

**THE ROLE OF NEOADJUVANT CHEMORADIATION THERAPY IN THE  
TREATMENT OF ESOPHAGEAL CANCER**

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**Abstract.** Currently, the choice of treatment method for patients with stage II-III esophageal cancer using neoadjuvant chemoradiation therapy is considered justified. This paper presents the results of evaluating the effectiveness of treating locally advanced esophageal cancer using independent remote radiation therapy, as well as competitive chemoradiation therapy.

**Keywords:** Esophageal cancer, locally advanced process, chemoradiation therapy.

## INTRODUCTION

Esophageal cancer (EC), occupying a far from leading place in the structure of malignant neoplasms, is, judging by the long-term results, one of the aggressive forms. The unfavorable prognosis is due to the difficulties of diagnosis at early stages [9] due to the often asymptomatic course of the disease, as well as the lack of an effective screening model. In addition, the features of the blood and lymph circulation of the organ determine the high potential of lymphogenous metastasis, which significantly worsens the results or makes it impossible to perform surgical intervention, which is the main method of treatment at the early stages of the disease. Unsatisfactory treatment results, directly dependent on the stage of the disease, show the advisability of a combination of surgical intervention with chemotherapy or radiation therapy, starting from stages II-III [2]. The high aggressiveness index of esophageal cancer (0.87) [4], unsatisfactory long-term treatment results [7, 8] and disease prognosis confirm the relevance of the issue of developing and introducing new treatment methods that enhance the cytoreductive effect, as well as their optimal combination. Neoadjuvant chemoradiotherapy (NACLT) is a recognized standard of treatment for locally advanced esophageal cancer [5, 6].

## MATERIALS AND METHODS

A total of 48 patients were treated, including 37 (77.1%) men and 11 (22.9%) women. The majority of patients were aged 51 to 70 years (32 people, or 66.7%). All patients underwent a standard examination, including a clinical examination with an assessment of the patient's general condition using the ECOG scale and the Karnofsky index, esophagogastroscope with biopsy, esophageal X-ray using a water-soluble contrast agent, spiral computed tomography of the chest and abdominal organs with intravenous contrast (if there are no contraindications), ultrasound examination of the abdominal organs/pelvis and peripheral lymph nodes, echocardiography, and duplex examination of the lower extremity vessels. Most frequently, cancer was localized in the mid-thoracic esophagus – in 25 patients (52%), then in the lower third of the esophagus and the cardioesophageal junction area – in 15 patients (31.3%); least frequently – in the cervical esophagus – in 8 people (16.7%). The morphological picture was characterized by the prevalence of moderately differentiated squamous cell carcinoma – in 40 patients (83.3%). Five patients (10.4%) were diagnosed with G2 adenocarcinoma, one (2.1%) – G1 adenocarcinoma, two (4.2%) – G3

adenocarcinoma. In these observations, the tumor was localized in the abdominal esophagus. The stage of the disease was established in accordance with the classification of the International Union Against Cancer according to the TNM 7 AJCC 8 revision: stage IA in 10 (20.8%), IIB in 14 (29.2%) and IIIA-IIIC in 24 patients (50%). In the group of operated patients, the stage of the disease was finally established based on the results of histological examination of the removed material and determination of the level of tumor invasion of the organ wall.

## RESULTS AND DISCUSSION

When analyzing the treatment results, it was found that in the group of patients who received incomplete palliative treatment, 15 people (31.3%) died within 6 to 8 months after completion of the course of therapy. Among patients who underwent treatment according to the radical program and especially among those who received complex treatment with a course of NACLT, the proportion of patients who achieved a complete or partial clinical response of the tumor, stabilization of the disease and are now under observation increased significantly - 19 people (39.7%).

Neoadjuvant chemoradiotherapy was received by 11 patients (23%). According to the results of morphological examination of the material obtained by tumor biopsy during control esophagogastroscope, 100% tumor regression was achieved in two patients (18.2%), which was confirmed by the results of the histological conclusion (therapeutic pathomorphosis of grade IV). Nine people (81.8%) were operated on. According to the results of the histological conclusion, therapeutic pathomorphosis of grade III-IV was achieved in 8 patients (72.8%), grade I - in one patient (9%). All 30 patients who received a course of EBRT or chemoradiotherapy according to the radical program tolerated the treatment satisfactorily, with minor complications of mild and moderate severity. The most common hematological complications were mild and moderate anemia (18 patients - 60%), leukopenia of grade I-II (22 patients - 73.3%). In these situations, correction was carried out by conducting hemostimulating therapy and antianemic therapy with iron preparations, as well as additional enteral nutrition with mixtures with a high protein content. In addition, 12 people (40%) showed signs of grade I dysproteinemia (hypoproteinemia and hypoalbuminemia), which was successfully corrected by prescribing additional enteral nutrition.

Developing post-radiation fibrosis in S10 of the left lung. No evidence of metastases. In S4a/b of the liver there is a zone of focal steatosis. After the treatment, the diagnosis was: cancer of the lower thoracic esophagus usT0-1N0M0. Stage III, 10 weeks after the end of the course of NACLT, surgical treatment was performed in the amount of subtotal hybrid resection of the esophagus with closure of the gastrostomy and one-stage plastic surgery with a gastric stalk. Histological examination No. 1674: squamous cell non-keratinizing cancer of the esophagus G1, with invasion into the proper plate of the mucosa without its complete germination, without germination into the submucosal layer.

## CONCLUSION

Locally advanced esophageal cancer stage II-III is an indication for the first stage of preoperative chemoradiation therapy. This allows to significantly increase the overall

survival of patients and reduce the risk of local relapses. The effectiveness of this type of therapy is confirmed by the treatment results: the prevalence among the treated patients of whom clinically significant (50-70%) and complete (18.2%) tumor regression was observed. High rates of therapeutic pathomorphosis (grade III-IV) were obtained – in 72.8%.

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