Supplementary File 1. SNPs of OSA to Hypertention.

SNP	beta.exposure	eaf.exposure	se.exposure	samplesize.exposure	SD	R2
rs1023230	-0.1107	0.9223	0.0232	217955	10.83107101	1.49719E-05
rs10507084	0.1085	0.1793	0.0163	217955	7.609761097	5.98291E-05
rs10860169	-0.0653	0.2906	0.0137	217955	6.395934173	4.29769E-05
rs10910079	0.1601	0.03324	0.0348	217955	16.24660651	6.24118E-06
rs10928560	-0.0878	0.1949	0.0158	217955	7.376332842	4.44631E-05
rs10938398	0.0577	0.4731	0.0125	217955	5.835706363	4.87389E-05
rs11530654	0.0655	0.2633	0.0141	217955	6.582676777	3.84104E-05
rs11758441	0.0602	0.378	0.0129	217955	6.022448966	4.6985E-05
rs12682930	-0.1262	0.0609	0.0262	217955	12.23164054	1.21761E-05
rs142006783	0.1783	0.03778	0.0327	217955	15.26620784	9.9176E-06
rs181190675	-0.2193	0.01815	0.0475	217955	22.17568418	3.48558E-06
rs182846984	0.2679	0.01414	0.0544	217955	25.39699409	3.10224E-06
rs1896039	0.062	0.5349	0.0126	217955	5.882392013	5.52744E-05
rs193546	0.0739	0.7438	0.0143	217955	6.676048079	4.66998E-05
rs1959185	0.0856	0.1344	0.0182	217955	8.496788464	2.36148E-05
rs2725231	-0.0766	0.8336	0.0166	217955	7.749818049	2.71029E-05
rs3996329	-0.0757	0.2366	0.0148	217955	6.909476333	4.33609E-05
rs405430	-0.0693	0.7625	0.0146	217955	6.816105031	3.74393E-05
rs4837016	-0.0706	0.4662	0.0125	217955	5.835706363	7.28456E-05
rs4961731	0.0959	0.8894	0.02	217955	9.33713018	2.07536E-05
rs527014	0.1246	0.07433	0.0238	217955	11.11118491	1.73048E-05
rs6021831	-0.0632	0.2973	0.0136	217955	6.349248522	4.13985E-05
rs6845679	0.0588	0.5898	0.0127	217955	5.929077664	4.75895E-05
rs72632980	0.1148	0.07221	0.0241	217955	11.25124187	1.39495E-05
rs72892016	-0.0885	0.1204	0.0192	217955	8.963644973	2.06471E-05
rs770267	0.0769	0.831	0.0166	217955	7.749818049	2.76559E-05
rs78730556	-0.1146	0.06738	0.0251	217955	11.71809838	1.20204E-05
rs9318788	0.9882	0.001152	0.2164	217955	101.0277485	2.20186E-07
rs9510253	0.0821	0.1468	0.0176	217955	8.216674558	2.50093E-05
rs9937053	0.102	0.4298	0.0125	217955	5.835706363	0.00014974
rs996762	-0.0801	0.8239	0.0163	217955	7.609761097	3.21504E-05
R2						0.001046075
F						7

Supplementary File 2. SNPs of OSA to Diabetes.

SNP	beta.exposure	eaf.exposure	se.exposure	samplesize.exposure	SD	R2
rs1023230	-0.1107	0.9223	0.0232	217955	10.83107101	1.49719E-05
rs10507084	0.1085	0.1793	0.0163	217955	7.609761097	5.98291E-05
rs10860169	-0.0653	0.2906	0.0137	217955	6.395934173	4.29769E-05
rs10938398	0.0577	0.4731	0.0125	217955	5.835706363	4.87389E-05
rs193546	0.0739	0.7438	0.0143	217955	6.676048079	4.66998E-05
rs1959185	0.0856	0.1344	0.0182	217955	8.496788464	2.36148E-05
rs2725231	-0.0766	0.8336	0.0166	217955	7.749818049	2.71029E-05
rs405430	-0.0693	0.7625	0.0146	217955	6.816105031	3.74393E-05
rs4837016	-0.0706	0.4662	0.0125	217955	5.835706363	7.28456E-05
rs4961731	0.0959	0.8894	0.02	217955	9.33713018	2.07536E-05
rs6021831	-0.0632	0.2973	0.0136	217955	6.349248522	4.13985E-05
rs6845679	0.0588	0.5898	0.0127	217955	5.929077664	4.75895E-05
rs72632980	0.1148	0.07221	0.0241	217955	11.25124187	1.39495E-05
rs770267	0.0769	0.831	0.0166	217955	7.749818049	2.76559E-05
rs9510253	0.0821	0.1468	0.0176	217955	8.216674558	2.50093E-05
rs9937053	0.102	0.4298	0.0125	217955	5.835706363	0.00014974
rs996762	-0.0801	0.8239	0.0163	217955	7.609761097	3.21504E-05
R2						0.000732466
F						9.4

Supplementary File 3. SNPs of OSA to BMI.

