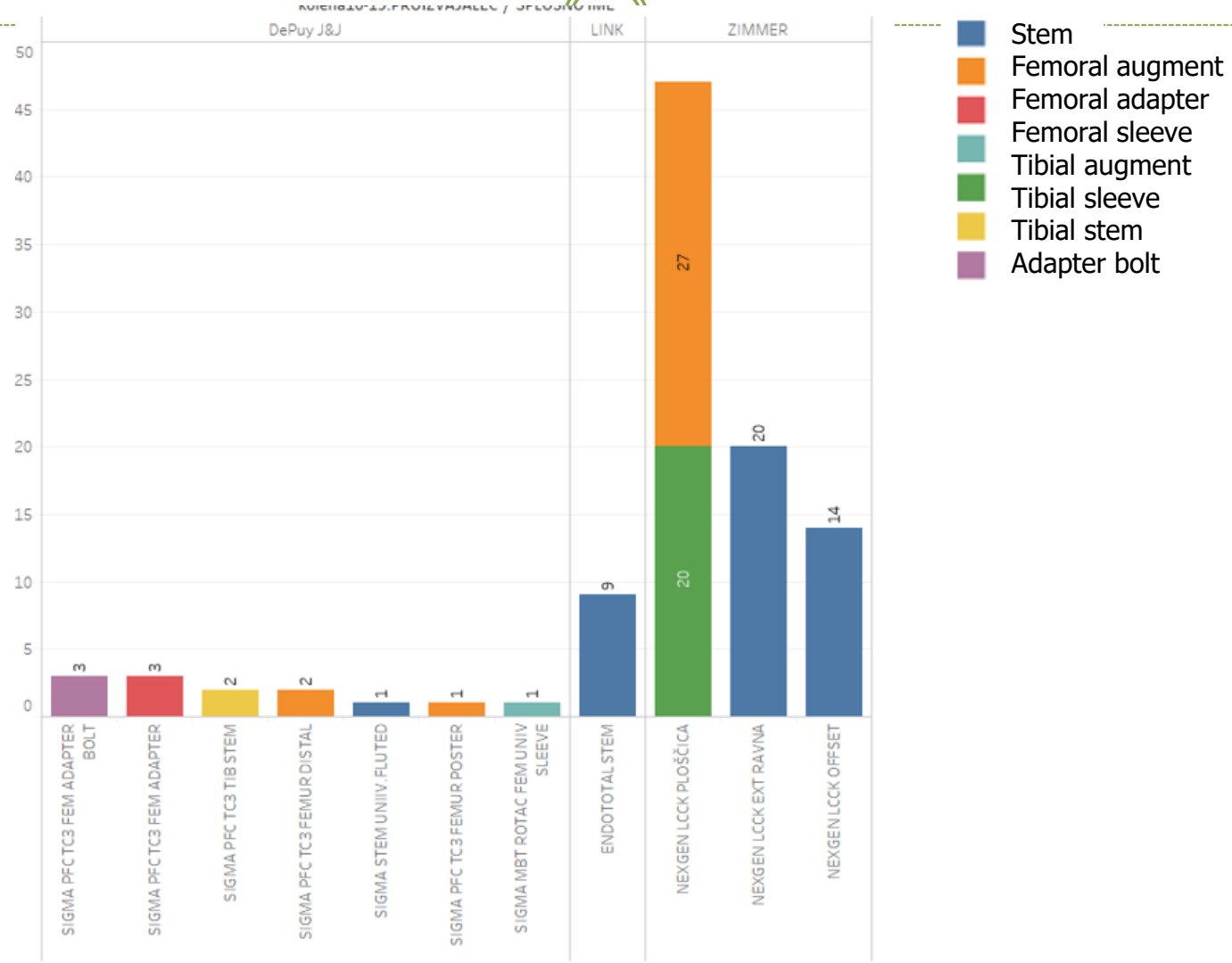
Revision rate for knee prostheses from 02 to 19

