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**Supplementary Table 1. Literature search strategy**

**1A. PubMed and Europe PMC Search String:**

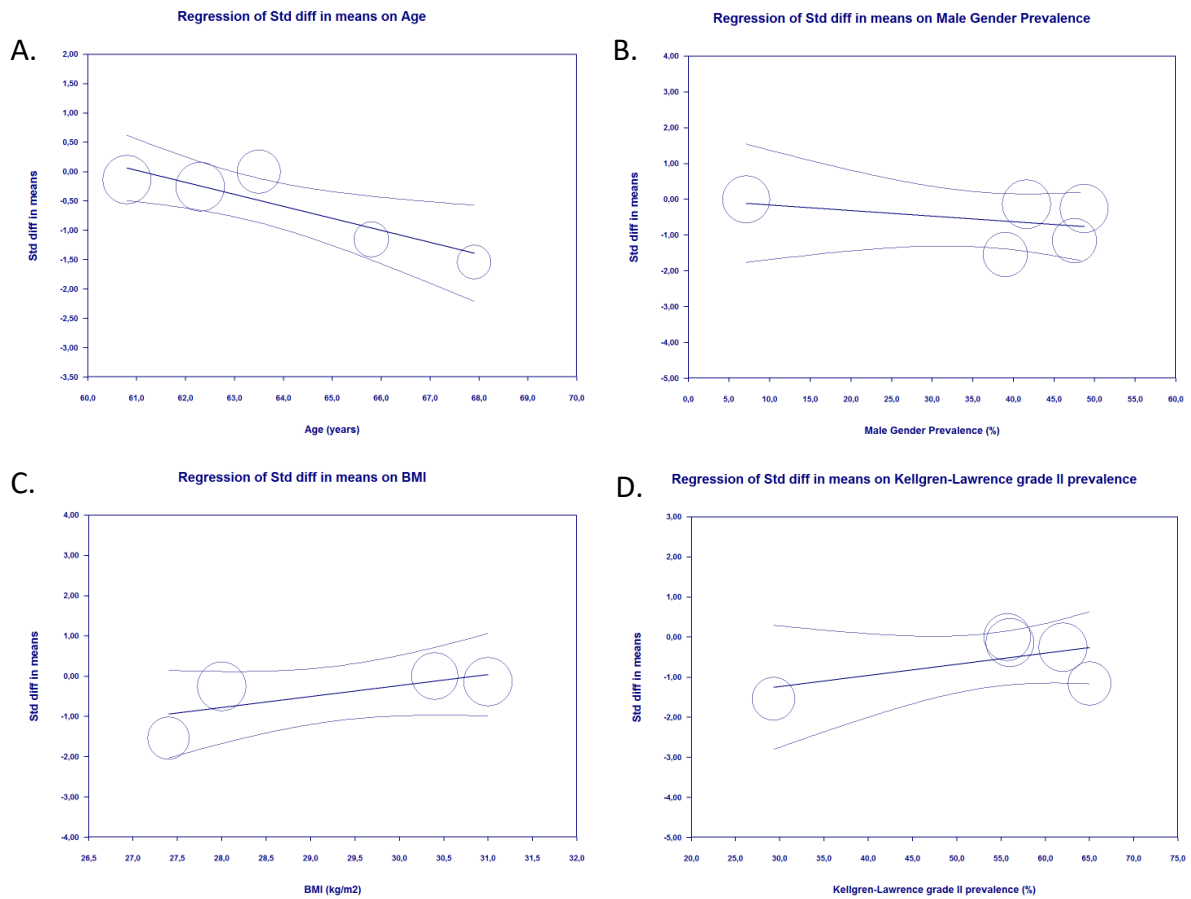
“(knee osteoarthritis OR OA knee OR gonarthrosis OR genu osteoarthritis OR OA genu) AND  
(botulinum toxin OR botox OR BTX OR BoNT OR dysport) AND (clinical trials OR  
randomized trials OR RCT)”

