

**RESULTS OF REHABILITATION PROGRAMME
OF GASTROENTEROLOGICAL PATIENTS
IN MEDICAL CENTER ROGAŠKA**

Zdravilišče Rogaška – Zdravstvo d.o.o.

Suzana Lazarova, MD, Specialist in Internal Medicine

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1. Introduction

Zdravilišče Rogaška – Zdravstvo d.o.o. (Rogaška Medical Centre) is the largest, oldest and only Slovenian health resort registered for Standard 8 treatment – for the prevention, further treatment and rehabilitation of patients with gastroenterological and endocrine diseases, for the rehabilitation of patients after operations on these organ systems and for the rehabilitation of patients after surgery, radiation or chemotherapy for gastrointestinal malignancies.

The Rogaška spa is unique due to its springs of natural mineral water Donat Mg, the water richest in magnesium in the world. Treatment with natural factors such as drinking cures, mineral and other baths, fango and other compresses, mineral water inhalations, combined with modern physical medicine procedures, provides services of more sophisticated rehabilitation. With the support of state-of-the-art equipment, the spa employs specialists in gastroenterology, cardiology, dermatology, radiology, gynaecology, urology, pulmonology, allergology, otolaryngology, physiatry, orthopaedics and neurology.

For patients who come to rehabilitation because of their condition after major or multiple operations, especially after treatment for malignant or other chronic diseases, we find a range of problems that require a multidisciplinary approach and an individually tailored rehabilitation programme.

The goal of the rehabilitation is to improve the quality of life of patients with minimal consequences of the diseases and at the same time positively affect the most common problems after the completed treatment. The many years of experience in the complex approach to the rehabilitation of patients with these diseases has shown that a comprehensive health spa treatment helps to achieve faster and comprehensive rehabilitation and healing.

2. The history of the Rogaška Slatina health spa

At the Rogaška Medical Centre, we are happy and proud to continue the over 400-year old tradition of spa treatment.

The Rogaška springs were already known and famous in Europe in the middle of the 16th century. The first chemical analysis of the water was carried out by L. Thurneysser in 1572. The first historically tested patient in Rogaške vrelni was Count Wolf by Ungnat. News about the healing effect of water from Rogaška springs spread even faster from 1665, when the Croatian ban, Count Petar Zrinski, miraculously recovered when he drank healing water from Rogaška Slatina for a liver disease. In 1680, the court physician and professor at the Vienna Medical University, Dr Paul Sorbait published the book *Praxis Medicae*, in which he described the water from Rogaška Slatina.

The Maribor physician Gruendel, the well-known Slovenian doctor Marcus Gerbetzius and many other well-known doctors wrote about the healing effect and chemical properties of Rogaška water and prescribed it to prominent patients. Thus the Rogaška waters secured a place in medical practice. In 1804, Dr. Frohlich began his work as the first permanent doctor in the Rogaška health spa.

Balneologist, Prof. Dr. Julius Glax, worked as a spa doctor in Rogaška Slatina in the second half of the 19th century. He published numerous professional articles in medical journals about his findings on the indications and contraindications of spa treatment in Rogaška Slatina, especially with regard to the treatment of patients with stomach and heart diseases. At this time, the most numerous spa guests were industrialists and landowners as well as members of important count and noble families, e.g. from the Hunyady and Attems families. The spa was visited by important personalities of the time, such as the Austrian actor Alexander Girardi, who began his acting career in the seasonal theatre in Rogaška Slatina. Among the guests of Rogaška Slatina was also the waltz king Johann Strauss.

In 1909, the spa published three publications by the Viennese professor of medicine Dr. Carl von Noorden: "Diabetes," "Magen und darmkrukbeiten" and "Giht und Nierenkrukbeiten". From 1936 to 1967, the official spa doctor was Dr. Rudolf Leskovar. He devoted 32 years of his life to the development of the spa. Since his arrival in Rogaška Slatina, he has been engaged in researching the effects of mineral water on the human body on a strictly scientific basis. He has conducted analyses of the composition of thermo-mineral and mineral water and other balneological research. Papers, publications and books were published both in Slovenia and abroad.

In 1955, the Institute of Balneology was founded in Rogaška Slatina. The Centre for the Development and Scientific Research of Mineral Waters was also established. In order to improve the health offer, a new modern therapy centre was built in 1965 and a new mineral water pub was built to the left of it in 1967.

In 1967, a gastroenterological symposium was held in Rogaška Slatina, where the Slovenian Association for Gastroenterology and Hepatology was founded.

The arrival of Prof. Završnik in 1965 marked the introduction of modern medical diagnostics in the spa: endoscopy, ultrasound and X-ray diagnostics, cardiology, a modern haematology and biochemistry laboratory. During this time, numerous studies were conducted on the effects of the natural mineral water Donat Mg. Prof. Završnik and his colleagues, Dr. Jože Lavrič, Dr. Bojan Glavnik, Dr. Domagoj Jerkovič, Dr. Jože Kokovnik, Prof. Dr. Bojan Tepeš and others have published the results of their research in renowned international literature. Four PhDs, four MAs and almost 200 scientific research papers and professional presentations have been completed.



Rogaška Health Spa in the 19th century

Donat Mg is the most researched mineral water in Europe; it is one of the two mineral waters in Slovenia and is used for medicinal purposes. Its effect on the stomach has been proven; it can be used as an antacid for diseases of the oesophagus, stomach and duodenum. The effect of Donat Mg on the gallbladder, the Oddi sphincter and the pancreas has been proven. Due to its hyperosmolarity the Donat Mg is classified as osmotic laxative. The absorption of magnesium, calcium, sulphate and bicarbonate has health effects. In 1986, at the Second European Magnesium Congress in Stockholm, doctors from the Rogaška Slatina Health spa presented the effects of a 14-day intake of Donat Mg on magnesium concentration, blood sugar, cholesterol and uric acid levels in patients with diabetes, ulcers and a control group of healthy individuals.

3. Rogaška Medical Centre today

Rogaška Slatina is a unique spa, both because of the springs of natural mineral water Donat Mg, the most magnesium-rich water in the world, and because of the wide range of health services available to guests in one place.