Name of implant	All implanted	Removed	% revisions
Attune Jo&J	151	0	0,00
PFJ Sigma Jo&J	15	0	0,00
Patellofemoral Nexgen Zimmer	10	0	0,00
Balansys Mathys	321	1	0,31
Physica ZUK Lima (Zimmer)	896	12	1,34
Sigma Jo&J	4229	69	1,63
Solution S&N	1152	30	2,60
Nexgen Monobloc Zimmer	859	27	3,14
Vanguard Biomet	531	21	3,95
AGC Biomet	747	30	4,02
Nexgen Zimmer	1562	79	5,06
Endomodel LINK	57	4	7,02
Preservation Jo&J	40	3	7,50
Nexgen LCCK Zimmer	40	3	7,50
Advance WRIGHT	300	23	7,67
Oxford Biomet	478	53	11,09
Genesis S&N	33	4	12,12

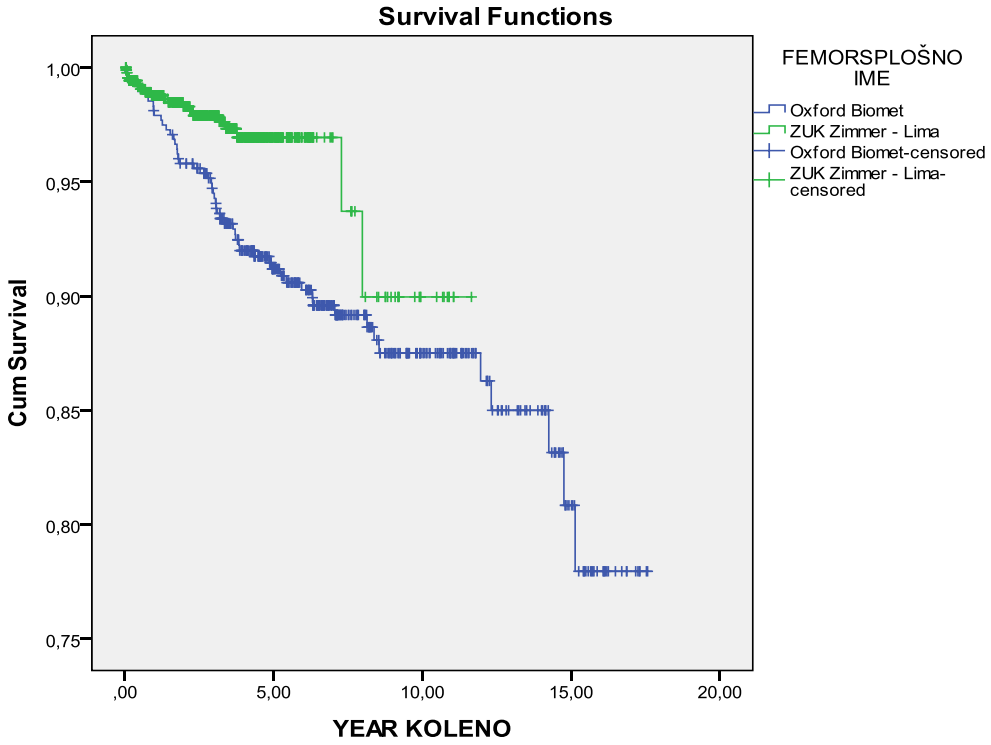
Revision TKR components in 2019 by manufacturers



Added stems, sleeves, augments and adapters in revisions in 2019



Survival of 2 unycondylar knee prosthes: Oxford Biomet, ZUK Zimmer (Lima)



