

# 学位論文の要旨

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<p>主論文の題名</p> <p>Influence of Epstein–Barr virus and human papillomavirus infection on macrophage migration inhibitory factor and macrophage polarization in nasopharyngeal carcinoma</p> <p>主論文の要旨</p> <p><b>Background:</b> To assess the effects of Epstein–Barr virus (EBV) and human papillomavirus (HPV) infection on the tumor microenvironment, we examined the relationship between viral infection status, macrophage migration inhibitory factor (MIF), and tumor-associated macrophages in nasopharyngeal carcinoma (NPC).</p> <p><b>Methods:</b> A tissue microarray containing 150 cores from 90 patients with NPC and six with chronic inflammation was used. EBV and HPV status were detected using in situ hybridization with commercial EBER1 and HPV16/18 probes. Immunofluorescence double staining of MIF, pan-macrophage marker CD68, M1 macrophage marker CD11c, and M2 macrophage marker CD163 were analyzed using the same tissue microarray. The levels of these markers between NPC and inflammation cases and between tumor nests and stroma were compared. Correlations among these markers were analyzed.</p> <p><b>Results:</b> We found EBER1(+) cases in 90% of NPC patients, including 10% EBV/HPV co-infection. M1 macrophages mainly infiltrated the tumor nest, while M2 macrophages infiltrated the tumor stroma. We found a significant positive correlation between EBER1 levels and MIF levels in tumor nests and a significant positive correlation between HPV16/18 and CD11c(+) cell levels in NPC tissues.</p> <p><b>Conclusions:</b> It is suggested that MIF is associated with EBV, and M1 macrophage infiltration is affected by HPV status in NPC.</p>			