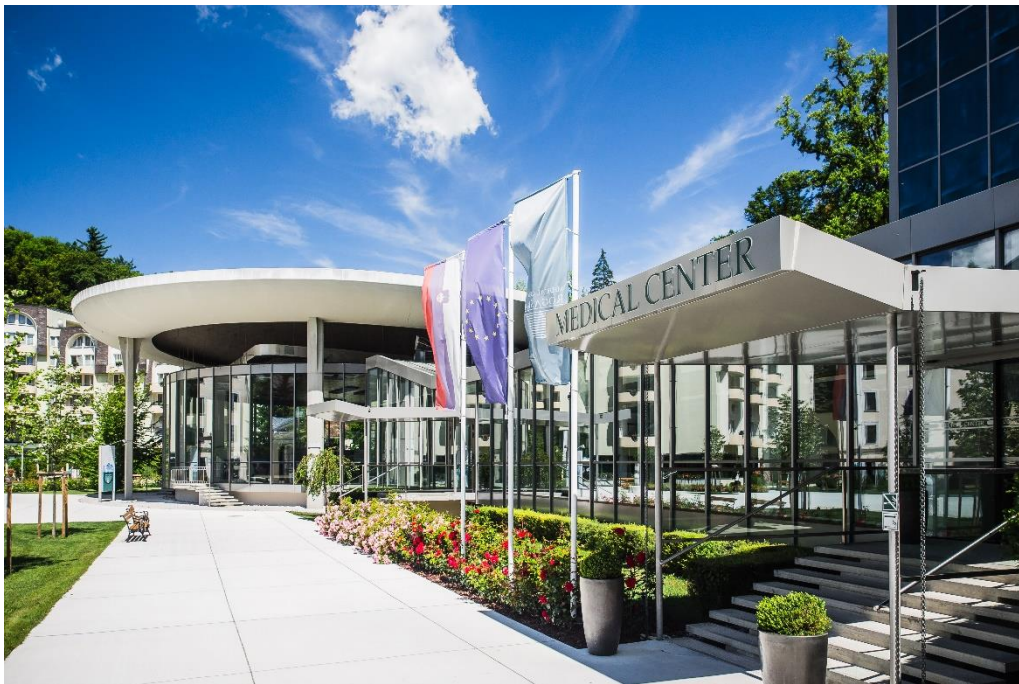
Rogaška Slatina Health Spa

Treatment with natural factors, such as drinking cures, mineral and other baths, mud and other compresses and inhalations, is combined with modern medicine. More than 50 specialists, supported by the most modern equipment, work in different areas of diagnostics: gastroenterology, cardiology, dermatology, radiology, gynaecology, urology, pulmonology, allergology, otorhinolaryngology, psychiatry, orthopaedics and neurology. In the clinical laboratory we perform over 130 different blood, urine and stool analyses. We are the only health centre with an operating theatre in Slovenia – we perform cosmetic plastic surgery, vascular surgery and hand surgery, among others. In Slovenia we are leaders in the field of preventive managerial check-ups.



Part of the team of top experts of Medical Center Rogaška

The health programmes are based on drinking the natural mineral water Donat Mg and the knowledge and experience of our specialists: doctors and other medical staff, nutritionists, body-shaping experts, beauticians, physiotherapists and masseurs. In addition to natural resources, professional staff with an open ear for patients is key to the success of comprehensive spa treatment at the Rogaška Medical Centre. The ACI Platinum certificate obtained in 2017 confirms the high quality of services and the safety of procedures according to international standards for the quality of medical care.



Medical center Rogaška

4. Basics of spa treatment

The health activities of the spa include preventive care and specialised outpatient and inpatient rehabilitation with the transfer of natural remedies. The foundations of the spa activity are the recognised healing properties of a natural remedy for individual disease states. The professional foundations of spa treatment are derived from balneology (balneo – to dig, logos – to research), which is one of the oldest interdisciplinary medical sciences. Although they have completed a specialisation in their professional field, spa doctors must also master certain knowledge in the field of balneology.

All natural healing factors must be clinically tested beforehand, their healing properties must be proven and possible contraindications to their use must be identified. Once the Ministry of Health has confirmed the healing properties, this is only the beginning of a relatively lengthy process to obtain natural spa status.

In the early 1990s, spas that already had the status of a natural health spa were included in the public health network system. Since 1957, the spas have been cooperating commercially within the framework of the Association of Spas or the economic community.

Spa treatment is regulated by the Health Care and the Health Insurance Act, the General Agreement and the Sectoral Agreement with Health Spas. The right to spa treatment is further defined in Articles 4 to 49 in the rules of Compulsory Health Insurance (OZZ). Article 43 stipulates that the insured person receives more sophisticated rehabilitation services carried out by sharing natural remedies in a spa.

5. Rehabilitation of gastroenterological patients in the Rogaška Medical Centre

Among Slovenian natural spas, Rogaška Medical Centre is the only spa registered for the type 8 standard, i.e. for the rehabilitation of patients with gastroenterological and endocrine diseases and for the rehabilitation of patients after operations on the mentioned organ systems.

Indication areas of the spa include:

- diseases of the oesophagus, stomach and duodenum;
- diseases of the small and large intestines;
- Liver and pancreas diseases;
- metabolic diseases;
- gastrointestinal, post operative, radiotherapy or chemotherapy malignancies.

The rehabilitation programme at the spa combines:

- examination of the patient by a spa doctor at the beginning and end of rehabilitation;
- patient care and 24-hour health monitoring;
- tests and assessments at the beginning and end of the regimen that assess the patient's nutritional status and psychophysical condition using:
 - an orientation test to facilitate the identification of a malnourished patient;
 - a common assessment form that indicates the patient's level of nutritional risk, performance status, comorbidity index and psychophysical condition;
 - nutritional anamnesis, scoring and mini nutritional anamnesis;
 - body composition measurements on the BodyStat device;
 - physiotherapeutic assessment of impairments of bodily functions and structure and activities and activity limitations.
- use of natural mineral water Donat Mg, which has proven healing effects on the gastrointestinal tract. The absorption of magnesium, calcium, sulphate and bicarbonate has health effects;
- use of balneotherapy and physical medicine procedures (baths, massages, lymphatic drainage, mud packs, inhalations, individualised exercises for endurance and muscle strength, breathing exercises, relaxation therapy, modern physical medicine procedures);
- psychological support and treatment;
- diet therapy and treatment;
- health education work and secondary prevention (we teach the patient how to live with the disease);
- use diagnostics if necessary.

