Supplementary Material

# Supplementary Figures and Tables

## Supplementary Figures

Figure S1

**Supplementary Figure 1.** GO analysis of differentially expressed MRGs. (A) Significantly enriched biological process (BP), cellular components (CC), and molecular functions (MF) terms of DEMRGs. (B) The highly enriched pathways in three terms.

Figure S3

**Supplementary Figure 2**. The interactions of prognosis-related 10 risk signature among MRGs showing in PPI network.

Figure S2

**Supplementary Figure 3.** The survival analysis of HNSCC patients with chemotherapy or radiotherapy (RT). Kaplan-Meier analysis for OS in (A) low- and (B) high-risk groups with the application of RT. And the predictive value of risk model for OS in patients with (C) chemotherapy and (D) radiotherapy.

## Supplementary Tables

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| **Table S1.** Introduction of 10 MRGs constructing the prognostic model. | | | |
| Gene symbol | Full name | Encoding protein | Risk Coefficient |
| ADA | Adenosine deaminase | An enzyme that catalyzes the hydrolysis of adenosine to inosine | 0.013053726 |
| ALG3 | Alpha-1, 3-mannosyltransferase | A member of the ALG3 family, a crucial class of glycosyltransferases | 0.004785301 |
| CHPF2 | Chondroitin polymerizing factor 2 | A kind of glycosyltransferase used for chondroitin synthesis | 0.005102212 |
| CYP4X1 | Cytochrome P450, family 4, subfamily X, polypeptide 1 | A member of the cytochrome P450 superfamily of enzymes | -0.009745387 |
| GATM | Glycine amidinotransferase | A mitochondrial enzyme that belongs to the amidinotransferase family | -0.011462085 |
| GPT | Glutamic-pyruvate transaminase | Cytosolic alanine aminotransaminase 1 | -0.004815018 |
| HPRT1 | Hypoxanthine phosphoribosyltransferase 1 | A transferase that converts hypoxanthine and guanine into adenosine and guanosine | 0.012284735 |
| HS3ST1 | Heparan sulfate (glucosamine) 3-O-sulfotransferase 1 | A member of the heparan sulfate biosynthetic enzyme family | 0.054555857 |
| HSD17B6 | Hydroxysteroid (17-beta) dehydrogenase 6 | A member of the retinol dehydrogenase family | -0.003982598 |
| LIPE | Lipase, hormone-sensitive | One of the lipolytic enzymeson that regulates adipose  tissue adiposetissue deposition | -0.070739922 |
| The introduction of genes from GEPIA v2.0 database. | | | |