SNP	beta.exposure	eaf.exposure	se.exposure	samplesize.exposure	SD	R2
rs1023230	-0.1107	0.9223	0.0232		10.83107101	1.49719E-05
rs10507084	0.1085	0.1793	0.0163		7.609761097	5.98291E-05
rs10860169	-0.0653	0.2906	0.0137		6.395934173	4.29769E-05
rs10910079	0.1601	0.03324	0.0348		16.24660651	6.24118E-06
rs10928560	-0.0878	0.1949	0.0158		7.376332842	4.44631E-05
rs10938398	0.0577	0.4731	0.0125		5.835706363	4.87389E-05
rs11758441	0.0602	0.378	0.0129		6.022448966	4.6985E-05
rs12682930	-0.1262	0.0609	0.0262		12.23164054	1.21761E-05
rs142006783	0.1783	0.03778	0.0327		15.26620784	9.9176E-06
rs181190675	-0.2193	0.01815	0.0475		22.17568418	3.48558E-06
rs182846984	0.2679	0.01414	0.0544		25.39699409	3.10224E-06
rs1896039	0.062	0.5349	0.0126		5.882392013	5.52744E-05
rs193546	0.0739	0.7438	0.0143		6.676048079	4.66998E-05
rs1959185	0.0856	0.1344	0.0182		8.496788464	2.36148E-05
rs2725231	-0.0766	0.8336	0.0166		7.749818049	2.71029E-05
rs3996329	-0.0757	0.2366	0.0148		6.909476333	4.33609E-05
rs405430	-0.0693	0.7625	0.0146		6.816105031	3.74393E-05
rs4837016	-0.0706	0.4662	0.0125		5.835706363	7.28456E-05
rs4961731	0.0959	0.8894	0.02		9.33713018	2.07536E-05
rs527014	0.1246	0.07433	0.0238		11.11118491	1.73048E-05
rs6021831	-0.0632	0.2973	0.0136		6.349248522	4.13985E-05
rs6845679	0.0588	0.5898	0.0127		5.929077664	4.75895E-05
rs72632980	0.1148	0.07221	0.0241		11.25124187	1.39495E-05
rs72892016	-0.0885	0.1204	0.0192		8.963644973	2.06471E-05
rs770267	0.0769	0.831	0.0166		7.749818049	2.76559E-05
rs78730556	-0.1146	0.06738	0.0251		11.71809838	1.20204E-05
rs9318788	0.9882	0.001152	0.2164		101.0277485	2.20186E-07
rs9510253	0.0821	0.1468	0.0176		8.216674558	2.50093E-05
rs9937053	0.102	0.4298	0.0125		5.835706363	0.00014974
rs996762	-0.0801	0.8239	0.0163		7.609761097	3.21504E-05
R2						0.001007664
F						7

Supplementary File 4. SNPs of OSA to HDL.

SNP	beta.exposure	eaf.exposure	se.exposure	samplesize.exposure	SD	R2
rs1023230	-0.1107	0.9223	0.0232		10.83107101	1.49719E-05
rs10507084	0.1085	0.1793	0.0163		7.609761097	5.98291E-05
rs10860169	-0.0653	0.2906	0.0137		6.395934173	4.29769E-05
rs10910079	0.1601	0.03324	0.0348		16.24660651	6.24118E-06
rs10928560	-0.0878	0.1949	0.0158		7.376332842	4.44631E-05
rs10938398	0.0577	0.4731	0.0125		5.835706363	4.87389E-05
rs11530654	0.0655	0.2633	0.0141		6.582676777	3.84104E-05
rs11758441	0.0602	0.378	0.0129		6.022448966	4.6985E-05
rs12682930	-0.1262	0.0609	0.0262		12.23164054	1.21761E-05
rs142006783	0.1783	0.03778	0.0327		15.26620784	9.9176E-06
rs181190675	-0.2193	0.01815	0.0475		22.17568418	3.48558E-06
rs182846984	0.2679	0.01414	0.0544		25.39699409	3.10224E-06
rs1896039	0.062	0.5349	0.0126		5.882392013	5.52744E-05
rs193546	0.0739	0.7438	0.0143		6.676048079	4.66998E-05
rs1959185	0.0856	0.1344	0.0182		8.496788464	2.36148E-05
rs2725231	-0.0766	0.8336	0.0166		7.749818049	2.71029E-05
rs3996329	-0.0757	0.2366	0.0148		6.909476333	4.33609E-05
rs405430	-0.0693	0.7625	0.0146		6.816105031	3.74393E-05
rs4837016	-0.0706	0.4662	0.0125		5.835706363	7.28456E-05
rs4961731	0.0959	0.8894	0.02		9.33713018	2.07536E-05
rs527014	0.1246	0.07433	0.0238		11.11118491	1.73048E-05
rs6845679	0.0588	0.5898	0.0127		5.929077664	4.75895E-05
rs72632980	0.1148	0.07221	0.0241		11.25124187	1.39495E-05
rs72892016	-0.0885	0.1204	0.0192		8.963644973	2.06471E-05
rs770267	0.0769	0.831	0.0166		7.749818049	2.76559E-05
rs78730556	-0.1146	0.06738	0.0251		11.71809838	1.20204E-05
rs9318788	0.9882	0.001152	0.2164		101.0277485	2.20186E-07
rs9510253	0.0821	0.1468	0.0176		8.216674558	2.50093E-05
rs9937053	0.102	0.4298	0.0125		5.835706363	0.00014974
rs996762	-0.0801	0.8239	0.0163		7.609761097	3.21504E-05
R2						0.001004676
F						7