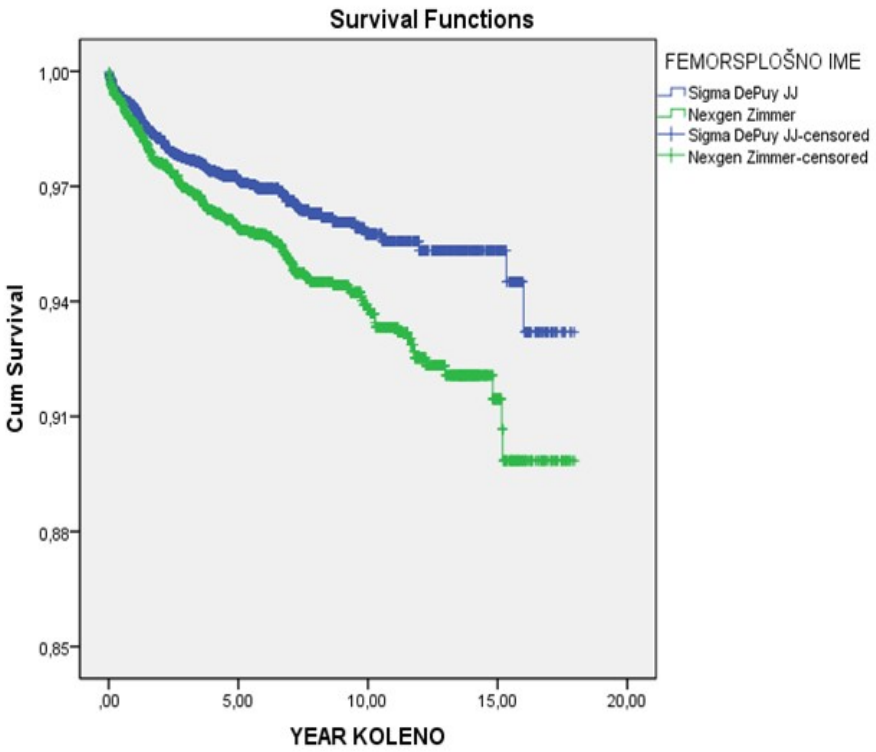
End of FU 31.12.2019

Overall Comparisons			
	Chi-Square	df	Sig.
Log Rank (Mantel-Cox)	10,222	1	0.001

Oxford Biomet: After **15,5** yrs survival **78,0 % (**95 % CI = **69,0 % - 87,0 %)**

ZUK Zimmer - Lima: After **11,1** yrs survival **90,0 %** **(**95 % CI = **80,6 % - 99,4 %)**

Survival of 2 total knee prostheses: Sigma De Puy Johnson, Nexgen Zimmer



Overall Comparisons			
	Chi-Square	df	Sig.
Log Rank (Mantel-Cox)	10,405	1	0.001

End of FU 31.12.2019

Sigma DePuy JJ: After **17,3** yrs survival **93,2 % (**95 % CI = **90,1 % - 96,3 %)**

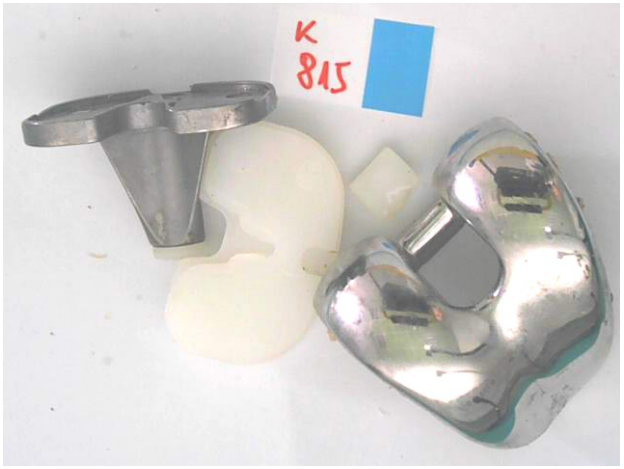
Nexgen Zimmer: After **16,9** yrs survival **89,8 % (**95 % CI = **86,7 % - 92,9 %)**

Removed prostheses – time in situ KNEES 2002 - 2019

Year	N° of removed	Time in situ of the removed (Year)
2002	7	4,8 (1 – 10)
2003	5	7,9 (2 – 19)
2004	18	3,9 (0 – 21)
2005	15	4,9 (0 – 13)
2006	25	5,3 (0 – 13)
2007	17	6,6 (0 – 20)
2008	21	6,5 (0 – 24)
2009	23	3,5 (0 – 12)
2010	36	3,8 (0 – 13)
2011	19	4,8 (0 - 18)
2012	42	3,2 (0 – 10)
2013	61	4,1 (0-20)
2014	45 (collected)	4,0 (0-18)
2015	61 (collected)	4,8 (0-19)
2016	66 (collected)	4,4 (0-20)
2017	52 (collected)	6,1 (0-21)
2018	30 (collected)	4,4 (0-18)
2019	50 (collected)	4,1 (0-21)
Sum	541	avarage: 4,8 (0 - 24)

