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Return to work after primary total hip or knee arthroplasty. First French study. Retrospective study of 241 cases.

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Abstract

Introduction

The quality and reliability of the results of primary total hip or knee arthroplasty (THA, TKA) have allowed indications to be extended to younger, working-age patients, raising the issue of return to work. This question has never been specifically addressed in THA and TKA in a French population. We therefore conducted a retrospective study to determine 1) the rates and intervals of return to work, and 2) factors affecting return to work and reasons for non-return.

Hypothesis

Rates and intervals of return to work are comparable to those in Western countries as a whole: 1.1-10.5 weeks in THA and 8-12 weeks in TKA.

Material and method

A single-center retrospective study included patients aged under 65 at surgery, between 2009 and 2013. A questionnaire collected population and occupational data. The patients' occupational situation was collected at a minimum 1 year postoperatively. During the study period, 289 TKAs or THAs were performed; 241 patients were recontacted, 144 of whom had been working at the time of surgery: 72 THAs and 72 TKAs. The sex-ratio was well balanced: 69 males, 75 females. Mean

age was 55.8 ± 8 years (range, 18.6-65.7 years). The mean time from surgery to data collection was 34.5 months (95% CI, 32.2-36.8 months).

Results

86 patients (57.6%) returned to work, at a mean 124 days (range, 15-540 days; 95% CI, 102.8-144.4 days). At 3 months, 55.4% of patients (n = 46) had returned to work, and 97.6% (n = 81) at 12 months. In most cases, patients returned to the same occupation.

Conclusion

The study hypothesis was not confirmed. French primary THA or TKA patients returned to work later and less frequently than in other Western countries.

Level of evidence: IV, retrospective study without control group

Keywords: total hip arthroplasty, total knee arthroplasty, return to work

1. Introduction

Advances in surgical technique, instrumentation and implants have increased implant survival in total hip (THA) [1] and knee arthroplasty (TKA) [2] and improved functional results. Patients now recover a quality of life comparable to that of healthy subjects [3-6]. The improvement is seen in both THA and TKA, and explains the increasing number of implantations in recent and in coming years [7-9]. The Nordic Arthroplasty Register [10] reported, over a 15-year period, that the number of TKAs doubled and that of THAs increased 2.5-fold. These good results have allowed indications to be extended to younger, working-age patients [11]. Moreover, patients are working longer as retirement ages increase. There are few studies of return to work after THA and TKA, and none at all in France. Mean time to return to work is reported to be between 1.1 and 10.5 weeks in THA [12] and between 8 and 12 weeks in TKA [13,14]. Rates of return to work range between 68% and 95% in THA and between 40% and 98% in TKA [15-18]. Many factors affect return to work: social, environmental, economic and medical [19]. According to Nunley et al. [15], published studies are beset by limitations [15]: small numbers, mean age over 60 years, patients with low functional demand, and old studies not dealing with return to work.

Returning to work promotes physical and emotional well-being [20] and lack of information on the possibilities after THA or TKA is a source of disappointment that can impair results. Apart from the study by Martinot et al. [21], which focused

exclusively on hip resurfacing, there are no data for French patients, and we therefore conducted a retrospective study to determine 1) the rates and intervals of return to work, so as to provide French reference data, and 2) factors affecting return to work and reasons for non-return. The study hypothesis was that the present French study population was within normal Western values for rates and intervals of return to work after primary THA or TKA. The present results cannot be extrapolated to the general French population of THA and TKA patients but, in the absence of prior studies, may serve as a reference for France and for comparison with studies conducted elsewhere.

2. Materials and method

2.1 Patients

A single-center retrospective study was conducted in a French university hospital orthopedic and traumatologic surgery department. Inclusion criteria comprised: age at surgery <65 years (which was the full-pension retirement age at the time in France), primary THA or TKA performed for orthopedic reasons (excluding trauma) between January 2009 and December 2013, and being in work during the 2 years prior to surgery. Patients were identified via the PMSI medical information database, using 3 codes: NFKA007, NFKA008 and NEKA020.

In all, 299 THAs and TKAs met the inclusion criteria. Fifty-two of the patients could not be recontacted: no address or no response after 10 telephone calls; 3 patients did not wish to respond, and 3 had died. Over the same period, 909 over-65 year-olds underwent primary THA or TKA (443 THAs and 466 TKAs).

