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## **GASTRIC CANCER: PRECANCEROUS PROCESSES**

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**Introduction.** Gastric cancer accounts for 6% of all cancer diagnosis in the world today, making it the 5<sup>th</sup> most common cancer diagnosis but having the 3<sup>rd</sup> highest mortality rate. In Belarus it is the 4<sup>th</sup> most common cancer diagnosis for men (7%), and 5<sup>th</sup> in women (5.1%). When we look at mortality rate in Belarus it is the 2<sup>nd</sup> most deadly diagnosis for both men and women (10.2% and 9.2% respectively). This increased mortality rate suggests that improvements in gastric cancer detection and treatment could be vital. Signet ring cell adenocarcinoma generally has a worse prognosis than non signet ring cell type. Gastric carcinogenesis has many different factors taking part, some environmental and some hereditary. The process of cancer development has many steps, termed Correa's cascade- chronic gastritis, mucosal atrophy, intestinal metaplasia to dysplasia and finally carcinoma. Early recognition of some of these precancerous processes can provide better treatment and higher chances of recovery.

**Aim:** to determine which precancerous process is most indicative to the development of gastric cancer.

**Materials and methods.** Looking into the database at City's Clinical Pathological Bureau, we obtained gastric biopsies of patients diagnosed with all forms of adenocarcinoma. Once we identified and classified these cases, we found biopsies of the same patients from earlier dates and investigated for types of precancerous processes.

**Results and their discussion.** We identified that 50% of the patients who developed gastric adenocarcinomas of any type initially presented with chronic gastritis with atrophy. 33% of those patients also showed concurrent precancerous processes. All patients with chronic gastritis with atrophy developed non signet ring cell type adenocarcinoma, accounting for 75% of the cases. Signet ring cell adenocarcinoma patients initially either had ulcers (50%) or hyperplastic polyps (50%). Sex did not seem to be a deciding factor as the patients who developed gastric cancer were split evenly between men and women. The average age of the patient at the time of developing cancer was 73.5, suggesting that advanced age may play a part in the cancer development process.

**Conclusion.** when prescreening for gastric adenocarcinoma, patients who present with chronic gastritis with atrophy are most at risk to develop non signet ring cell type, while patients with ulcers or hyperplastic polyps were more likely to develop signet ring cell type adenocarcinoma.