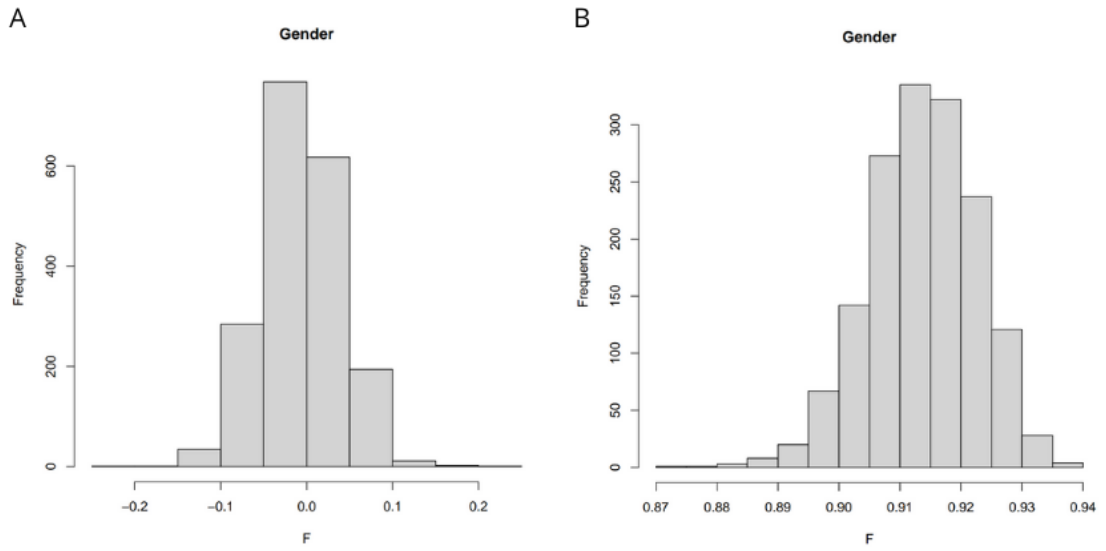

Figure 1. A. Bar plot of sexual discrepancies for breast cancer patients. **B.** Bar plot of sexual discrepancies for prostate cancer patients. Patients with an F value below 0.2 correspond to females, and those with an F value above 0.8 correspond to males.

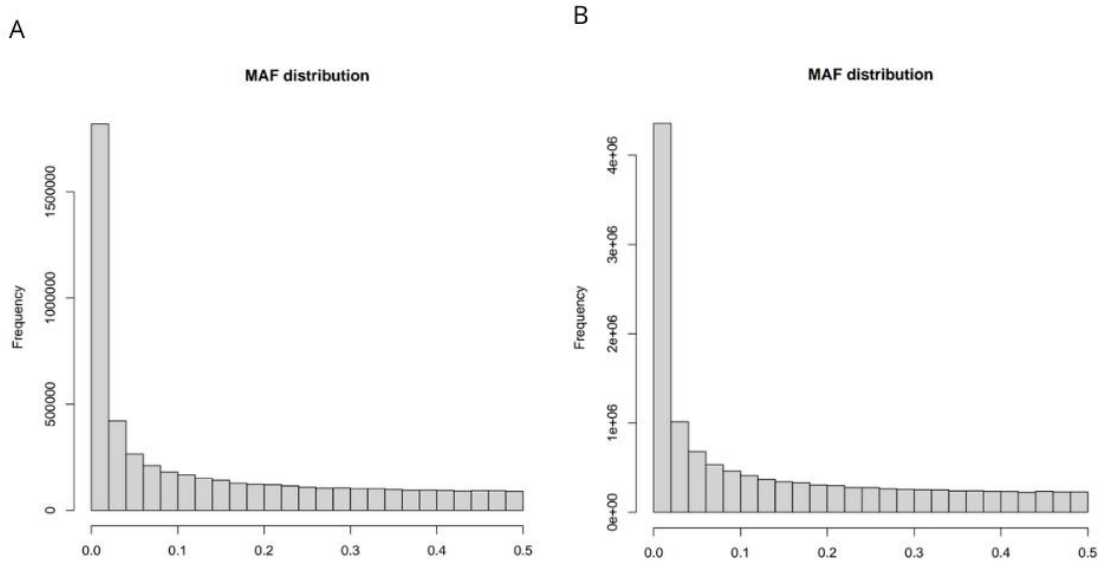

Figure 2. Bar plots of the distribution of SNPs according to MAF value for breast cancer patients (A) and prostate cancer patients (B). All SNPs with a value below 0.05 were removed, which corresponds to more than 6 million in each study.

