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Membranous nephropathy (Xie, 2020)

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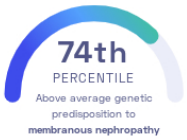
Autoimmunity | Kidneys

STUDY SUMMARY

Identification of 4 genomic regions associated with membranous nephropathy, an *autoimmune* disease of the kidneys.

YOUR RESULT



STUDY DESCRIPTION

Kidneys are organs that remove waste and excess water from the blood, which eventually ends up as urine. Membranous nephropathy (MN) is an *autoimmune* disease that leads to kidney failure. This genome-wide association study attempted to identify genetic variants associated with an increased risk of membranous nephropathy. By examining the genetic data of over 12,000 individuals of East Asian and European ancestries, 4 regions of the genome were linked to an increased risk of membranous nephropathy. All identified variants are near genes related to the immune system's function, underscoring that membranous nephropathy is an *autoimmune* disease. Furthermore, the variants have previously been linked to inflammatory bowel disease, another *autoimmune* condition.

DID YOU KNOW?

Treatments for membranous nephropathy include drugs that cause the patients to urinate more and a low-salt diet. Medications that help keep the immune system under control are also used.

YOUR DETAILED RESULTS

To calculate your genetic predisposition to membranous nephropathy we summed up the effects of genetic variants that were linked to membranous nephropathy in the study that this report is based on. These variants can be found in the table below. The variants highlighted in green have **positive effect sizes** and increase your genetic predisposition to membranous nephropathy. The variants highlighted in blue have **negative effects sizes** and decrease your genetic predisposition to membranous nephropathy. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to membranous nephropathy. By adding up the effect sizes of the highlighted variants **we calculated your polygenic score for membranous nephropathy to be 2.98**. To determine whether your score is high or low, we compared it to the scores of 5,000 other Nebula Genomics users. We found that your polygenic score for membranous nephropathy is in the **74th percentile**. This means that it is higher than the polygenic scores 74% of people. We consider this to be an **above average genetic predisposition to membranous nephropathy**. However, please note that genetic predispositions do not account for important non-genetic factors like lifestyle. Furthermore, the genetics of most traits has not been fully understood yet and many associations between traits and genetic variants remain unknown. For additional explanations, click on the column titles in the table below and visit our Nebula Library tutorial.

VARIANT	YOUR GENOTYPE	EFFECT SIZE	VARIANT FREQUENCY	SIGNIFICANCE
rs9271573_A	A / C	0.88 (↑)	44%	2.70×10^{-164}
rs17831251_C	C / C	0.81 (↑)	61%	4.70×10^{-103}
rs9405192_G NEW	G / A	0.25 (↑)	69%	1.40×10^{-14}
rs230540_C NEW	C / T	0.22 (↑)	32%	3.40×10^{-12}