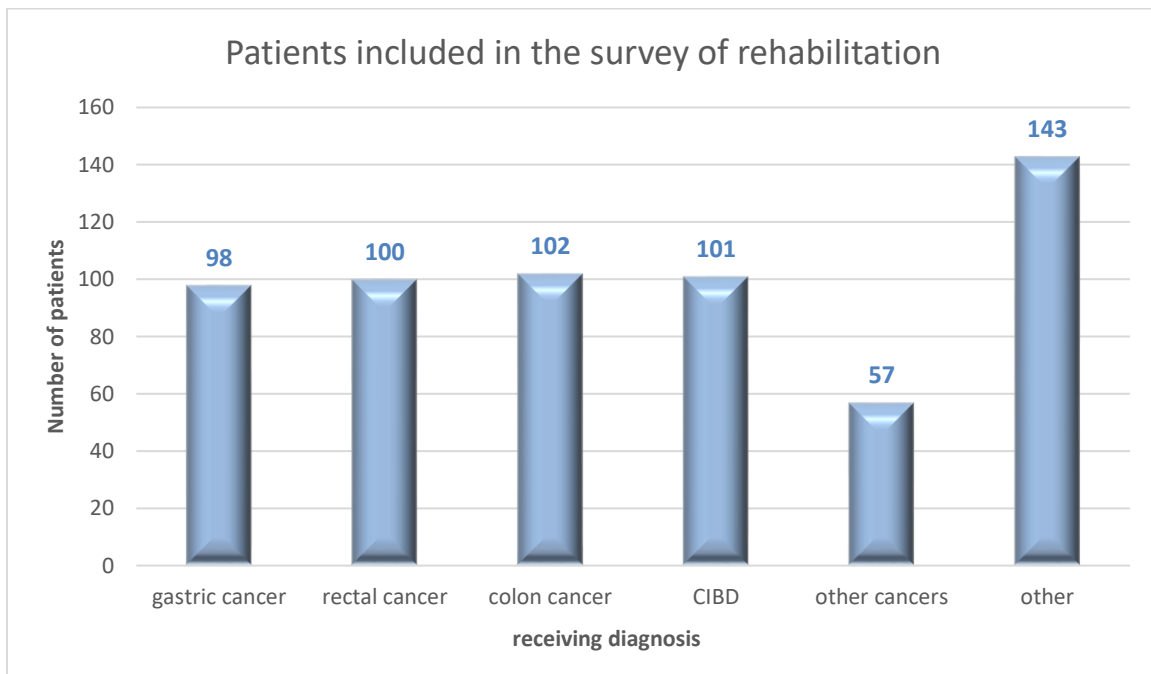
In patients who come to rehabilitation because of their condition after major or multiple operations, especially in the treatment of malignant or other chronic diseases, we find a number of problems that require multidisciplinary treatment and an individually tailored rehabilitation programme. In recent years, most patients who come for rehabilitation are patients after surgery,

radiation or chemotherapy for gastrointestinal cancer, after extensive gastrointestinal surgery for other reasons and after severe exacerbations of IBD.

In 2010, we started systematically collecting data and indicators of rehabilitation efficiency. Initially we treated more high-risk patients, and since 2015 we have conducted tests and assessments on every patient at the beginning and end of spa treatment.

The first presentation in 2010 covered 601 patients: 357 patients after cancer treatment, 101 patients with inflammatory bowel disease (IBD) and 143 patients after surgical or conservative treatment of acute and chronic diseases, mainly of the digestive system.

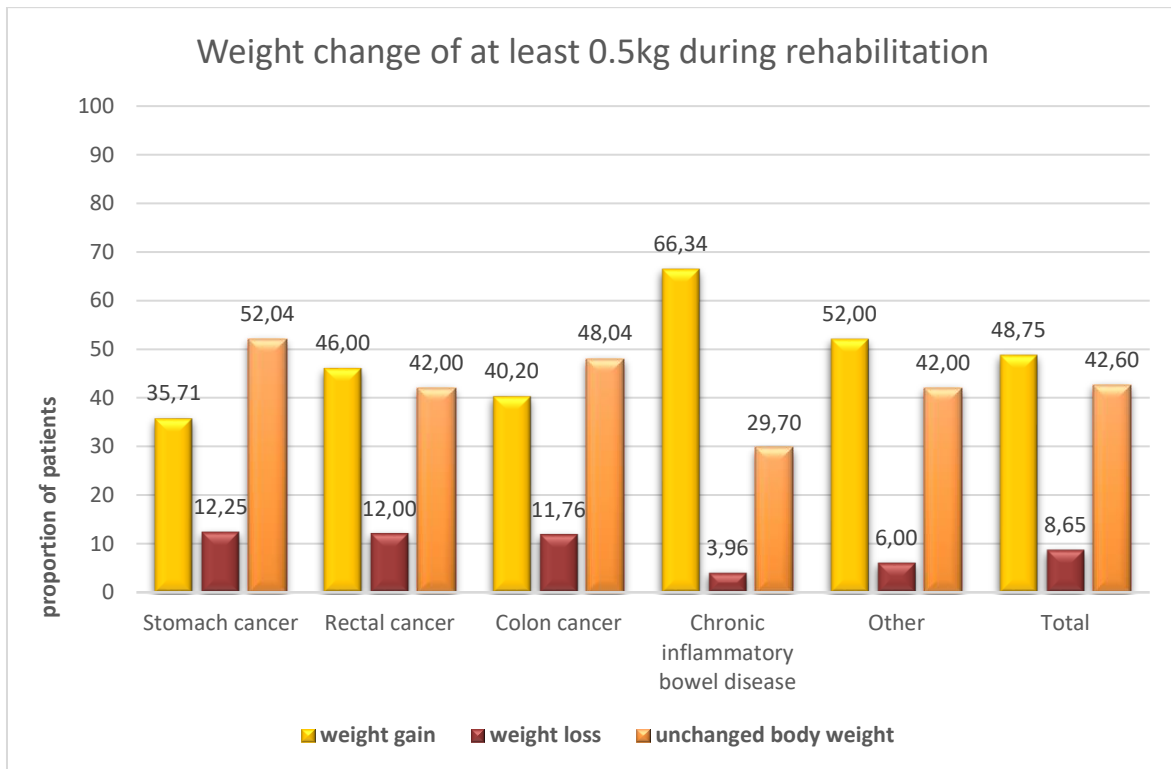
5.1. Patients included in the survey of rehabilitation



The effects of rehabilitation are shown by the most common problems experienced by patients after treatment: Weight loss, eating disorders, bowel movements, pain, need for psychological support.

