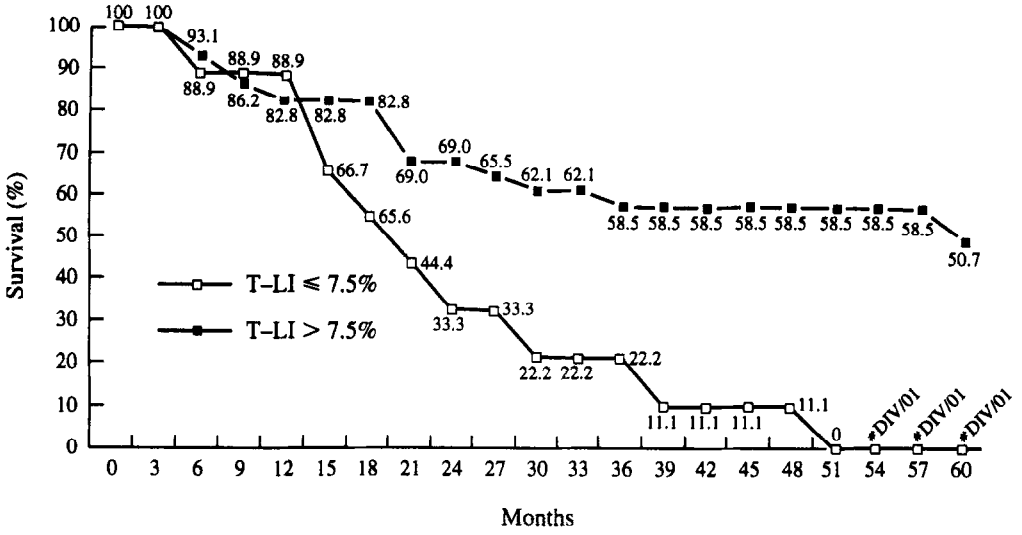

Figure 1. Survival curves according to T-LI

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Sialyl-Tn Expression in Gastric Carcinoma

F. Carneiro, L. David and M. Sobrinho-Simões

In a recent article Ma and colleagues [1] reported the results of an immunohistochemical study of the expression of sialyl-Tn in 85 gastric carcinomas. Sialyl-Tn expression occurred in 62.4% of the cases and immunoreactivity was correlated with the degree of gastric wall penetration, lymph vessel invasion, lymph node metastases, stage of the tumours and survival of the patients.

In a previous work [2], we reported the results of the immunohistochemical expression of simple mucin-type carbohydrate antigens in a series of 87 gastric carcinomas. We have used the same antibody for the detection of sialyl-Tn (TKH2), but our results do not entirely fit with those of Ma [1]. In our series, sialyl-Tn was expressed in 62/87 (71.3%) primary gastric carcinomas and no significant correlation was found with the different pathological parameters studied by Ma's group [1], despite the trend towards an association between sialyl-Tn positivity and signs of aggressiveness (serosal invasion, lymph node metastases and venous invasion) [2]. Our results were confirmed in a more recent study [3], using another antibody for sialyl-Tn (HB-STn, Dako, Glostrup, Denmark). In this study [3], mainly examining the expression of simple mucin-type carbohydrate antigens in precursor lesions of gastric carcinoma, sialyl-Tn was found in 75/100 (75.0%) primary carcinomas (data not previously published). Again, no significant association was found with the pathological parameters studied by Ma and colleagues [1]. However, separating the positive cases into three groups (≤ 5%, 5–50%, ≥ 50% of immunoreactive cells), we found a trend towards an association between high percentage of immunoreactive cells and aggressiveness of the tumours (serosal invasion, lymph node metastases and vascular invasion) (Table 1). These results are in keeping with those of Ma's study [1], and favour a relationship between the expression of sialyl-Tn and signs of aggressiveness in gastric carcinoma.

The aforementioned relationship was recently confirmed by Takahashi and colleagues [4] who, in a series of 350 gastric carcinomas, showed that the pre-operative serum levels of sialyl-Tn were significantly associated with signs of aggressiveness and survival of the patients. Since multivariate analysis was not performed by Takahashi's group [4], it cannot be excluded that the poor prognosis of the patients with high serum levels of sialyl-Tn was due to the significantly larger size and more advanced stage of the tumours in this group of patients.