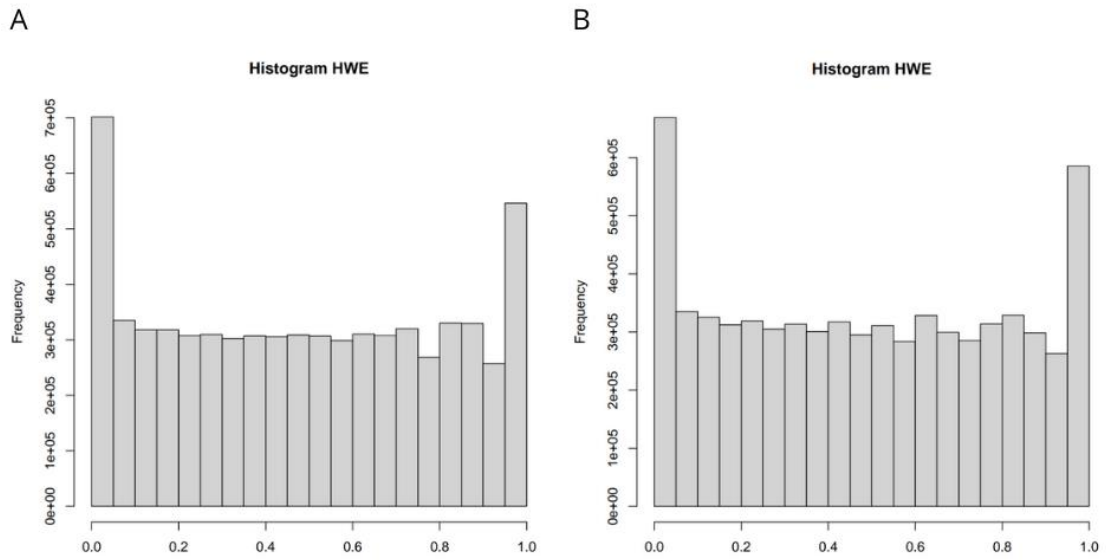

Figure 3. Bar plot of SNPs for breast cancer (A) and prostate cancer (B). SNPs that do not meet Hardy-Weinberg equilibrium are removed.

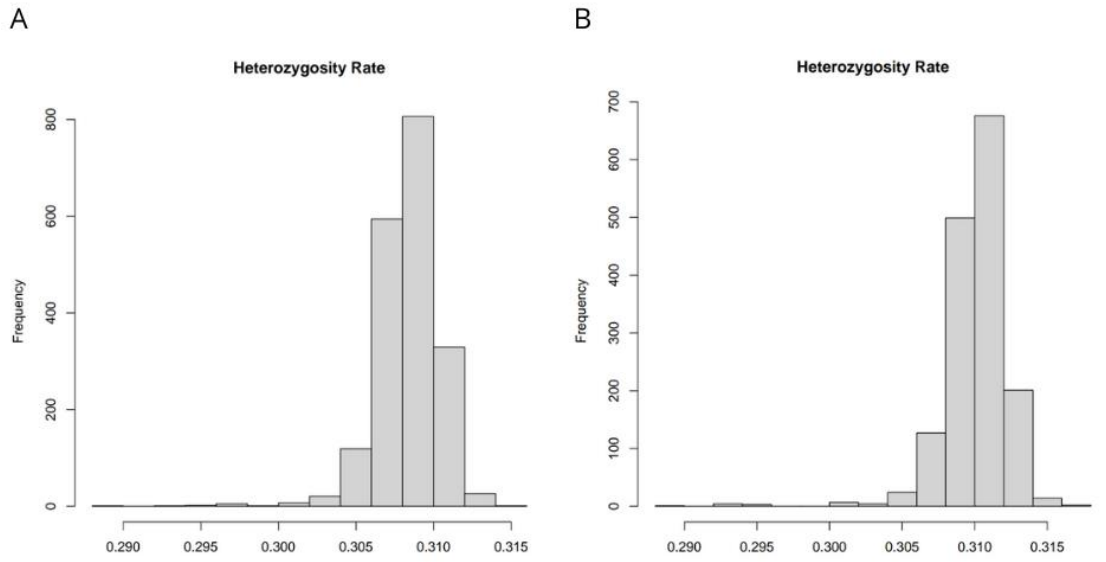

Figure 4. Bar plot of breast cancer patients (A) and prostate cancer patients (B). All patients who fail heterozygosity tests are removed.