5.1.1. Changes in body weight during the rehabilitation

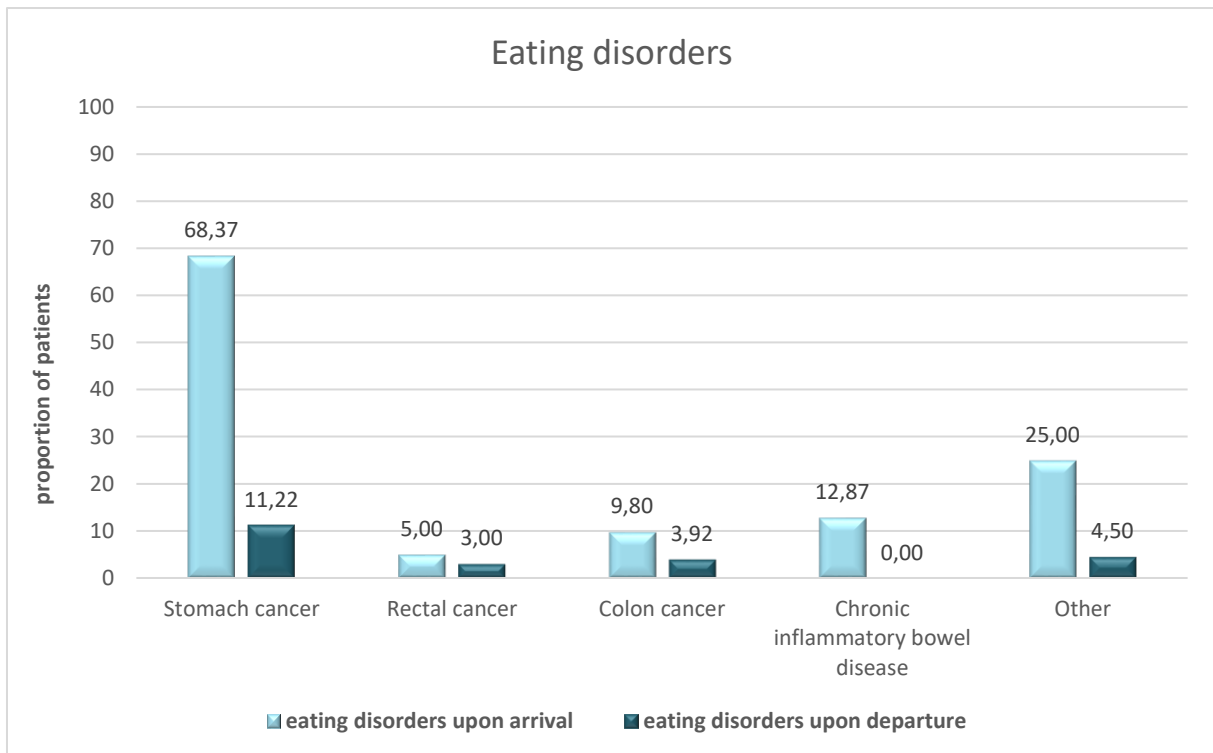
Based on the results, we find that weight loss in the period before rehabilitation is most common in patients treated for stomach cancer (81.63% of patients lost more than 5kg before rehabilitation), in patients with IBD (71.29%) and in patients with other types of cancer (51%). When they arrived for rehabilitation, 50.75% of all patients treated in the demonstration had lost more than 5kg.



The graph shows the changes in body weight during rehabilitation according to individual diagnoses. 48.75% of all patients gained at least 0.5kg during rehabilitation. Body weight remained unchanged in 42.60%, 8.65% of patients lost weight. The percentage of patients who gained weight is highest in patients with IBD (66.34%) and lowest in patients with gastric cancer (35.71%), in whom we also found the most frequent weight loss of more than 5 kg during treatment until the start of rehabilitation.