Data were collected from clinical files and by telephone, with informed consent. To increase the response rate, 10 attempted telephone calls were systematically scheduled. The study had approval from the Nancy university hospital review board, and was declared to the French data protection commission (CNIL) under the number R2015-14.

2.2 Surgical technique

THA used an Excia™ stem (B. Braun, Melsungen, Germany) and Plasmafit™ cup (B. Braun, Melsungen, Germany). All bearings were ceramic-ceramic. Two approaches were used: minimally invasive Hardinge approach with Orthopilot® navigation (B. Braun, Melsungen, Germany) and EOS planning (n=54), or classical Hardinge approach (n=18).

TKA used an Academia™ or FHK™ implant, sparing the posterior cruciate ligament (n = 38) or with posterior stabilization (n = 34) (FH-Orthopedics, Heimsbrunn, France). A mid-vastus medial approach was used.

2.3 Assessment

As there was no suitable validated questionnaire in the literature, two co-authors (DM, MM) drew up an ad-hoc instrument based on literature data and personal experience.

The anonymized questionnaire contained one part related to inclusion criteria (age, occupational status during the 2 years before surgery) and another related to patient data: age, weight, height, ASA (American Society of Anesthesiologists) grade [22], medical and surgical history, family situation, and number of children) (Table 1).

Endpoints comprised: occupational category according to the socioeconomic criteria of the INSEE National Institute of Statistics and Economic Studies, preoperative sick leave, time to return to work, return at the same or a different level, type of postoperative rehabilitation, satisfaction with surgery and postoperative course on a simple scale, and adverse events, dichotomized as without surgical revision (low back pain, complex regional pain syndrome, trochanteric bursitis, impingement between cup and psoas, etc.) and with revision surgery (fracture, infection, dislocation, etc.). Patients not working during the study period were asked why not, whether the implant enabled return to work, and at what interval.

2.4 Statistics

Continuous variables were reported as mean, standard deviation, quartiles and range, and categorical variables as percentage. Subgroup comparison between return versus non-return to work within 2 years used Chi² and Student t tests. A logistic regression model of probability of return to work identified factors associated with

return to work. The final model was produced by stepwise selection (entry threshold 0.1, exit threshold 0.05). Strengths of association were assessed on odds ratios (OR) with 95% confidence intervals. In the return-to-work subgroup, a linear regression model with stepwise selection identified factors affecting the interval between surgery and return to work. Analyses used SAS software, v9.4 (SAS Institute Inc., Cary, NC, USA).

3. Results

144 of the 241 patients who were recontacted were working at the time of surgery (Figure 1). TKA was as frequent as THA, with 30 minimally invasive approaches in the 72 THAs. The sex-ratio was balanced. Mean age at surgery was 55.8 ± 8 years (range, 18.6-65.7 years). Most patients were either overweight (32.6%; n=47) or obese (41.7%; n=60). 64.6% (n=93) had ASA score ≥ 2 . More than 70% (n=104) had history of more than 2 conditions. Surgery was indicated for primary osteoarthritis in 73.6% of cases. Almost 60% of procedures were in virgin joints, while 20.2% of patients (n=29) had had previous THA or TKA.

Mean hospital stay was 10 ± 5 days (range, 4-52 days). Discharge was to a convalescence home in 59.7% of cases (n=86). Sick leave for working patients returning home was not standardized. 67% of patients (n=97) were living in a couple with at least 1 child at the time of surgery; 28.5% had a dependent child.

Sixty-four patients were office workers. 84.7% were in full-time work. Work had been stable for at least 2 years in 94.4% of cases. The mean interval between surgery and data collection was 34.5 months (95% CI: 32.2-36.8 months) (Table 1).

Eighty-three patients (57.6%) returned to work, at a mean 124 days (95% CI, 102.8-144.4 days; range, 15-540 days) (Figure 2): 55.4% of these (n=46) by 3 months and 97.6% (n= 81) by 12 months (Figure 3). In a large majority of cases (81.9%), they resumed work in the same conditions (same working hours for 92.8%, and same work job for 92.8%) (Table 2). In TKA, 38 patients returned to work (52.7%), at a mean 141 ± 100.69 days (range, 30-540 days), and 34 did not. In THA, 45 patients returned to work (62.5%), at a mean 109 ± 91.67 days (range, 15-515 days), and 27 did not. In all, 61 patients did not return to work (42.3%): 26 retired (42.6%), 18 were on invalidity benefit, 11 lost their job, and 6 were on long-term sick-

leave (Figure 4). Retirement was the most frequent reason for not resuming work, in 18% of patients as a whole; other reasons accounted for 24.3%.

