

## **Genetics of Osteoarthritis (GO) Consortium file information**

19<sup>th</sup> May 2021

These are the genome-wide meta-analysis summary statistics for the Genetics of Osteoarthritis (GO) Consortium (<https://www.genetics-osteoarthritis.com>).

Details relating to contents are:

SNPID = Chromosome:position\_allele1\_allele2, in GRCh37/Hg19 coordinate, with alleles listed in alphabetical order

Chromosome = Chromosome in GRCh37/hg19 coordinates

Position = Position in base pairs in GRCh37/hg19 coordinates

EffectAllele = The effect allele

AlternateAllele = The non-effect allele

Pvalue = Meta-analysis P value

EffectSize.OR = Odds ratio

EffectSize.Beta = Beta

SampleSize = Total number of cases and controls

EffectAlleleFrequency = Weighted average of effect allele frequency across all studies

Additional information for sex specific analysis:

Male.Pvalue = Meta-analysis P value in the male only analysis

Male.EffectSize = Odds ratio in the male only analysis

Male.SampleSize = Total number of cases and controls in the male only analysis

Male.EffectAlleleFrequency = Weighted average of effect allele frequency across all studies in the male only analysis

Female.Pvalue Pvalue = Meta-analysis P value in the female only analysis

Female.EffectSize = Odds ratio in the female only analysis

Female.SampleSize = Total number of cases and controls in the female only analysis

Female.EffectAlleleFrequency = Weighted average of effect allele frequency across all studies in the female only analysis

### **Main analysis**

AllOA

KneeHipOA

KneeOA

HipOA

TJR

THR

TKR

SpineOA

FingerOA

ThumbOA

HandOA

### **File name**

KP.Format.GO.FILTER.GW.AllOA.FULL.09052019.txt.gz

KP.Format.GO.FILTER.GW.KneeHipOA.FULL.09052019.txt.gz

KP.Format.GO.FILTER.GW.KneeOA.FULL.09052019.txt.gz

KP.Format.GO.FILTER.GW.HipOA.FULL.09052019.txt.gz

KP.Format.GO.FILTER.GW.TJR.FULL.09052019.txt.gz

KP.Format.GO.FILTER.GW.THR.FULL.09052019.txt.gz

KP.Format.GO.FILTER.GW.TKR.FULL.09052019.txt.gz

KP.Format.GO.FILTER.GW.SpineOA.FULL.09052019.txt.gz

KP.Format.GO.FILTER.GW.FingerOA.FULL.09052019.txt.gz

KP.Format.GO.FILTER.GW.ThumbOA.FULL.09052019.txt.gz

KP.Format.GO.FILTER.GW.HandOA.FULL.09052019.txt.gz

### Early-onset osteoarthritis

AlIOA KP.Format.GO.RAW.final.meta.results.Early\_AlIOA.txt.gz

### Sex specific analysis

AlIOA KP.Format.AlIOA.gwama.plotting.gz.minus9sout.gz  
KneeHipOA KP.Format.KneeHipOA.gwama.plotting.gz.minus9sout.gz  
KneeOA KP.Format.KneeOA.gwama.plotting.gz.minus9sout.gz  
HipOA KP.Format.HipOA.gwama.plotting.gz.minus9sout.gz  
TJR KP.Format.TJR.gwama.plotting.gz.minus9sout.gz  
THR KP.Format.THR.gwama.plotting.gz.minus9sout.gz  
TKR KP.Format.TKR.gwama.plotting.gz.minus9sout.gz  
SpineOA KP.Format.SpineOA.gwama.plotting.gz.minus9sout.gz  
FingerOA KP.Format.FingerOA.gwama.plotting.gz.minus9sout.gz  
ThumbOA KP.Format.ThumbOA.gwama.plotting.gz.minus9sout.gz  
HandOA KP.Format.HandOA.gwama.plotting.gz.minus9sout.gz



The Genetics of Osteoarthritis (GO) consortium (<https://www.genetics-osteoarthritis.com>) is a global collaboration with a focus on progressing our understanding of the genetic underpinning of osteoarthritis and related traits. GO aims to bring together all globally available genetic

studies of osteoarthritis in order to make new discoveries possible. These are the genome-wide meta-analysis summary statistics for 11 osteoarthritis phenotypes across 13 international cohorts stemming from 9 populations in up to 826,690 individuals (177,517 osteoarthritis patients). There are 3 datasets available: the main analysis, sex specific analysis and early-onset osteoarthritis analysis.

The total sample size is 826,690 individuals. Participants were of European and East Asian ancestry.

	Max Cases	Max Controls
<b>Main analysis</b>		
AlIOA	177,517	649,173
KneeHipOA	89,741	400,604
KneeOA	62,497	333,557
HipOA	36,445	316,943
TJR	40,887	327,689
THR	23,021	296,016
TKR	18,200	233,841
SpineOA	28,372	305,578
FingerOA	10,804	255,814
ThumbOA	10,536	236,919

HandOA	20,901	282,881
<b>Early-onset osteoarthritis</b>		
AlIOA	6,838	41,449
<b>Sex specific analysis - Females</b>		
AlIOA	90,838	192,697
KneeHipOA	47,511	102,916
KneeOA	34,550	81,587
HipOA	19,023	60,266
TJR	19,391	83,579
THR	11,,089	67,516
TKR	8477	45,927
SpineOA	15,731	54,374
FingerOA	2,778	20,321
ThumbOA	3,238	24,060
HandOA	8,840	35,161
<b>Sex specific analysis - Males</b>		
AlIOA	56,462	153,808
KneeHipOA	31,243	92,622
KneeOA	22,228	73,354
HipOA	11,602	55,251
TJR	13,064	59,542
THR	6,798	44,676
TKR	6,411	43,712
SpineOA	10,005	48,585
FingerOA	968	16,931
ThumbOA	1,056	18,719
HandOA	3,196	27,161

Osteoarthritis was defined by either: self-reported osteoarthritis, clinically diagnosed, ICD10 codes or radiographic depending on the data available in the cohort. Controls were osteoarthritis-free or population-based with or without ICD code exclusions

AlIOA: Osteoarthritis at any of one or more of the investigated joint sites: hip, knee, hand, finger, thumb and spine, as defined below

KneeOA: Osteoarthritis or joint replacement at the left and/or right knee joint

HipOA: Osteoarthritis or joint replacement at the left and/or right hip joint

Knee/HipOA: KneeOA and/or HipOA

TJR: undergone total knee and/or hip replacement due to osteoarthritis in left, right or both joints

THR: undergone total hip replacement due to osteoarthritis in left right or both hip joints

TKR: undergone total knee replacement due to osteoarthritis in left right or both knee joints

SpineOA: osteoarthritis in the spine defined by ICD codes or lumbar disk degeneration: narrowing, osteophytes or both present on two or more vertebral levels [REF: PMID: 20147869]

FingerOA: Finger osteoarthritis defined by ICD10 codes or clinically defined at of the distal interphalangeal (DIP) joints 1-4, the proximal interphalangeal (PIP) joints 1-4 in the left finger and right fingers. If only data from one side (left/right) was available cases were defined on that side only

ThumbOA: Thumb osteoarthritis defined by ICD10 codes or clinically defined at the first carpometacarpal (CMC1) joint and/or trapezioscapoid (TS) joint in the left thumb and right thumb. If only data from one side (left/right) was available cases were defined on that side only

HandOA: FingerOA and/or ThumbOA

Early AIOA: Early osteoarthritis defined as age at onset younger than 45 years of age at any of one or more of the investigated joint sites: hip, knee, hand, finger, thumb and spine, as defined above.