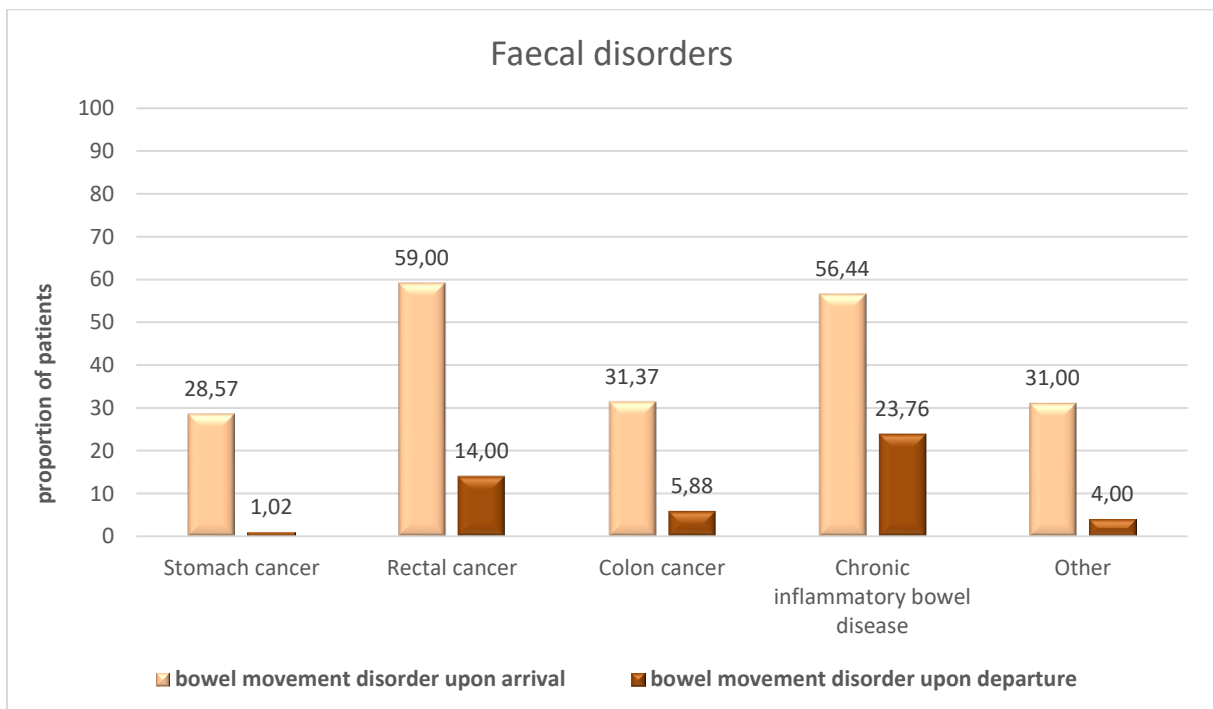
5.1.2. Eating disorders

Eating disorders were most commonly observed in patients after treatment for gastric cancer: 68.37% of patients had poor appetite, dysphagia or nausea after eating. At the time of discharge, eating disorders were present in only 11.22% of patients, which speaks to the success of an individualised approach to patients' problems and the work of dietitians. Such disorders occurred less frequently in patients with other diagnoses; for all diagnoses, the proportion of patients with eating disorders decreased during rehabilitation.



5.1.3. Faecal disorders

Faecal disorders are most common in patients after treatment for rectal cancer (59% of patients) and in patients with IBD (56.44%). With an individually adapted diet and conservative physiotherapeutic treatment of incontinence – regardless of whether it is indigestion or faecal incontinence – a positive effect is achieved in reducing the problems. At the start of treatment, 14% of patients with rectal cancer and 23.76% of patients with IBD had faecal disorders.



5.2. Monitoring the nutritional status of the patient during rehabilitation

Patient nutrition is an important part of comprehensive treatment, both from the first visit to the doctor and during diagnosis, treatment and rehabilitation. For the chronically ill and cancer patients, continuous nutritional support is necessary as this improves the effectiveness of treatment or slows the progression of the disease. The patient's nutritional therapy is part of the patient's treatment.

During the rehabilitation of gastroenterological patients, we often encounter malnourished and cachectic patients.

Malnutrition and cachexia (a complex and multifaceted syndrome resulting from chronic inflammation and metabolic changes leading to lean and fat loss and reduced performance) are more common in cancer patients and are indicators of poorer prognosis. Cachexia occurs in 40–80% of cancer patients. Cachexia itself is the direct cause of death in 20% of cancer patients.

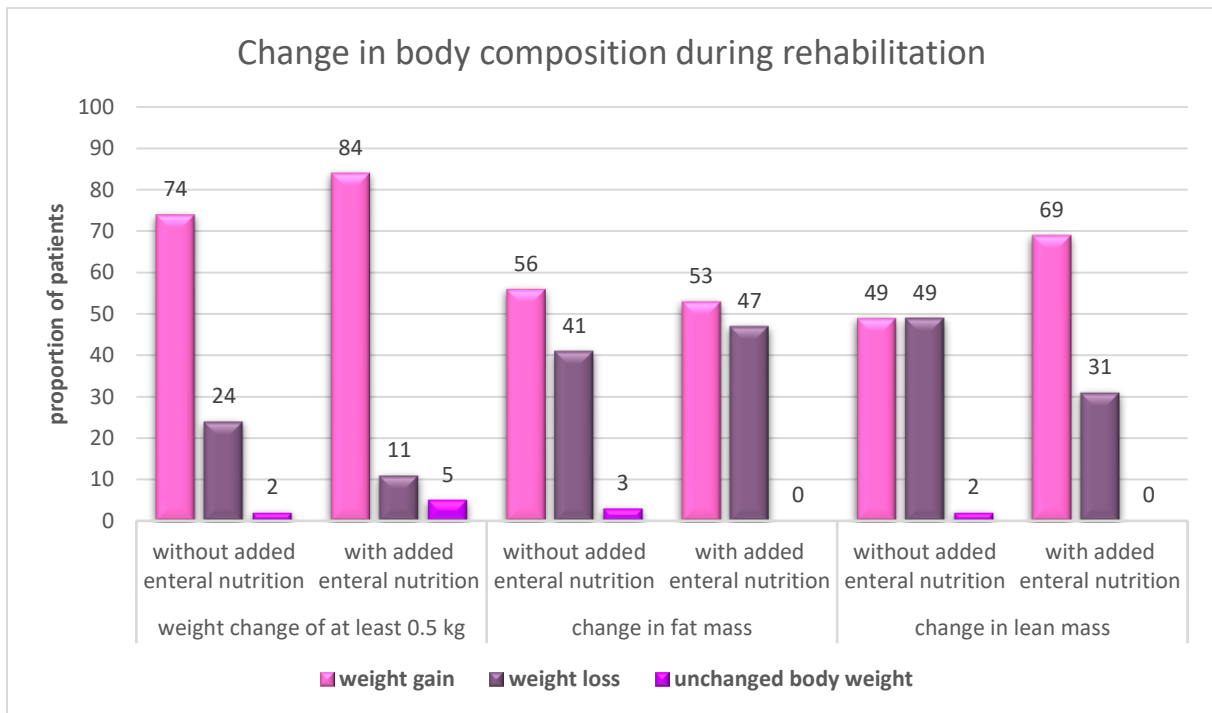
Patients with cancer cachexia who stabilise their weight have a better quality of life and longer survival compared to patients whose weight loss continues. The rehabilitation programme is individually tailored to the patient and their problems.

With the help of the screening test MNA (mini nutritional history), it is easier to identify patients who are at risk of developing malnutrition and patients who already have malnutrition. In the context of rehabilitation, these patients receive special nutritional support individually tailored by the nutritionist by providing an adequate and balanced diet with sufficiently high caloric values and sufficient levels of trace elements and vitamins. In cases of inadequate nutritional intake due to dysfunction, we start enteral nutrition with a protein-energy supplement that includes eicosapentaenoic acid (EPA).

The nutritional status monitoring presentation included 470 patients who had lost more than 5% of their body weight at the time of arrival in rehabilitation.