On bivariate analysis, several factors were associated with return to work (Table 3). Patients returning to work were significantly younger: 52.7 ± 9.2 years (range, 18.6-62.3 years) versus 56.4 ± 5.6 years (range, 40.1-65.7 years) ($p=0.01$). Under-50 year-olds were more likely to return to work ($p=0.006$), as were those with dependent children ($p=0.0005$). Patients with ASA score > 2 were more likely not to return to work ($p=0.048$), as were those reporting history ($p=0.024$), with at least 2 painful joints ($p=0.035$), and overweight or obese ($p=0.003$). On multivariate analysis, under-50 year-olds were significantly more likely to return to work (OR=4.28; 95% CI, 1.413-12.964; $p=0.01$) and overweight or obese patients were significantly less likely: OR=0.19 (95% CI, 0.071-0.512; $p=0.001$) and OR=0.76 (95% CI, 0.3-1.93; $p=0.0016$), respectively.

Patients off work at the time of surgery returned to work at a mean 171 ± 131 days (range, 45-540 days), significantly later than those who were not: 92 ± 45.8 days (range, 15-240 days) ($p=0.003$).

4. Discussion

Only 60% of the present patients were in work, which was much fewer than in the series reported by Scott et al. [19] where 90% of TKA patients were working despite a slightly greater average age (59 years). In the present series, rather more than half the patients (57.6%, $n=83$) had returned to work by 1 year after primary THA or TKA, at a mean 124 days (95% CI, 102.8-144.4 days), slightly more than half of whom (55.4%, $n=46$) had returned to work within 3 months. These findings are to be compared to the recommendations of the 2011 French National Salaried Workers' Health Insurance body (CNAMTS) for 42 days' sick-leave in sedentary work, 70 days in light work, 90 days in moderately heavy work and 120 days in "heavy" work (www.has-santé.fr).

Age and body-mass index (BMI) significantly impacted the rate of return to work. Sick leave prior to surgery was the only variable that significantly increased time to return to work, by a mean 78 days. The most frequent reason for not returning

to work was retirement, followed by invalidity benefit, redundancy and renewed (long-term) sick leave.

Thus, the study hypothesis was not confirmed as, excepting the series of Scott et al. [19], French patients returned to work less often and later than in other Western countries. THA and TKA did not differ in this regard. On the other hand, a large majority of those who did return to work did so with the same working hours and work-post as before, unlike in many studies where 20-30% of patients are working part-time at 1 year [23,24]. The present series has a similar mean age to other series, although many include only under-60 year-olds. Comparison with the literature is hindered by differences in methodology, and safety-nets (which impact results) differ between countries, as do cultural habits and behavior [18,19,23,25]. The good quality of French national health insurance cover may partly account for the present findings, although Leichtenberg et al. [24] reported no link between the level of benefits and return to work.

Styron et al. [26] reported that 72.2% of a series of 162 patients returned to work within 9 weeks. Lombardi et al. [27] reported a series of 494 patients aged 18-60 years undergoing TKA for osteoarthritis; 91% returned to work at a mean 8.9 weeks; In a similar study in THA [15] with 806 patients, 87.6% returned to work at a mean 6.9 weeks, usually to the same job with the same hours, although 25.9% were restricted for a mean 7.3 weeks and 2.8% were restricted permanently. The exclusion criteria in these two studies were stricter than in the present study; patients were younger (<60 years), with few comorbidities, and inflammatory arthritis and surgical complications were excluded. In the UK, Kleim et al. [28] reported that 81.4% of 102 patients with THA or TKA, aged less than 60 years with more than 5 years to go before retirement, were working before surgery and 78.4% returned to work at a median 12 weeks. Cowie et al. [29] reported that 71.1% of 235 THA patients returned to work at a mean 13.9 weeks. In Denmark, Kievit et al. [30] reported that 68% of 173 TKA patients returned to work at 12 weeks. The recent study by Laasik et al. [18] reported 94% return to work at a mean 3 months (range, 10 days to 1 year) in 408 THA patients. Lombardi et al. [17] reported the best 1-year return to work rate (98%), but in a selected population under 60 years of age and without comorbidity. Takeuchi et al. [31] distinguished men and women; in 156 THA patients aged <60 years, 94.4% of males and 52.3% of females returned to work [31]. These findings are