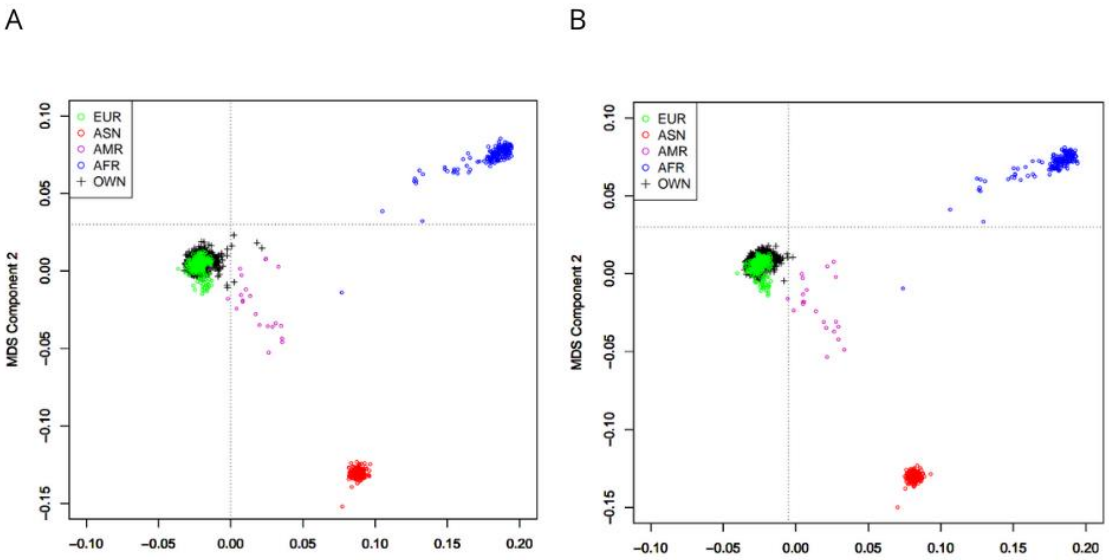

Figure 5. Table of population stratification in breast cancer (A) and prostate cancer (B). The patients from our studies are marked with a "+".

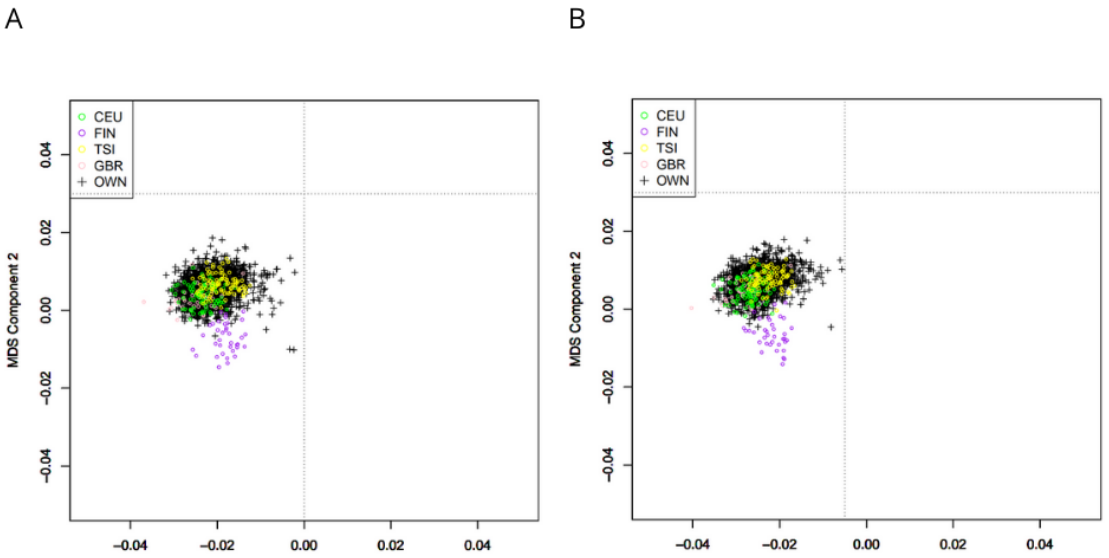

Figure 6. Table of subpopulation stratification for breast cancer patients (A) and prostate cancer patients (B). All subpopulation groups are European.