**1B. Example Scopus and ClinicalTrials.gov Search Strategy:**

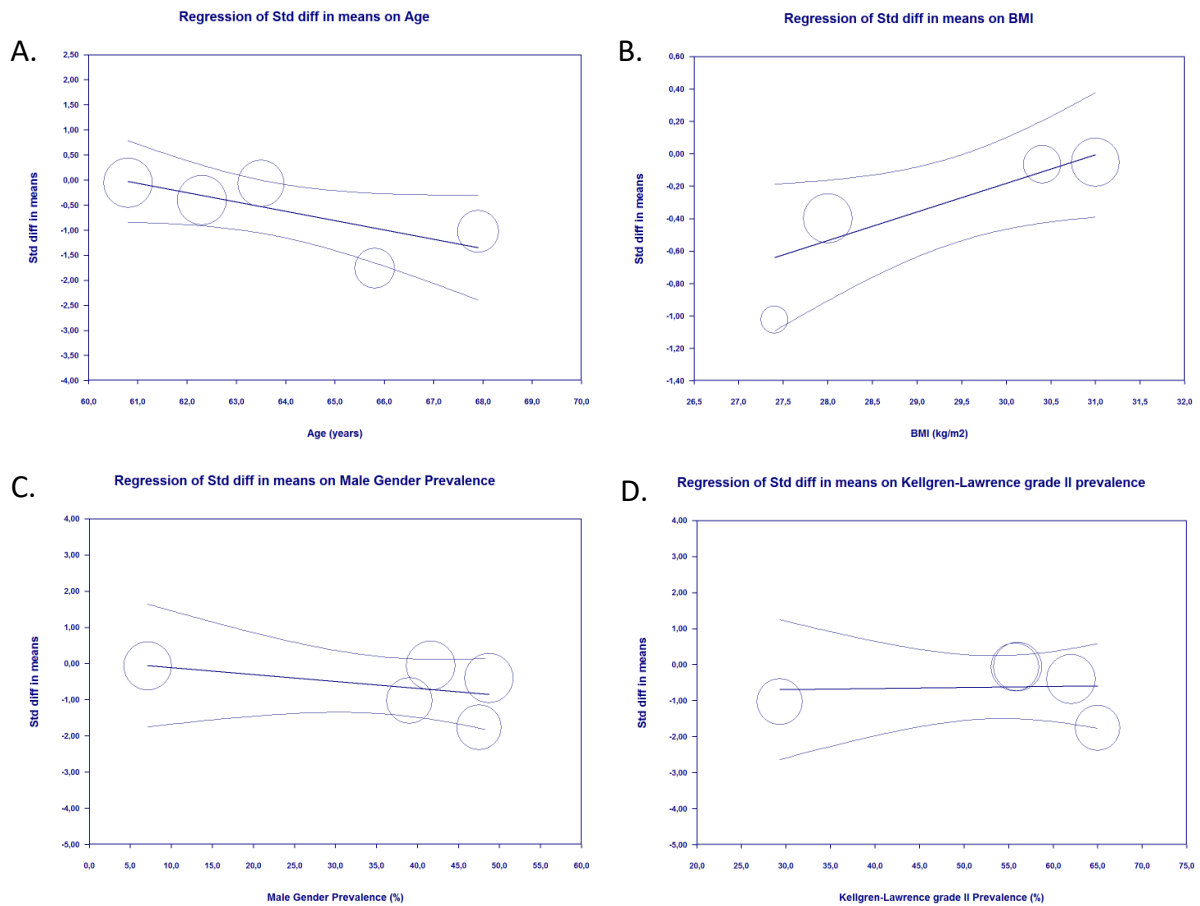
1. knee osteoarthritis
2. OA knee
3. gonarthrosis
4. genu osteoarthritis
5. OA genu
6. botulinum toxin
7. botox
8. BTX
9. BoNT
10. dysport
11. clinical trials
12. randomized trials
13. RCT
14. 1 or 2 or 3 or 4 or 5
15. 6 or 7 or 8 or 9 or 10
16. 11 or 12 or 13
17. 14 and 15 and 16

