

## Colorectal cancer in 17 year old girl

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**A**-Conception and study design; **B** - Collection of data; **C** - Data analysis; **D** - Writing the paper; **E**-Review article; **F** - Approval of the final version of the article; **G** - Other (please specify)

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### ABSTRACT

**Introduction:** Colorectal cancer (CRC) is one of the most common cancers. It ranks 4<sup>th</sup> in morbidity and mortality from this cancer. The average age of onset is 55 years. Most of these tumors arise de novo in both the colon and rectum. Some cancers are associated with molecular abnormalities in the course of Lynch syndrome.

**Case presentation:** A 17-year-old woman presented to the emergency room of the Children's Hospital in Białystok with symptoms of

obstruction. The patient reported abdominal pain and occasional blood in the stool. Additional test showed anemia with haemoglobin 7 g/dL and Red Blood Cells count 3.0 thousand. Computed tomography and magnetic resonance imaging showed a nodular lesion in the ileocaecal valve and 3 metastatic focus in the liver.

**Conclusions:** Single cases of CRC in children or young adults are described in the literature. They are usually advanced tumors with poor prognosis.

**Keywords:** CRC, colorectal cancer

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## INTRODUCTION

Colorectal carcinoma (CRC) is one of the most common tumors in adults, but extremely rare in young age. This study showed one case report 17 –year old female patient diagnosed for colorectal cancer. No family history of the disease was found. It was the first case. New WHO classification of the tumours of the colon and rectum distinguishes; adenocarcinoma NOS with subgroup serrated Adenocarcinoma, Adenoma-like Adenocarcinoma, Micropapillary adenocarcinoma, poorly cohesive carcinoma, Signet ring cell carcinoma. At the literature we can find different histological type diagnosed in young adults, most of them are Adenocarcinoma [1-4].

## CASE PRESENTATION

A 17-year-old female patient was admitted to the emergency room of the University Children's Hospital in Bialystok with severe abdominal pain, nausea and weakness.

The patient had been complaining of these symptoms for several days. Constipation and blood in the stool have also been noticeable for 6 months. Physical examination showed tenderness in the right iliac region.

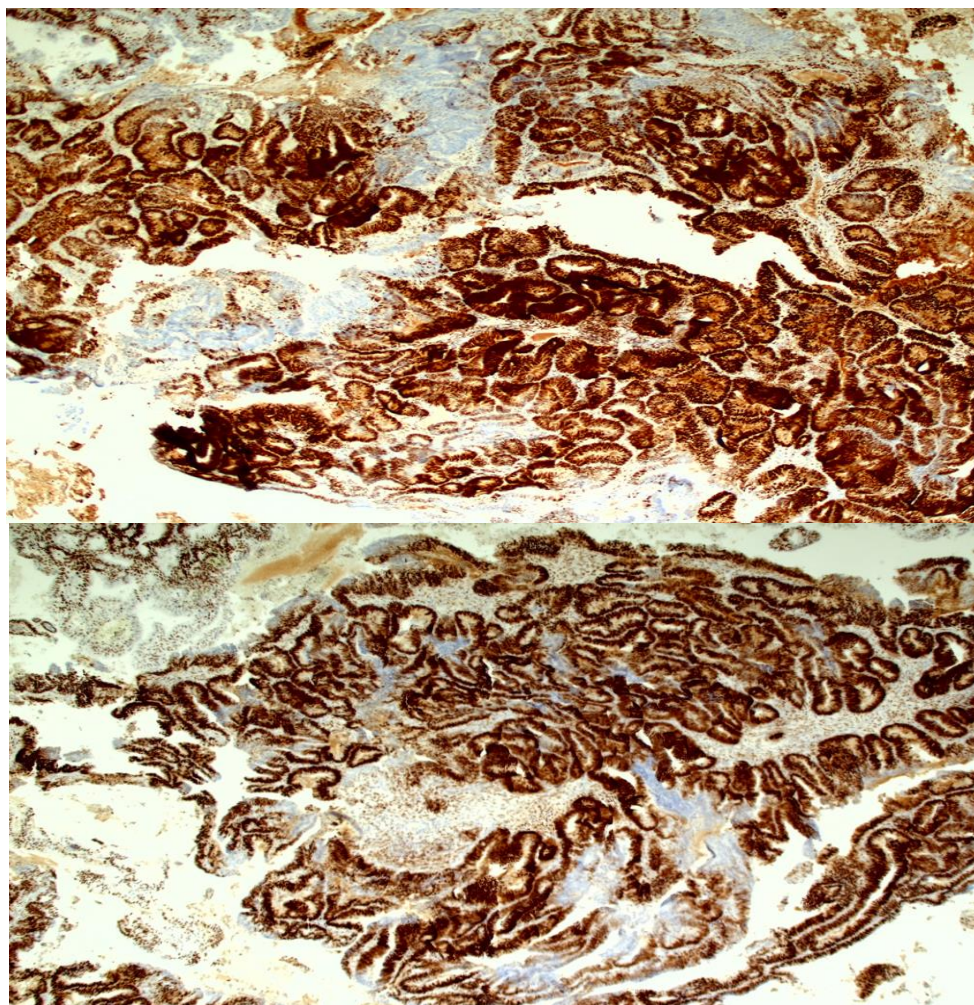
Laboratory test showed a decreased level of haemoglobin (Hb 7g/dL). Elevated CRP and lowered Red Blood Cells count. Other results were normal.