Variable	Value
Other collagen vascular disease	-0.852206943
Previous abdominal surgery	0.012248337
Psa prediagnostic biopsy (ng/ml)	0.001152975
Hormone therapy	-0.525500068
Radio dose per fraction (Gy)	-0.089353064
Radio rectum V60 (%)	-0.020462106
Radio rectum V75 (%)	0.020124473

Table 1. Variables selected by LASSO for the prostate cancer study. These variables have a value below 0.05.

Site	Coded number
Barcelona	1
Gent	2
Leicester	3
Leuven	4
Mannheim	5
Milan	6
Montpellier	7
Mount Sinai	8
Santiago	9

Stage	Coded number
Stage I	1
Stage II	2
Stage III	3
Stage IV	4

Phenotype	Coded number
DCIS	1
HER2 positive	2
Luminal	3
Luminal B HER2 positive	4
Triple negative	5

Table 2. Recoding of categorical covariates for the breast cancer study.

Site	Coded number
Candiolo	1
Freiburg	2
Gent	3
Karlsruhe ST	4
Karlsruhe VN	5
Leicester	6
Leuven	7
Ludwigshafen	8
Maastricht	9
Manchester	10
Mannheim	11
Milan	12
Montpellier	13
Mount Sinai	14
Nimes	15
Santiago	16

Stage	Coded number
Stage I	1
Stage II	2
Stage III	3
Stage IV	4

Table 3. Recoding of categorical covariates for the prostate cancer study.

CHR	SNP	BP	A1	TEST	NMISS	OR	STAT	P	ensembl_gene_stable_id	hgnc_symbol
17	rs11078096	12857896	T	ADD	1885	2,652	4,871	0,000001111	ENSG00000006740	ARHGAP44
17	rs12451713	12857574	A	ADD	1885	2,164	4,668	0,000003047	ENSG00000006740	ARHGAP44
16	rs113202356	27891845	A	ADD	1885	2,686	4,567	0,000004957	ENSG00000169181	GSG1L
17	rs17720826	27061271	A	ADD	1885	2,828	4,542	0,000005569	ENSG00000160602	NEK8
17	rs34558300	12857379	GT	ADD	1885	2,146	4,532	0,000005856	ENSG00000006740	ARHGAP44
6	rs4713808	34483015	T	ADD	1885	0,455	-4,501	0,000006764	ENSG00000124507	PACSIN1

Table 4. Table indicating the genes of interest in the breast cancer study and the corresponding SNPs.

CHR	SNP	BP	A1	TEST	NMISS	OR	STAT	P	ensembl_gene_stable_id	hgnc_symbol
2	rs7580581	71700788	G	ADD	1539	0,4516	-5,042	4,62E-04	ENSG00000135636	DYSF
2	rs62143762	71701847	T	ADD	1539	0,4605	-4,895	9,82E-04	ENSG00000135636	DYSF
2	rs67359852	71700743	G	ADD	1539	0,4599	-4,894	9,89E-04	ENSG00000135636	DYSF
2	rs62143761	71700405	A	ADD	1539	0,4637	-4,873	1,10E-03	ENSG00000135636	DYSF
2	rs6725919	71699253	G	ADD	1539	0,477	-4,63	3,66E-03	ENSG00000135636	DYSF
3	rs10937192	184662961	C	ADD	1539	2,271	4,623	3,78E-03	ENSG00000156931	VPS8
2	rs6754568	71699184	T	ADD	1539	0,4779	-4,616	3,91E-03	ENSG00000135636	DYSF
2	rs12611717	71698819	A	ADD	1539	0,4789	-4,603	4,17E-03	ENSG00000135636	DYSF
2	rs6755293	71699632	T	ADD	1539	0,4794	-4,593	4.36e-06	ENSG00000135636	DYSF
2	rs6546695	71702582	G	ADD	1539	0,5055	-4,511	6,44E-03	ENSG00000135636	DYSF
19	rs111436395	53353962	A	ADD	1539	2,26	4,503	6,70E-03	ENSG00000204604	ZNF468
9	rs7044604	3968545	C	ADD	1539	2,175	4,428	9.51e-06	ENSG00000107249	GLIS3

Table 5. Table indicating the genes of interest in the prostate cancer study and the corresponding SNPs