**Supplementary Table 2. Results for the meta-regression models for each outcomes of interest**

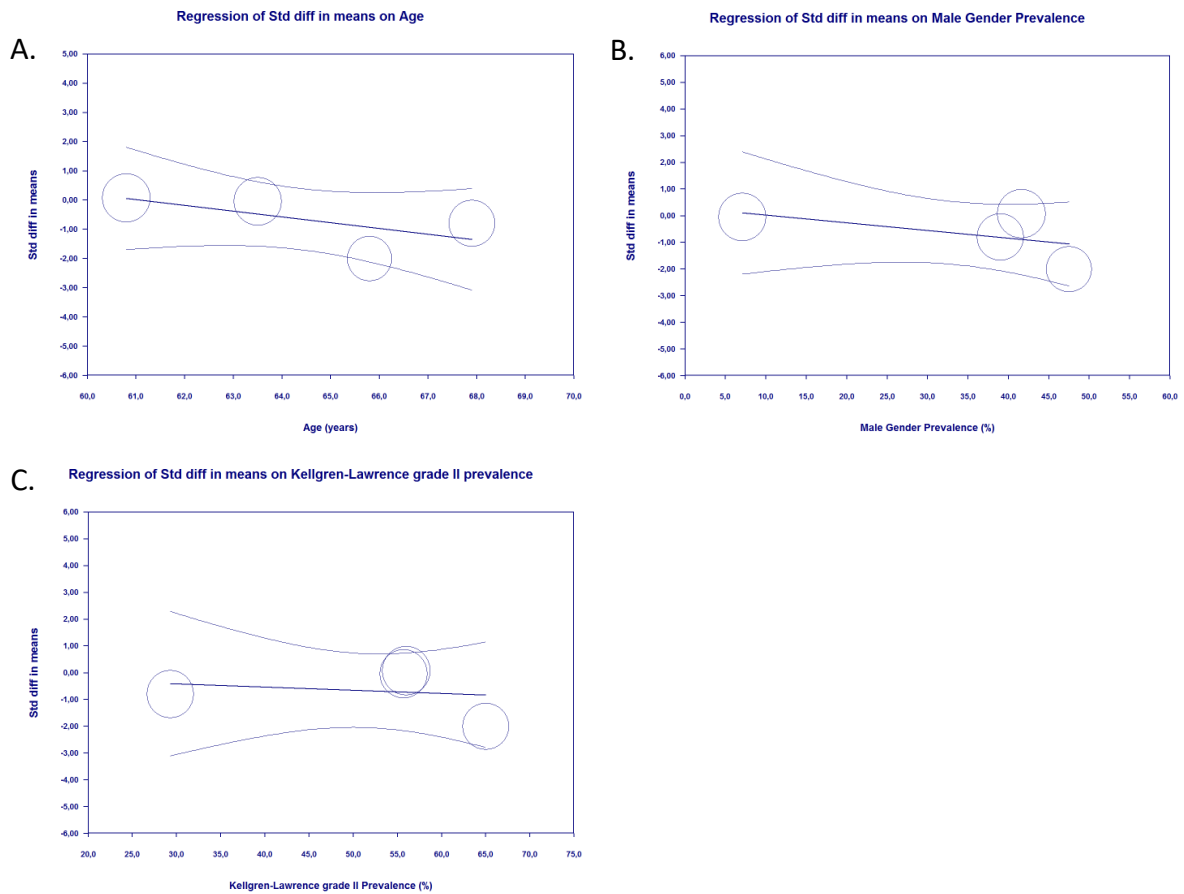
<b>Change in Early VAS score (≤4 weeks)</b>					
Covariate	Coefficient	95% CI (min)	95% CI (max)	S.E.	<i>p</i> -value
<b>Age</b>	<b>-0.2046</b>	<b>-0.3332</b>	<b>-0.0760</b>	<b>0.0656</b>	<b>0.0018</b>
Gender	-0.0157	-0.0554	0.0240	0.0203	0.4383
BMI	0.2721	-0.0876	0.6318	0.1835	0.1382
Kellgren-Lawrence grade	0.0276	-0.0172	0.0725	0.0229	0.2267
<b>Change in Late VAS score (&gt;4 weeks)</b>					
<b>Age</b>	<b>-0.1858</b>	<b>-0.3570</b>	<b>-0.0145</b>	<b>0.0874</b>	<b>0.0335</b>
Gender	-0.0191	-0.0599	0.0217	0.0208	0.3584
<b>BMI</b>	<b>0.1759</b>	<b>0.0321</b>	<b>0.3196</b>	<b>0.0734</b>	<b>0.0165</b>
Kellgren-Lawrence grade	0.0028	-0.0538	0.0595	0.0289	0.9226
<b>Change in Early WOMAC index (≤4 weeks)</b>					
Age	-0.1973	-0.5117	0.1170	0.1604	0.2186
Gender	-0.0288	-0.0884	0.0308	0.0304	0.3442
Kellgren-Lawrence grade	-0.0116	-0.0951	0.0720	0.0426	0.7861
<b>Change in Late WOMAC index (&gt;4 weeks)</b>					
Age	-0.3740	-1.1619	0.4139	0.4020	0.3522
Gender	0.0483	-0.1862	0.0895	0.0703	0.4919
<b>BMI</b>	<b>0.1968</b>	<b>0.0534</b>	<b>0.3401</b>	<b>0.0731</b>	<b>0.0071</b>
Kellgren-Lawrence grade	-0.0538	-0.2232	0.1155	0.0864	0.5332