The patient was referred for abdominal CT. The examination revealed a nodular lesion within the laryngocaecal valve. Indicative of neoplastic lesion.

The histopathological diagnosis of the patient showed adenocarcinoma High Grade, pT3 N2M1.

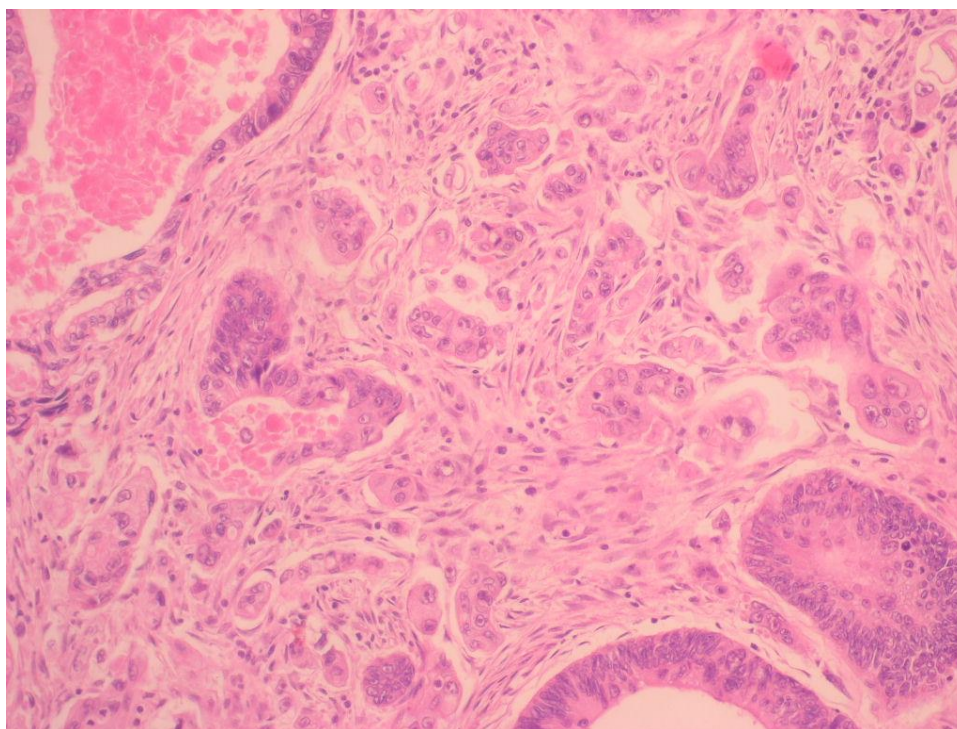
Molecular test for mutations associated with microsatellite instability as well as KRAS and NRAS were performed in the postoperative material.

We do not find any molecular pathology.



**Figure 1.** MSH2 and PMS2 expression preserved





**Figure 2.** Adenocarcinoma High Grade (H&E) x400

## DISCUSSION

Colorectal cancer is very rare, only single cases of this cancer are described in the literature. A. Ferrari at all. described retrospective reports on a group of 27 patients <30 years of age, and particularly on 7 cases <18 years old, treated at the Instituto Nazionale Tumori, Milan, Italy, between 1985 and 2005. Sultan I. at all has analyzed patients from January 1973 through December 2005, and only 159 children/adolescents (ages 4-20 years) were reported with a diagnosis of colorectal cancer. The most common sites of involvement were the rectum (27%) and the transverse colon (26%). Adenocarcinoma was the most common histotype in both adults and pediatric patients; however, children/adolescents had more unfavorable histotypes (mucinous adenocarcinoma [22%] and signet ring cell carcinoma [18%]) when compared with adults (10% and 1%, respectively;  $P < .001$ ). Poorly differentiated and undifferentiated tumors (grades III and IV, respectively) and distant stage were more common in children/adolescents ( $P < .001$ ). The 5-year relative survival estimates in children/adolescents and adults were 40%  $\pm$  4.2% and 60%  $\pm$  0.10%, respectively, confirming a worse outcome in the pediatric age group ( $P < 0.001$ ) [4].

Our Patient after surgery received standard chemotherapy. Recurrence of metastatic disease occurred one year after treatment. The patient's

survival time from the moment the cancer was detected was 3 years.

## CONCLUSION

It has to be said that the colorectal cancer is exceedingly rare in children and adolescents. Reports from small series indicate that poor prognostic factors are more common in children than in adults, resulting in worse outcome for the pediatric population.

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## Conflicts of interest

There are no conflicts of interest to declare.

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