comparable to those of Martinot et al. [21], with 112 patients (99,1%) with a mean age of 53 years who returned to work at a mean 9.4 weeks after a resurfacing procedure.

There are many risk factors for non-return to work after TKA or THA: age, health status, educational level, occupation, comorbidity, surgical complications and preoperative sick leave, sometimes with divergent assessments [15,16,24,32-35].

According to Tilbury et al.'s meta-analysis [16], negative factors for return to work after THA comprise: female gender, advanced age, other painful joints, physical work, and unskilled work; after TKA they comprise: social assistance and physical work. Positive factors after THA comprise: young age, higher educational level, being in work in the preoperative month, intellectual occupation, primary osteoarthritis, and better postoperative walking capacity; after TKA, they comprise: female gender, independent occupational status, high physical and mental scores, and low comorbidity. Laasik et al. [18] found no associations for marital status, smoking status or alcohol consumption, psychological distress or certain comorbidities (asthma, rheumatoid arthritis, or coronaropathy).

There seem to be some differences between THA and TKA. In a prospective study, Leichtenberg et al. [24] showed that age, educational level, independent work, preoperative sick leave and functional scores differed significantly between patients returning versus not returning to work after THA, whereas only preoperative sick leave was discriminating in TKA [24].

Most of these factors converge, suggesting that there is one major factor affecting return to work: motivation [18,19,28]. Styron et al.'s study [14] was alone in demonstrating the importance of motivation in return to work, which depended on 5 factors: self-esteem, confidence in one's own capabilities, necessity to meet financial needs, influence of the family circle, services rendered to the community, and work that stimulates physical or mental health.

The present results showed that patients already on sick leave at the time of surgery returned to work later, at 77 days. Likewise, the literature reported longer time to return to work after TKA or THA: 17.5 weeks with preoperative sick leave versus 4.6 weeks without [28,32-36]. These data suggest that the safety-net systems

do not promote rapid return to work. Another explanation might be that patients already on sick leave at the time of surgery suffered particularly severe impact of their pathology, requiring postoperative rehabilitation. According to Eichler et al. [37], regular rehabilitation followed by videoconference shortened the time to return to work.

Preoperative sick leave was not related to the rate of return to work, unlike in Bohm's study [36], where only 20% of patients already on sick leave at the time of surgery returned to work. Likewise, Laasik et al. [18] found a correlation between return to work and the number of days of preoperative sick leave: patients with less than 30 days' leave were twice as likely to return to work. 97.5% of patients who returned to work did so within 1 year. Mobasheri et al. [12] reported similar results, and no patients still on sick leave at 1 year ever returned to work. In the series reported by Lyall et al. [38], none of the patients who were not working before surgery returned to work.

The effect of age on return to work is well known [36], but the present study is alone in showing a relation between age and dependent children (which is age-related) and return to work. The age effect on return to work after THA was reported in several studies [15,29,35], although Laasik et al. [18] strangely enough did not find this. Scott et al. [19] showed that return to work correlated with age: all under-50 year-olds returned to work, compared to only 60% of 50-54 year-olds, 50% of 55-59 year-olds and 25% of 60-65 year-olds.

According to some authors, the level of preoperative activity correlates with return to work [15,29], in contrast to the findings of Laasik et al. [18], Hoorntje et al. [35] and Boersma et al. [39]. In a multicenter prospective study, Boersma et al. [39] found no relation between preoperative physical activity and return to work after THA or TKA. Type of occupational activity may affect return to work. Laasik et al. [18] found that patients in non-manual occupations were 2.2-fold more likely to return to work; however, Scott et al. [19] found that patients with moderate to high activity level returned to work as often as others, but with longer time off. In the present series, obese or overweight patients returned to work less frequently, in agreement with other reports [18,29,40], whereas for Boersma et al. [39] this factor was relevant only in THA.