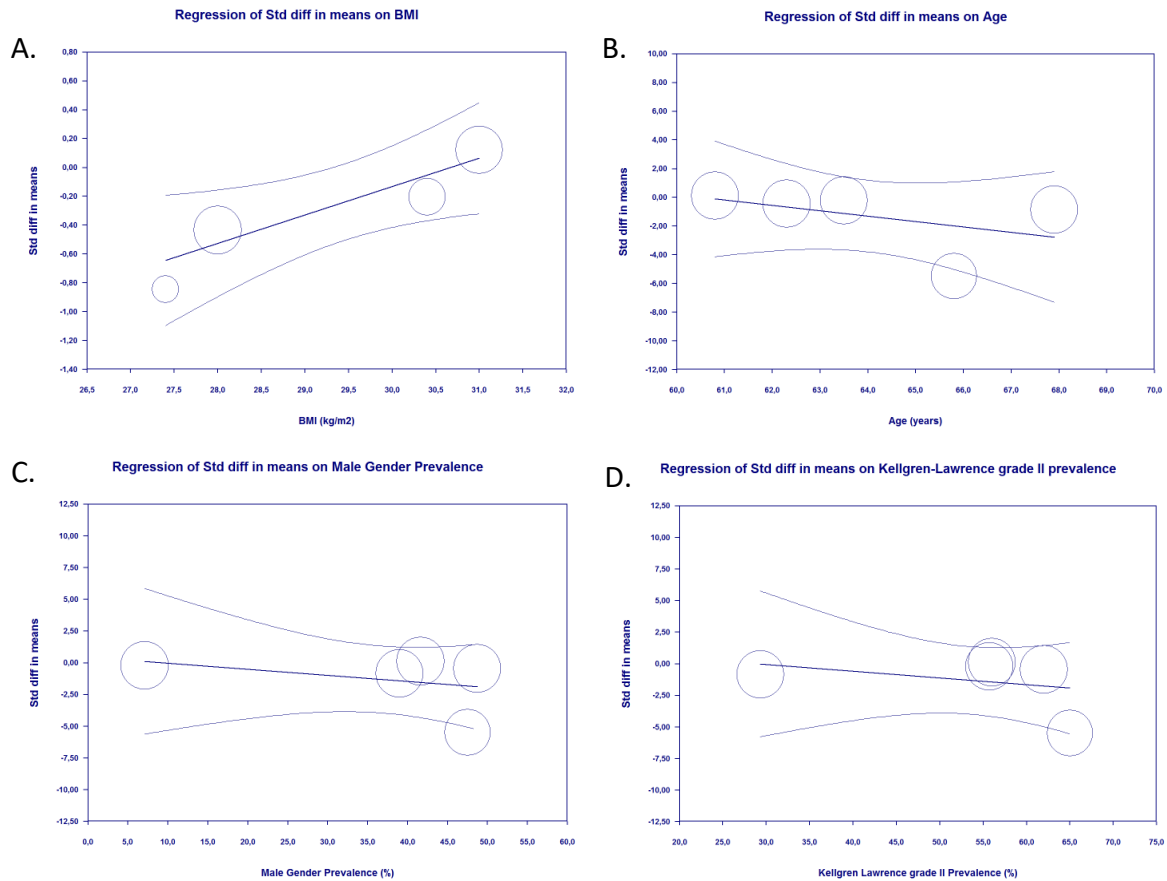
Supplementary Figure 1. Bubble-plot for meta-regression. Meta-regression analysis showed that the association between botulinum toxin A intraarticular injection and changes in early VAS score was significantly affected by age (A), but not by gender (B), BMI (C), nor Kellgren-Lawrence grade (D)



Supplementary Figure 2. Bubble-plot for meta-regression. Meta-regression analysis showed that the association between botulinum toxin A intraarticular injection and changes in late VAS score was significantly affected by age (A) and BMI (B), but not by gender (C) nor Kellgren-Lawrence grade (D)



Supplementary Figure 3. Bubble-plot for meta-regression. Meta-regression analysis showed that the association between botulinum toxin A intraarticular injection and changes in early WOMAC was not significantly affected by age (A), gender (B), nor Kellgren-Lawrence grade (C)



Supplementary Figure 4. Bubble-plot for meta-regression. Meta-regression analysis showed that the association between botulinum toxin A intraarticular injection and changes in late WOMAC index was significantly affected by BMI (A), but not by age (B), gender (C), nor Kellgren-Lawrence grade (D)