



## Manifestations of Gastroparesis

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### Introduction

Primary Gastrointestinal Lymphoma (PGIL) is a rare malignant tumor without standard diagnosis and treatment methods. This study is aimed to systematically analyze its clinical characteristics and draw out an appropriate flow chart of diagnosis and treatment process for PGIL in China. This study retrospectively analyzed the clinic pathological characteristics, diagnostic approaches, prognostic factors, and therapeutic modalities in 415 cases of PGIL in Chinese province of Guangdong. A systematic review was conducted in 118 studies containing 5075 patients to further identify clinical manifestations and mortalities of therapeutic modalities. The most common clinical presentations were abdominal pain and bloody stools. Endoscopic biopsy was an important diagnostic means, and usually more than once to make a definite diagnosis. Retrospective multicenter clinical study showed that younger onset age ( $<60$  years), female, one region involved, one lesion, early stage, International Prognostic Index (IPI  $\leq 1$ ), normal Lactate Dehydrogenase (LDH), normal albumin, and nonemergency operation were significant prognostic factors for B-cell lymphoma; non-B symptom, tumor restricted to gastric or ileocecal region, one lesion, performance status (PS  $\leq 1$ ), normal LDH, and non-surgery alone were significant prognostic factors for T-cell lymphoma. Among different therapeutic modalities, chemotherapy alone or combined with surgery showed better OS and PFS than surgery alone for Diffuse Large B-cell lymphoma (DLBCL) of stage I/II E and T-cell lymphoma.

For DLBCL of stage III E/IV and mucosa-associated lymphoid tissue lymphoma, OS and PFS did not differ among different therapeutic groups. In meta-analysis, surgery plus chemotherapy showed lowest mortality. Primary Gastrointestinal Lymphoma (PGIL) is a tumor Of Gastro Intestinal (GI) tract, as its primary lesion might invade the lymph nodes of the related drainage area, excluding tumors involving the liver, spleen, or lymphomas in patients who exhibit GI symptoms, and palpable lymph nodes. PGIL is a rare malignant tumor with an incidence of about 1505 per 100,000. Helicobacter pylori eradication therapy is the first-line treatment of gastric Mucosa-Associated Lymphoid Tissue (MALT) lymphoma; involved-field radiotherapy or surgery is recommended for patients of no gastric MALT with an early stage (I/II E); and R-CHOP regimen (rituximab, cyclophosphamide, doxorubicin, vincristine, and prednisolone) is recommended for gastric Diffuse Large B-Cell Lymphoma (DLBCL).

However, treatments on primary intestinal lymphoma are still controversial. Furthermore, whether surgery should be a first-line therapy of PGIL has been debated for several years. Therefore, the optimal treatment strategy for PGIL is still not established. This study comprised 415 patients, and 355 (85.8%) were of B- cell and 60 (14.5%) were of T-cell. The B-cell lymphoma patients had a median age of 57 years (range, 19–92 years), and the T-cell patients had a median age of 44 years (range, 21–88 years). B-cell lymphoma patients comprised 221 male and 134 female (male:female, 1.65:1.00), and T-cell lymphoma patients comprised 39 male and 21 female (male:female, 1.86:1.00). The Gastro Intestinal (GI) system has a number of sophisticated and autonomous functions coordinated over a range of length and time scales. Recent years have seen major advances in determining the mechanisms and interactions responsible for these functions. A substantial challenge involves reintegrating this detailed knowledge into coherent descriptions of single cell, tissue, and organ function, and this review highlights significant early progress towards this goal.