Retirement was the main reason for not returning to work, in agreement with Lombardi et al. [17] for TKA and Nunley et al. [15] for THA. For these authors, arthroplasty was implicated in non-return in only one-third of cases of TKA [27] and in 2% of cases of THA [36]. In the present series, 12.5% of patients in work preoperatively remained on invalidity benefit, and none of the patients on invalidity benefit returned to work, in agreement with Jensen et al. [32] who had 7% of patients on invalidity benefit. In Scott et al.'s series [19], none of the patients not working preoperatively returned to work. Non-return to work after surgery, whatever the reason, has an economic impact on society, in the form of sickness, unemployment or invalidity benefits. The question should be dealt with ahead of surgery in the light of the study by Nouri et al. [41]. Factors affecting return to work are influenced by the safety-net provisions of each country. Health-care expenditure ranges from 19.6% of GNP in Greece to 34.8% in Germany, and is 28.4% in France. Unemployment benefit costs vary according to the level of unemployment and the generosity of the safety-net; they amount to 6.2% of social expenditure in France, 13.8% in Ireland, and 1.7% in the UK.

The present study had certain limitations, although it included a larger series than many others, apart from the prospective study by Tilbury et al. [23]. 1) Firstly, the design was retrospective. However, this does not undermine the results: rate of and time to return to work. A study using health insurance data could provide access to a larger population. 2) It was also a single-center study, and the team's habits may have influenced the patients' behavior. 3) Occupations were classified in 6 socio-occupational categories, which did not take full account of differences in physical level. The distinction between salaried and independent work was not made, preventing analysis in terms of means of payment, which has been a focus in the literature. 4) The large number of study variables led to loss of statistical power, although the study showed relatively high power compared to the literature. 5) There was probably a confusion bias, as the work dimension included physical, psychological, social and motivational factors.

5. Conclusion

The present study was conducted in a context of growing public health and medico-economic concern. The results provide patients with an estimate of time to return to work after THA or TKA, allowing them to organize themselves accordingly. Slightly more than half the patients undergoing primary THA or TKA returned to work, and slightly more than half of these did so within 3 months. The study hypothesis was not confirmed: French patients returned to work less often and later than in most other Western countries. Comparison with the international literature suggests an influence of safety-net systems on time to return to work.

Disclosure of interest: Didier Mainard has conflicts of interest with FH Orthopedics, BBraun, Zimmer Biomet, and EOS Imaging. Fayçal Houfani has conflicts of interest with Orthofix SA. Michael Mangin has conflicts of interest with FH Orthopedics. Florent Galliot has conflicts of interest with Orthofix SA

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Table 1: Description of population

Variable		N	%	Mean (standard deviation)	Median (Q1;Q3)
Gender	Male	69	47.9		
	Female	75	52.1		
				54.8(8)	56.1(50.3;60.2)
Age	<50 years	32	22.2		
	50-60 years	74	51.4		
	>60 years	38	26.4		
Smoking	Non-smoker	100	69.4		
	Smoker	44	30.6		
Body-mass index (mean)	<25kg/m ²	37	25.7		
	25-30kg/m ²	47	32.6		
	>30kg/m ²	60	41.7		
Number of history items	0	8	5.6		
	1	32	22.2		
	≥2	104	72.2		
ASA score	ASA 1	51	35.4		
	ASA ≥2	93	64.6		
TKA		72	50		
THA		72	50		
Bilateral implants		24	16.7		
	Primary osteoarthritis	106	73.6		
	Post-traumatic osteoarthritis	7	4.9		
Indication	Osteonecrosis	17	11.8		
	Inflammatory arthritis	10	6.9		
	Femoroacetabular dysplasia	4	2.8		
Surgical history on joint	0	86	59.7		
	1	51	35.4		
	≥2	7	4.9		
Pain in other joints	None	85	59		
	1	44	30.6		
	≥2	15	10.4		
Other implant	none	115	79.9		
	1	26	18.1		
	≥2	3	2.1		
Adverse events	none	123	85.5		
	Not requiring revision surgery	16	11.1		

