

# Obesity

see [Obesity in neurosurgery](#).

## Types

see [Hypothalamic obesity](#).

Severe obesity: [Body mass index](#) (BMI  $\geq$  35).

## Complications

[Hypertension](#), [obesity](#), [smoking](#), and [cerebral small vessel disease](#) were important factors associated with non-lesional spontaneous intracerebral hemorrhage in young patients. Radiologic changes corresponding to cerebral small vessel disease appeared in young patients (in their 30s) and they were associated with hypertension <sup>1)</sup>.

---

[Obesity](#) is a strong [risk factor](#) for esophageal [adenocarcinoma](#) (EAC). Nevertheless, not all patients with EAC are obese, and a substantial proportion of obese patients don't suffer from poor prognoses. The mechanisms behind the "[obesity paradox](#)" that uncouple obesity from dismal outcomes in EAC are unclear. This study aimed to explore the "obesity-guarding" genes (OGG) profiles and their prognostic values in patients with EAC. Methods: Gene expression data and clinical information of patients with EAC were downloaded from The Cancer Genome Atlas (TCGA) database. Enrichment analysis was used to explore the OGG functions and pathways. Cox regression analysis and nomogram model were performed to investigate the OGG prognostic values for overall survival (OS). In addition, relations between OGG and immune cells were assessed by the "CIBERSORT" algorithm and the Tumor IMMune Estimation Resource (TIMER) tool. Finally, the results were experimentally validated in a real-world study. Results: A total of 69 OGG were retrieved, and 17 significantly differentially expressed genes (SDEG) were identified between normal and EAC tissues. Enrichment analysis showed the OGG were enriched in the mitochondrion-related and various receptor pathways. Univariate Cox regression results showed that the MCM6, ATXN2, and CSK were significantly associated with OS ( $P=0.036$ ,  $0.039$ ,  $0.046$ , respectively). Multivariate Cox regression analysis showed MCM6 and CSK were independent prognostic genes for OS ( $P=0.025$ ,  $0.041$ , respectively). Nomogram demonstrated that the OGG had good predictive abilities for the 1-, 2-, and 3-year OS. Immunity analysis demonstrated that OGG were significantly associated with immune cells ( $P < 0.05$ ). In addition, clinical correlation analysis revealed that the OGG had significant relations with clinical parameters ( $P < 0.05$ ). The experiment results confirmed that the SDEG were significantly different between normal and EAC tissues ( $P < 0.05$ ). Conclusions: We identified the OGG expression profiles that may uncouple obesity from poor survival in patients with EAC. They have prognostic values in predicting patients' OS, and may be exploited for prognostic biomarkers <sup>2)</sup>.

## Psychological factors

Psychological factors may explain why some people develop obesity and others remain a normal [weight](#) during their life course. Robinson et al. used an [umbrella review](#) approach to build an evidence-based map of the psychological correlates of heavier body weight. Synthesising findings from 42 meta-analyses that have examined associations between psychological factors and heavier body weight, we assessed level of evidence for a range of cognitive, psychosocial and mental health individual difference factors. There is convincing evidence that impaired mental health is associated with heavier body weight and highly suggestive evidence that numerous cognitive factors are associated with heavier body weight. However, the relatively low methodological quality of meta-analyses resulted in lower evidential certainty for most psychosocial factors. Psychological correlates of heavier body weight tended to be small in statistical size and on average, people with obesity were likely to be more psychologically similar than different to people with normal weight. We consider implications for understanding the development of heavier body weight and identifying effective public health interventions to reduce obesity <sup>3)</sup>.

1)

Jang JS, Park YS. Contributing factors of spontaneous intracerebral hemorrhage development in young adults. *J Cerebrovasc Endovasc Neurosurg*. 2024 Jun 20. doi: 10.7461/jcen.2024.E2023.11.001. Epub ahead of print. PMID: 38897595.

2)

Zhu L, Yang F, Dong L, Wang G, Li Q, Zhong C. Novel evidence of obesity paradox in esophageal adenocarcinoma: perspective on genes that uncouple adiposity from dismal outcomes. *J Cancer*. 2022 Jan 1;13(2):436-449. doi: 10.7150/jca.65138. PMID: 35069893; PMCID: PMC8771516.

3)

Robinson E, Roberts C, Vainik U, Estonia T, Jones A. The psychology of obesity: An umbrella review and evidence-based map of the psychological correlates of heavier body weight. *Neurosci Biobehav Rev*. 2020 Oct 18:S0149-7634(20)30613-8. doi: 10.1016/j.neubiorev.2020.10.009. Epub ahead of print. PMID: 33086131.

From:

<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:

<https://neurosurgerywiki.com/wiki/doku.php?id=obesity>

Last update: **2024/06/20 07:13**