After assessing nutritional status and reviewing metabolic, nutritional and functional variables, patients were divided into two groups. In the first group were 254 patients for whom optimal energy-protein intake was possible with individualised nutritional care without additional enteral nutrition. In the second group were 216 patients who were found to have inadequate food intake (60% of expected energy expenditure) and required the introduction of enteral nutrition or a protein-energy supplement that also contained eicosapentaenoic acid.

Based on body composition measurements at patient arrival and departure (every 14 days) using the BodyStat device, we obtained the following results:



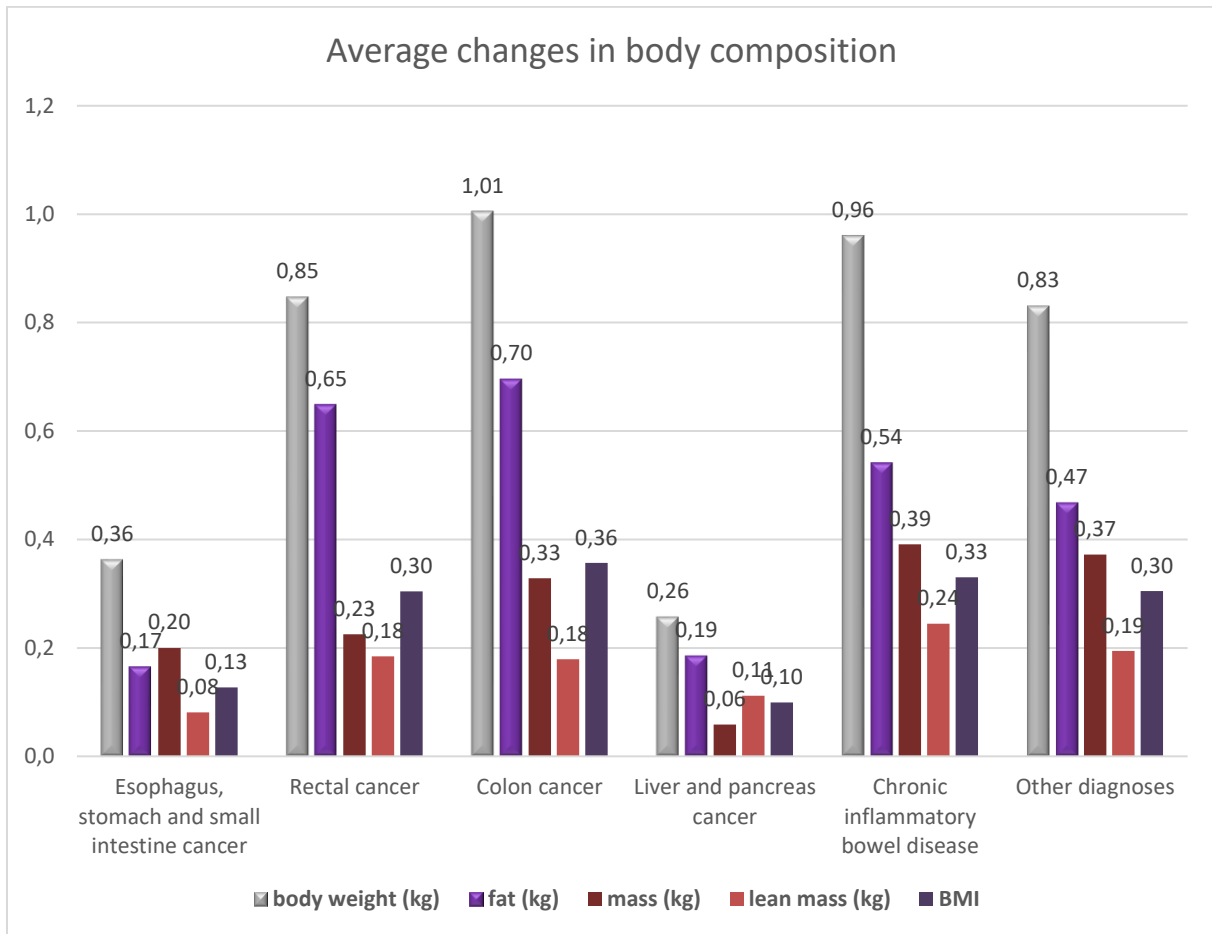
Based on the results, we found that patients with supplementary enteral nutrition had a greater increase in body weight, mainly due to lean mass, which was also reflected in the patient's improved general condition. During rehabilitation, monitoring patients' nutritional status is crucial to the overall success of rehabilitation, especially in malnourished and cachectic patients.

5.3. Presentation of the results of a comprehensive spa treatment

Since 2015, we have been conducting tests and assessments on every patient during rehabilitation at the beginning and end of the course, showing the patient's nutritional status and psychophysical condition.

The results show 1762 patients. 60% are patients with cancer of the oesophagus, stomach and small intestine, rectum, colon and liver and pancreas and 40% are patients with other cancers, IBD and other chronic and acute diseases. The mean age of patients was 62.13 years; 45.46% are women and 54.54% are men. 54.11% of patients lost at least 5% of their body weight, malnutrition or at risk of malnutrition is 31.81%, 11.28% of patients start nutritional supplements during rehabilitation.