	Requiring revision surgery	5	3.4		
				10.4 (5)	9 (8;11.5)
Hospital stay	<9 days	84	58.3		
	≥9 days	60	41.7		
	Rehabilitation center	86	59.7		
Postoperative rehabilitation	At home	55	38.2		
	Not needed	3	2.1		
	Single	29	20.1		
Family situation	Couple without children	18	12.5		
	Couple with children	97	67.4		
Dependent children	no	103	71.5		
	yes	41	28.5		
	Agricultural	4	2.8		
	Office	64	44.4		
	Manual	37	25.7		
Socio-occupational category	Craftsman, shopkeeper, CEO	8	5.6		
	Executive, superior intellectual	17	11.8		
	intermediate	14	9.7		
Working hours	Part-time	22	15.3		
	Full-time	122	84.7		
>2 years' stable work	Yes	136	94.4		
	No	8	5.6		
Preoperative sick-leave	No	82	56.9		
	Yes	62	43.1		
Return to work	No	61	42.4		
	yes	83	57.6		
Mean follow-up (days)				1,036 (421)	989 (668;1,303)

ASA : American Society of Anesthesiologists / TKA: total knee arthroplasty/ THA: total hip arthroplasty

Table 2: Description of return to work

Variable	n	%/mean (standard deviation or 95% confidence interval)/Median (Q1;Q3)
Number of returns	83	57.6
Mean time (days)		123.65 (95% CI: 102.8;144.4)
Median time (days)		90 (60;150)
Therapeutic part-time	15	18.1
Time unchanged	68	81.9
Redeployment	1	1.2
Adaptation	5	6
Same job	77	92.8

Table 3: Factors for return to work (bivariate analysis)

		Non-return			Return			
		N=61 (42.4%)		Standard deviation	N=83 (57.6%)		p**	
		N	%/mean		N	%/mean		
gender	male	31	50.8	5.6	38	45.8	0.55	
	female	30	49.2		45	54.2		
Age		61	56.4		83	52.7	0.006	
	<50 years	8	13.1		25	30.1		
	50-60 years	33	54.1		40	48.2	0.042	
	>60 years	20	32.8		18	21.7		
Smoking	Non-smoker	38	62.3		62	74.7	0.11	
	smoker	23	37.7		21	25.3		
Body-mass index	<25kg/m ²	10	16.4		27	32.5	0.003	
	25-30kg/m ²	29	47.5		18	21.7		
	>30kg/m ²	22	36.1		38	45.8		
Number of history items	0	3	4.9		5	6	0.024	
	1	7	11.5		25	30.1		
	≥2	51	83.6		53	63.9		
ASA	1	16	26.2		35	42.2	0.048	
	≥2	45	73.8		48	57.8		
implant	TKA	34	55.7		38	45.8	0.238	
	THA	27	44.3		45	54.2		
Bilateral implant	no	49	80.3		71	85.5	0.407	
	yes	12	19.7		12	14.5		
Indication	Primary osteoarthritis	45	73.8		61	73.5	0.97	
	Secondary osteoarthritis	16	26.2		22	26.5		
Previous surgeries in joint	0	35	57.4		51	61.4	0.881	
	1	23	37.7		28	33.7		
	≥2	3	4.9		4	4.8		
Other painful joints	0	32	52.5		53	63.9	0.035	
	1	18	29.5		26	31.3		
	≥2	11	18		4	4.8		
Other implants	no	46	75.4		69	83.1	0.447	
	Contralateral joint	13	21.3		13	15.7		
	Other joint	2	3.3		1	1.2		
Adverse events	none	48	78.7		74	89.1	0.11	
	Not requiring surgery	8	13.2		8	9.6		
	Requiring surgery	4	8.1		1	1.2		

