

# 学 位 論 文 の 要 約

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<p>主論文の題名</p> <p>Clinical Implications of Pretreatment: Lymphocyte-to-Monocyte Ratio in Patients With Rectal Cancer Receiving Preoperative Chemoradiotherapy</p> <p>(術前化学放射線療法を施行した直腸癌における治療前 Lymphocyte-to-monocyte ratio (LMR) の予後予測マーカーとしての有効性)</p> <p>Akira Yamamoto M.D, Yuji Toiyama M.D, Ph.D, Yoshinaga Okugawa M.D, Ph.D, Satoshi Oki M.D, Shozo Ide M.D, Ph.D, Susumu Saigusa M.D, Ph.D, Toshimitsu Araki M.D, Ph.D, Masato Kusunoki M.D, Ph.D</p> <p>Diseases of the colon and rectum. 2019 Feb;62(2):171-180 Published: February, 2019 doi: 10.1097/DCR.0000000000001245</p> <p>主論文の要約</p> <p><b>Background.</b></p> <p>Despite advances in local control of rectal cancer, recurrence in distant organs is still one of the main causes of mortality. Prognostic biomarkers would be valuable for treatment of patients who have rectal cancer.</p> <p><b>Objective.</b></p> <p>The aim of our study is to investigate the prognostic impact of lymphocyte-to-monocyte ratio in rectal cancer patients receiving preoperative chemoradiotherapy, and to clarify the clinical significance of lymphocyte-to-monocyte ratio.</p> <p><b>Design.</b></p> <p>Prospectively maintained data of rectal cancer patients were retrospectively evaluated to</p>			

clarify the clinical relevance of lymphocyte-to-monocyte ratio.

#### **Setting.**

This study was conducted at a single expert center.

#### **Patients.**

Total 119 consecutive rectal cancer patients through chemoradiotherapy followed by total mesorectal excision at our institute were enrolled in this study. Eight patients were excluded due to lack of laboratory data, and finally 111 patients were assessed in this study.

#### **Main outcome measures.**

The primary outcome measured was the clinical relevance of lymphocyte-to-monocyte ratio in rectal cancer patients receiving chemoradiotherapy.

#### **Results.**

Patients with low pre-treatment lymphocyte-to-monocyte ratio showed poor prognosis significantly both in overall survival and disease-free survival of rectal cancer patients receiving chemoradiotherapy. Multivariate analyses showed that low pre-treatment lymphocyte-to-monocyte ratio level, presence of pathological lymph node metastasis (ypN(+)), and high pre-treatment serum C-reactive protein level were independent prognostic factors of overall survival and disease-free survival. Additionally, time-to-event analysis divided into two groups by ypN status showed that low pre-treatment lymphocyte-to-monocyte ratio was correlated with poor overall survival and disease-free survival not only in group ypN(-), but also in group ypN(+).

#### **Limitations.**

The present study had several limitations, including retrospective observational and single institutional study from Japanese patients.

#### **Conclusions.**

The combination of lymphocyte-to-monocyte ratio and ypN status can be a predictive marker of poor prognosis and recurrence among rectal cancer patients undergoing preoperative chemoradiotherapy.