Two other points deserve a special mention if one intends to use sialyl-Tn immunoreactivity as an independent prognostic factor.

Correspondence to F. Carneiro.
The authors are at the Department of Pathology, IPATIMUP, Medical School, H.S. João, 4200 Porto, Portugal.
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Table 1. Relationship between sialyl-Tn immunoreactivity and several pathological parameters (depth of penetration of gastric wall, lymph node metastases and venous invasion)

	Negative (n = 25)	≤ 5% (n = 10)	5–50% (n = 51)	≥ 50% (n = 14)	P value
Serosal invasion (n = 74)	22(88.0%)	4(40.0%)	37(72.6%)	11(78.6%)	0.04
Lymph node metastases (n = 72)	17(68.0%)	6(60.0%)	37(72.6%)	12(85.7%)	0.53
Venous invasion (n = 55)	14(56.0%)	3(30.0%)	28(54.9%)	10(71.4%)	0.26

The first concerns the difficulty of interpreting the meaning of the numerous negative cases from a pragmatic standpoint. In fact, 50% of the negative cases of Ma's series [1] displayed invasion into lymphatics and 38% were in stages III or IV. In our series [3], most of the negative cases also displayed features of aggressiveness such as serosal invasion (88.0%), venous invasion (56.0%), lymph vessel permeation (84.0%) and lymph node metastases (68.0%) (Table 1).

The second point concerns the putative relationship between sialyl-Tn expression and the histological type of gastric carcinoma. In contrast to Ma and colleagues [1], we found (data not previously shown) a significant relationship between sialyl-Tn expression and histological type, according to Laurén's classification [5]: intestinal 62.7%, diffuse 25.3% and unclassifiable 12.0% (P = 0.02). We cannot compare this finding with those of Ma's study [1] because these authors have not used Laurén's classification in their study. However, the recent finding of Iwata and associates [6], showing that sialyl-Tn is a marker of goblet cells, partly supports the assumption that sialyl-Tn expression is related to cell differentiation.

Taking Ma's results [1] together with our own [2, 3] and those from other groups [4], we conclude that the practical usefulness of sialyl-Tn expression as a marker of biological aggressiveness and/or prognosis in gastric cancer still remains to be elucidated.

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An Erythropoietin-producing Endometrium Carcinoma

J. Asin, H.P. Muller and R. Fijnheer

ERYTHROPOIETIN IS a glycoprotein with a molecular weight of appoximately 32–40 kDa. It is a hormone involved in the production of erythrocytes, produced in the kidneys and in small amounts elsewhere, mainly in the liver. The production is stimulated when the oxygenation of the tissues is insufficient. This can be the result of a decreased quality or quantity of the erythrocytes, or hypoxaemia [1–3]. Erythropoietin controls differentation of precursor cells into erythroid lineage, rapidly induces RNA synthesis, and appears to influence the release of marrow reticulocytes [4].

Marked erythrocytosis and high serum levels of erythropoietin have also been reported in case of renal cell carcinoma, renal artery stenosis, cystic kidneys, hepatoma, haemangiosarcoma, leiomyoma, pheochromocytoma, androgen-producing ovarium tumours and Cushing's disease [3, 5]. There has never been a report of marked erythrocytosis and elevated serum erythropoietin levels in case of endometrial carcinoma. Here we report a case of an erythropoietin-producing endometrium carcinoma.

A 60-year-old woman was seen because of postmenopausal bleeding in April 1992. Histological examination showed a moderately differentiated adenocarcinoma of the endometrium. Laboratory data revealed an erythrocyte count of 4.81 × 10E12/1 [normal range (N)] = 3.69–4.88 × 10E12/1], Hb 8.1 mmol/l (N = 7.5–9.6 mmol/l) and increased serum CA-125 (170 kU/l, N = < 20 kU/l). She underwent a laparatomy, and unexpectedly the peritoneum, omentum, diaphragm, and ovaria were

Correspondence to H.P. Muller.
The authors are at Ziekenhuis Gooi-Noord, Dept. of Internal Medicine, Rijksstraatweg 1, 1261 AN Blaricum, The Netherlands.
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