		61	11.3	6.8	83	9.8	3	0.068
Hospital stay	≤9 days	31	50.8		53	63.9		0.117
	>9 days	30	49.2		30	36.1		
Postoperative rehabilitation	yes	39	67.2		47	56.6		0.204
	no	19	32.8		36	43.4		
Family situation	Single	13	21.3		16	19.3		0.063
	Couple without children	12	19.7		6	7.2		
	Couple with children	36	59		61	73.5		
Dependent children	no	53	86.9		50	60.2		0.0005
	yes	8	13.1		33	39.8		
Socio-occupational category	Agricultural	2	3.3		2	2.4		0.302
	office	27	44.3		37	44.6		
	manual	20	32.8		17	20.5		
	Craftsman, shopkeeper CEO	4	6.6		4	4.8		
	Executive, superior intellectual	5	8.2		12	14.5		
	Intermediate	3	4.9		11	13.3		
Working hours	Full-time	50	82		72	86.7		0.431
	Part-time	11	18		11	13.3		
>2 years' stable work	no	6	9.8		2	2.4		0.055
	yes	55	90.2		81	97.6		
Preoperative sick-leave	no	30	49.2		52	62.7		0.107
	yes	31	50.8		31	37.3		
Satisfied	Not/poorly/moderately satisfied	11	18.1		10	12.1		0.67
	Satisfied/very satisfied	50	81.9		73	87.9		
Mean follow-up		61	1017.2	425.8	83	123.7	96.6	<0.0001