5.3.1. Assessment of nutritional status in the rehabilitation process



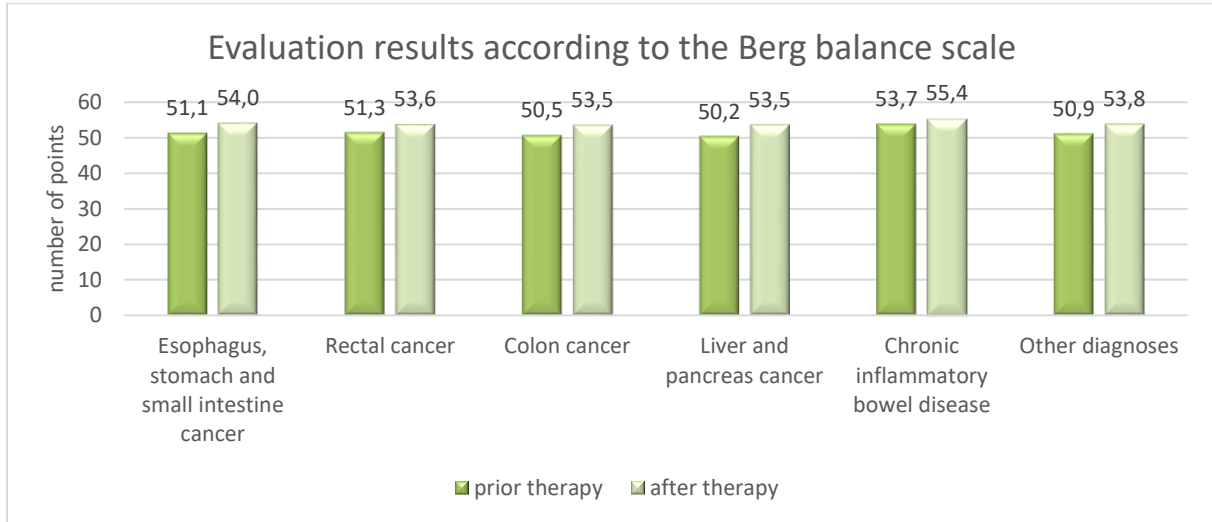
The table shows that during rehabilitation all patients (1712) gained weight; most patients with colon cancer (1.01 kg) also have the highest change in body mass index (0.36). Patients with liver and pancreatic cancer gained the least (0.26kg) and also had the lowest change in body mass index – 0.10. Fat mass also increased the most in patients with colon cancer (0.70kg) and the least in patients with oesophageal, gastric and small bowel cancer (0.17kg). Lean body mass and muscle mass increased the most in patients with IBD (0.39kg and 0.24kg, respectively) and the least in patients with liver and pancreatic cancer (lean body weight around 0.06kg) and cancer patients. oesophagus, stomach and small intestine (lean body weight by 0.08kg).

5.3.2. Monitoring of physiotherapeutic treatment in the rehabilitation process

In assessment, it is necessary to obtain meaningful, accurate and as objective as possible data in order to evaluate the success of physiotherapeutic measures and to assess the results of treatment in an individual patient. We use measuring instruments in our work, because only a combination of different tests and measurements shows the objective condition of the patient. In the presentation we introduce some of the assessment procedures and measuring instruments we use.

5.3.3. Berge Balance Scale

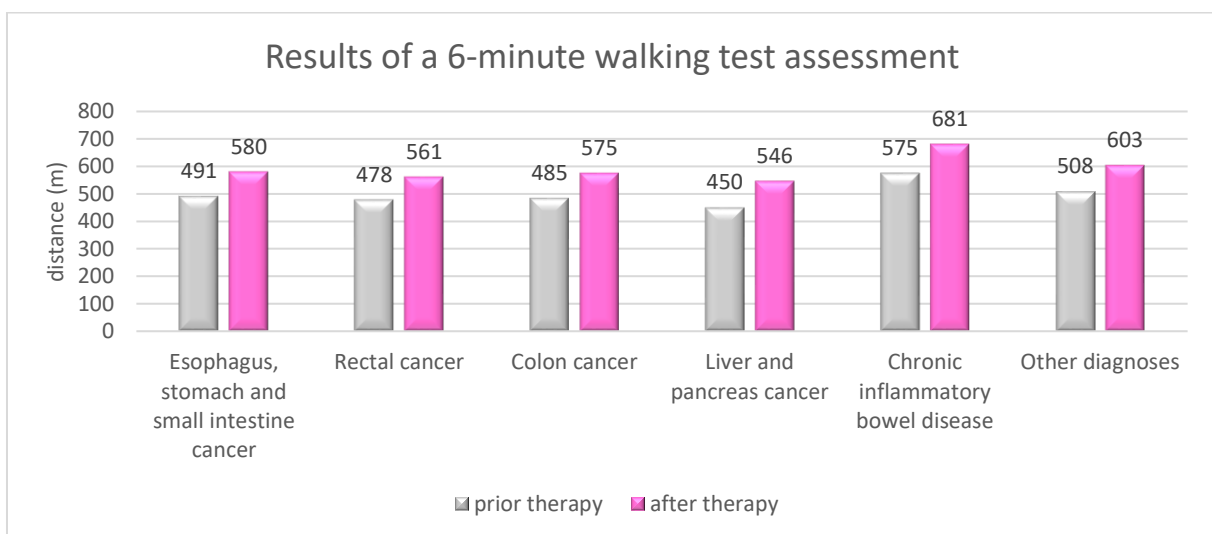
The Berg Balance Scale assesses the performance of functional skills related to balance. It consists of 14 balance-specific motor tasks taken from the activities of daily living and representing the general mobility (agility) of the person assessed (Berg et al., 1992).



All patients scored above 50, which means that they had good balance before therapy, but it only improved after therapy: Among the cancer patients, balance improved most in patients with liver and pancreatic cancer (3.3 points), followed by patients with colon cancer (3 points), patients with oesophageal, stomach and small intestine cancer (by 2.9 points), patients with rectal cancer (2.3 points) and patients with IBD (1.7 points).

5.3.4. 6-minute walk test

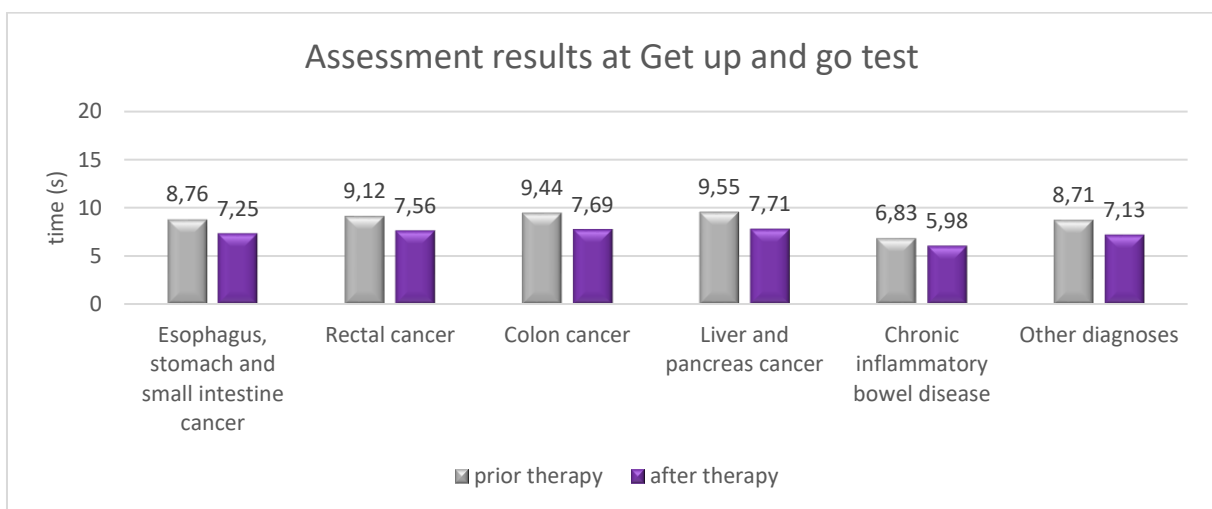
A 6-minute walk test is used to assess functional body capacity. The test measures the distance a patient travels in twenty minutes along a straight corridor. In this way, we assess patients' submaximal physical capacity, which reflects physical activity during everyday tasks (Klemen, Prokšelj, 2010).