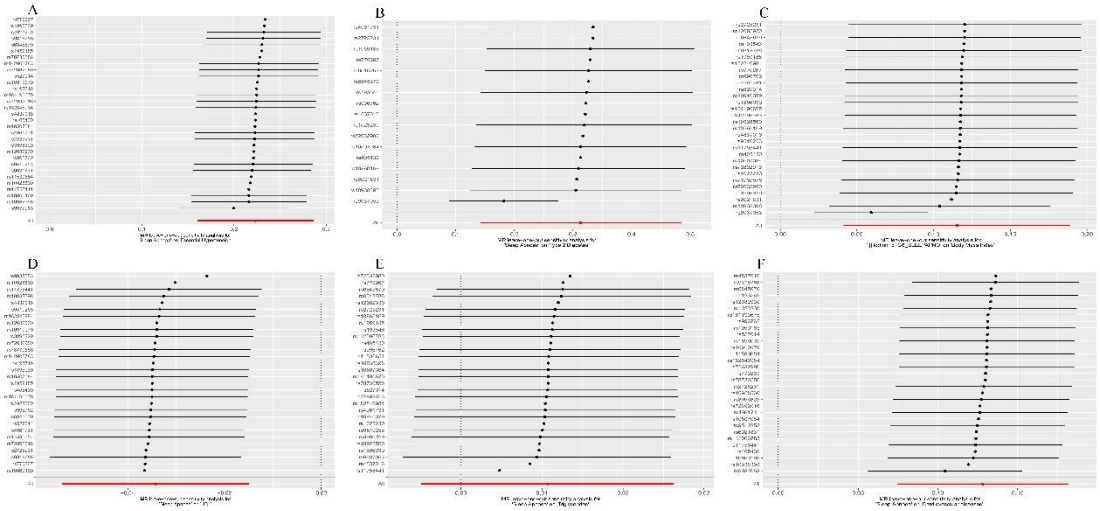
Supplementary File 5. SNPs of OSA to Triglycerides.

SNP	beta.exposure	eaf.exposure	se.exposure	samplesize.exposure	SD	R2
rs1023230	-0.1107	0.9223	0.0232		10.83107101	1.49719E-05
rs10507084	0.1085	0.1793	0.0163		7.609761097	5.98291E-05
rs10860169	-0.0653	0.2906	0.0137		6.395934173	4.29769E-05
rs10910079	0.1601	0.03324	0.0348		16.24660651	6.24118E-06
rs10928560	-0.0878	0.1949	0.0158		7.376332842	4.44631E-05
rs10938398	0.0577	0.4731	0.0125		5.835706363	4.87389E-05
rs11530654	0.0655	0.2633	0.0141		6.582676777	3.84104E-05
rs11758441	0.0602	0.378	0.0129		6.022448966	4.6985E-05
rs12682930	-0.1262	0.0609	0.0262		12.23164054	1.21761E-05
rs142006783	0.1783	0.03778	0.0327		15.26620784	9.9176E-06
rs181190675	-0.2193	0.01815	0.0475		22.17568418	3.48558E-06
rs182846984	0.2679	0.01414	0.0544		25.39699409	3.10224E-06
rs1896039	0.062	0.5349	0.0126		5.882392013	5.52744E-05
rs193546	0.0739	0.7438	0.0143		6.676048079	4.66998E-05
rs1959185	0.0856	0.1344	0.0182		8.496788464	2.36148E-05
rs2725231	-0.0766	0.8336	0.0166		7.749818049	2.71029E-05
rs3996329	-0.0757	0.2366	0.0148		6.909476333	4.33609E-05
rs405430	-0.0693	0.7625	0.0146		6.816105031	3.74393E-05
rs4837016	-0.0706	0.4662	0.0125		5.835706363	7.28456E-05
rs4961731	0.0959	0.8894	0.02		9.33713018	2.07536E-05
rs527014	0.1246	0.07433	0.0238		11.11118491	1.73048E-05
rs6845679	0.0588	0.5898	0.0127		5.929077664	4.75895E-05
rs72632980	0.1148	0.07221	0.0241		11.25124187	1.39495E-05
rs72892016	-0.0885	0.1204	0.0192		8.963644973	2.06471E-05
rs770267	0.0769	0.831	0.0166		7.749818049	2.76559E-05
rs78730556	-0.1146	0.06738	0.0251		11.71809838	1.20204E-05
rs9318788	0.9882	0.001152	0.2164		101.0277485	2.20186E-07
rs9510253	0.0821	0.1468	0.0176		8.216674558	2.50093E-05
rs9937053	0.102	0.4298	0.0125		5.835706363	0.00014974
rs996762	-0.0801	0.8239	0.0163		7.609761097	3.21504E-05
R2						0.001004676
F						7