** bold indicates significant difference. TKA: total knee arthroplasty; THA: total hip arthroplasty

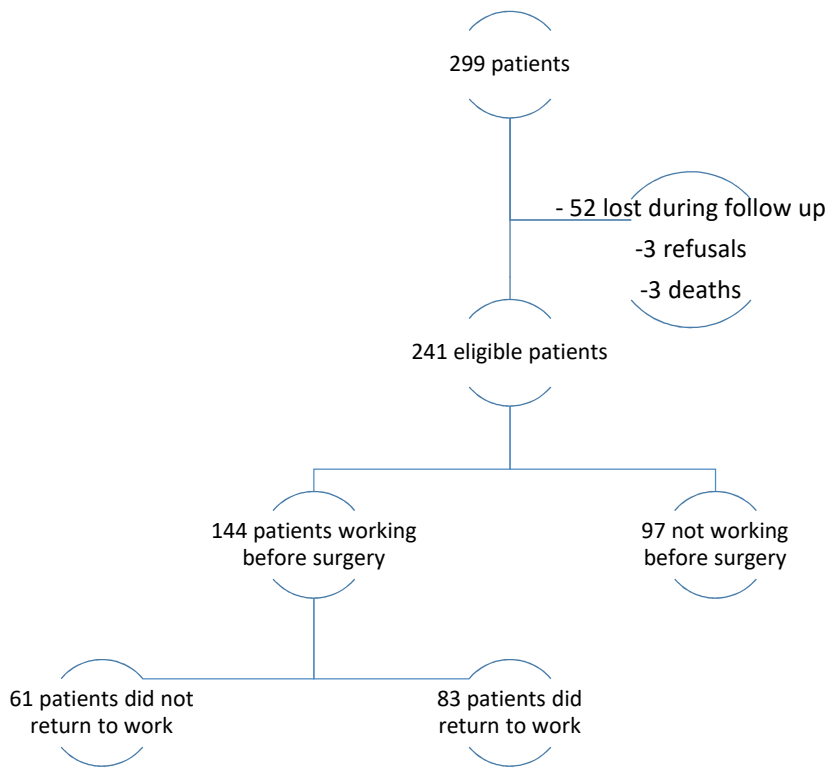
Figure legends

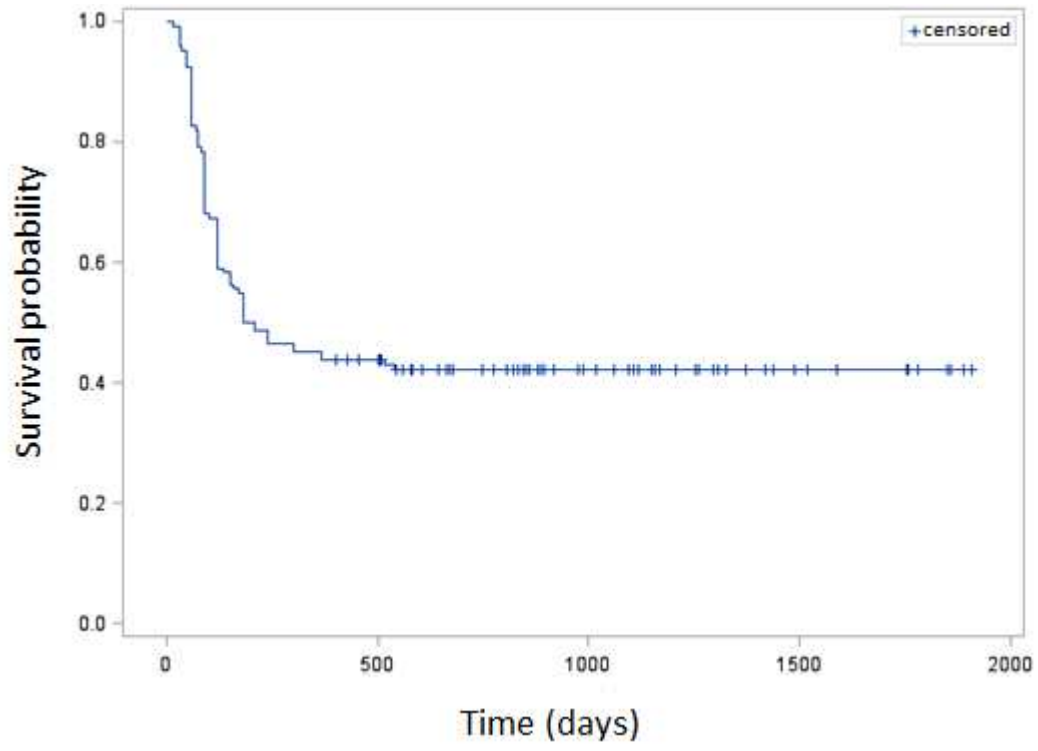
Figure 1: flowchart

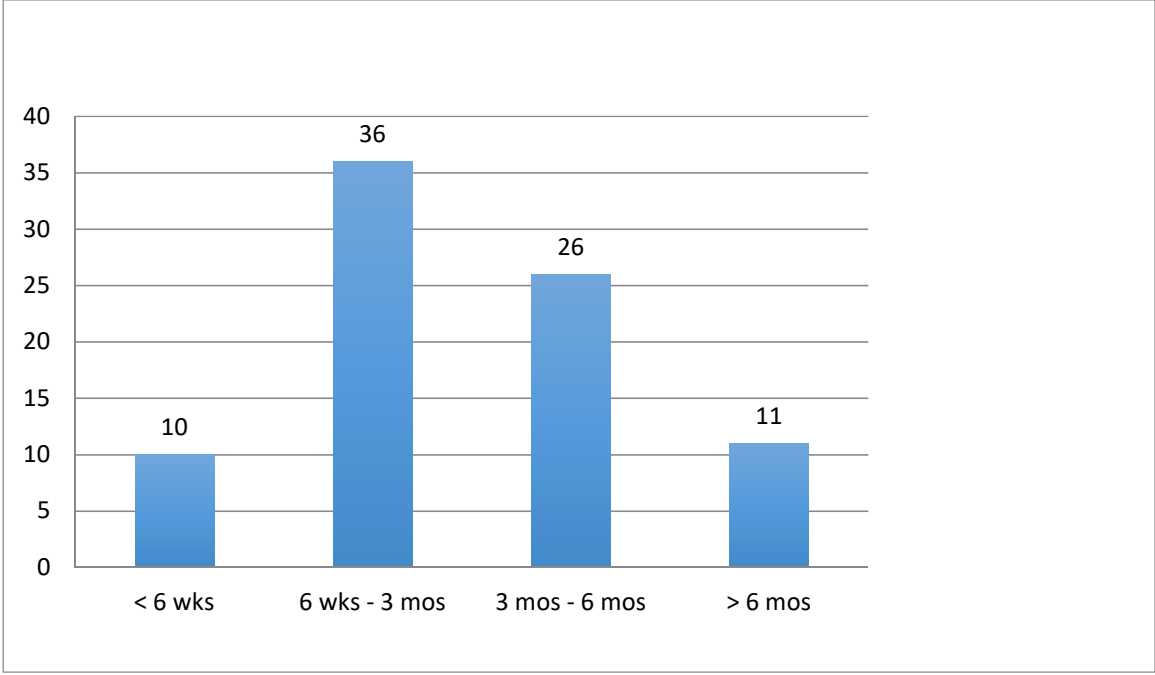
Figure 2: survival curve for event = return to work after arthroplasty

Figure 3: number of patients returning to work according to postoperative interval

Figure 4: piechart of patients not returning to work







no return to work