„The longest tim in situ“

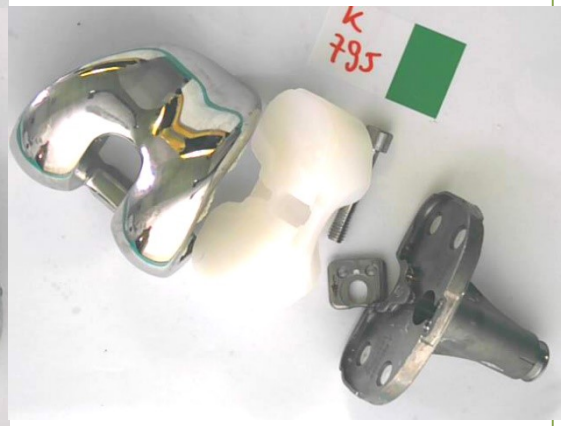
IB Cremascoli
Time in situ: 21,6 years



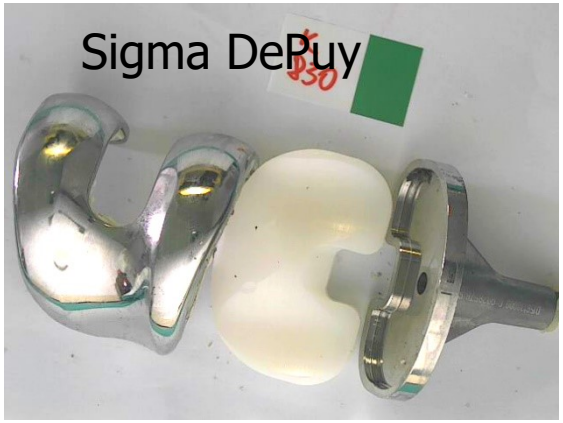
Nexgen Zimmer
Time in situ: 11,4 years

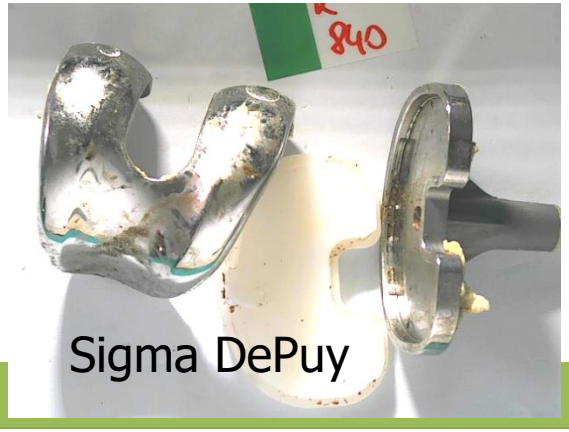
Removed total knee prostheses

Nexgen

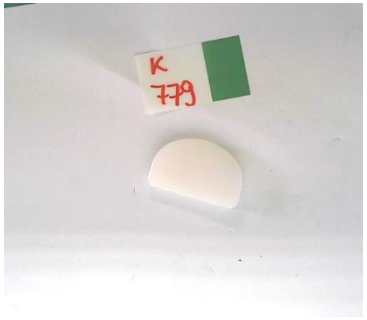


Removed total knee prostheses

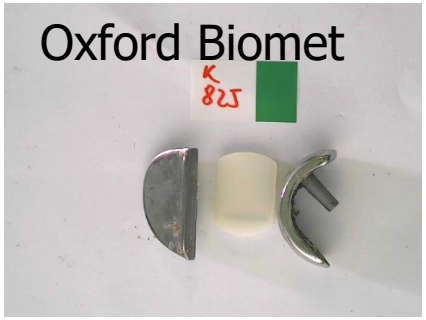




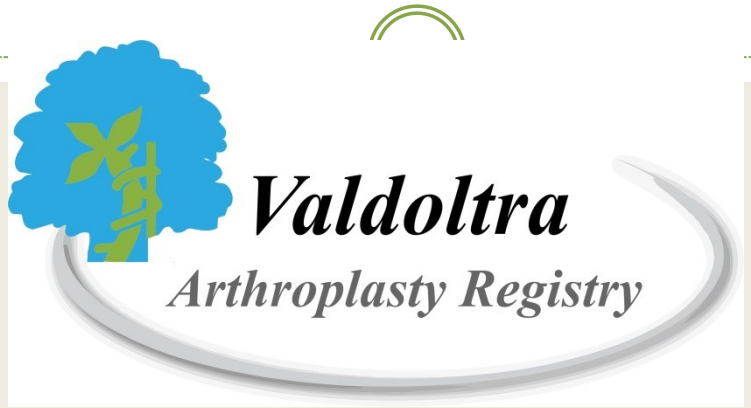
Removed partial knee prostheses



Oxford Biomet



Lima (Zimmer)



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