Supplementary File 6. SNPs of OSA to Cardiovascular disease.

SNP	beta.exposure	eaf.exposure	se.exposure	samplesize.exposure	SD	R2
rs1023230	-0.1107	0.9223	0.0232	217955	10.83107101	1.49719E-05
rs10507084	0.1085	0.1793	0.0163	217955	7.609761097	5.98291E-05
rs10860169	-0.0653	0.2906	0.0137	217955	6.395934173	4.29769E-05
rs10910079	0.1601	0.03324	0.0348	217955	16.24660651	6.24118E-06
rs10928560	-0.0878	0.1949	0.0158	217955	7.376332842	4.44631E-05
rs10938398	0.0577	0.4731	0.0125	217955	5.835706363	4.87389E-05
rs11530654	0.0655	0.2633	0.0141	217955	6.582676777	3.84104E-05
rs11758441	0.0602	0.378	0.0129	217955	6.022448966	4.6985E-05
rs12682930	-0.1262	0.0609	0.0262	217955	12.23164054	1.21761E-05
rs142006783	0.1783	0.03778	0.0327	217955	15.26620784	9.9176E-06
rs181190675	-0.2193	0.01815	0.0475	217955	22.17568418	3.48558E-06
rs182846984	0.2679	0.01414	0.0544	217955	25.39699409	3.10224E-06
rs1896039	0.062	0.5349	0.0126	217955	5.882392013	5.52744E-05
rs193546	0.0739	0.7438	0.0143	217955	6.676048079	4.66998E-05
rs1959185	0.0856	0.1344	0.0182	217955	8.496788464	2.36148E-05
rs2725231	-0.0766	0.8336	0.0166	217955	7.749818049	2.71029E-05
rs3996329	-0.0757	0.2366	0.0148	217955	6.909476333	4.33609E-05
rs405430	-0.0693	0.7625	0.0146	217955	6.816105031	3.74393E-05
rs4837016	-0.0706	0.4662	0.0125	217955	5.835706363	7.28456E-05
rs4961731	0.0959	0.8894	0.02	217955	9.33713018	2.07536E-05
rs527014	0.1246	0.07433	0.0238	217955	11.11118491	1.73048E-05
rs6021831	-0.0632	0.2973	0.0136	217955	6.349248522	4.13985E-05
rs6845679	0.0588	0.5898	0.0127	217955	5.929077664	4.75895E-05
rs72632980	0.1148	0.07221	0.0241	217955	11.25124187	1.39495E-05
rs72892016	-0.0885	0.1204	0.0192	217955	8.963644973	2.06471E-05
rs770267	0.0769	0.831	0.0166	217955	7.749818049	2.76559E-05
rs78730556	-0.1146	0.06738	0.0251	217955	11.71809838	1.20204E-05
rs9318788	0.9882	0.001152	0.2164	217955	101.0277485	2.20186E-07
rs9510253	0.0821	0.1468	0.0176	217955	8.216674558	2.50093E-05
rs9937053	0.102	0.4298	0.0125	217955	5.835706363	0.00014974
rs996762	-0.0801	0.8239	0.0163	217955	7.609761097	3.21504E-05
R2						0.001046075
F						7

Supplementary Figure 1. The MR "leave-one-out" sensitivity analysis. (A) OSA to Hypertention. (B) OSA to Diabetes. (C) OSA to BMI. (D) OSA to HDL. (E) OSA to Triglycerides. (F) OSA to Cardiovascular disease.



Supplementary Figure 2. Funnel plots of OSA with Mets. The X-axis represents odds ratio (OR), and the Y-axis represents standard error (SE). (A) OSA to Hypertention. (B) OSA to Diabetes. (C) OSA to BMI. (D) OSA to HDL. (E) OSA to Triglycerides. (F) OSA to Cardiovascular disease.