A 6-minute walk test was performed by 88% of patients. The best result was achieved by patients with IBD who walked 575m before therapy and 681m in six minutes after therapy, improving the result by 106m. Patients with liver and pancreatic cancer walked the shortest distance, 450m, before therapy. After therapy, they walked 96m more, i.e. 546m, which is still a clinically significant change (more than 70m).

5.3.5. Get up and go test

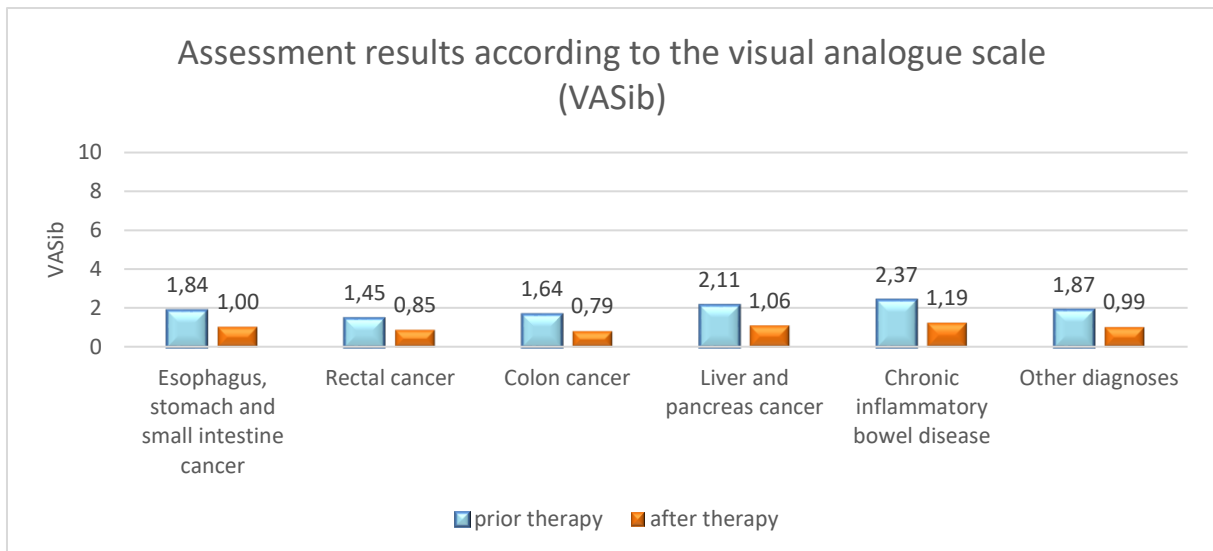
The get up and go test involves basic motor skills such as standing up from the chair, walking, turning and sitting down. It is a simple, practical, inexpensive, quickly feasible and reliable indicator of functional mobility of children, adults and older adults (Jakovljević, 2013).



On average, patients with IBD performed the fastest in the Get up and go test. It took 6.83 seconds before therapy and 5.98 seconds after therapy and improved the result by 0.85 seconds. Patients with liver and pancreatic cancer spent the most time on the test – 9.55 seconds before therapy, and after therapy they performed the test 1.84 seconds faster – in 7.71 seconds and also made the best progress among all patients shown.

5.3.6. Estimation of pain intensity according to the visual analogue scale (VASib)

One of the simplest and most widely used forms of reporting is the visual analogue scale (Podsiadlo, Richardson 1992, Jakovljević, Puh, 2014). The VASib scale is represented by a 10cm line that increases from left to right (Jakovljević, Puh, 2014). Depending on the patient's assessment, the examiner measures the distance in millimetres from the beginning of the line (point 0 – no pain) to the mark made by the patient (Jensen et al., 1986). The measured distance means the intensity of the pain (Jakovljević, Puh, 2014).



Before therapy, patients with IBD felt the greatest pain at rest, reaching 2.37cm on the scale. After therapy, the intensity of pain at rest decreased to 1.19cm. In these patients, we were able to achieve the greatest change with therapy – 1.18cm, while we were least successful in patients with rectal cancer, whose change on the scale was 0.60cm. These patients felt the least pain before therapy – 1.45cm, and after therapy the value dropped to 0.85cm. The sample comprised 1762 patients.

6. Conclusion

The presentation of the treatment results confirms the success of the rehabilitation of gastroenterological patients in Rogaška Medical Centre. Spa treatment is an important part of the patient's comprehensive rehabilitation, an important part of the patient's path to recovery or to improving the quality of life during the illness.

Based on the data from the health spa treatments, we can conclude that during rehabilitation patients gain body weight, particularly lean body weight; improve their balance, muscular strength, flexibility, movement coordination, endurance, functional skills and general well-being. We also noticed reduced pain, fewer eating disorders and bowel movement disorders.

At the Rogaška Medical Centre, we regularly monitor and analyse the data obtained during the rehabilitation of patients. In the presentation of the results only some of the assessments and tests are mentioned. In our health spa we continuously update and complement the data, since we want in this way to monitor and document the changes of the patient's condition after the completed health spa treatment. Beside the patients' satisfaction, the treatment results are proof that we do our work correctly and successfully.

Based on previous experience, Rogaška Medical Centre can be actively involved in the rehabilitation of post-COVID-19 patients.

Previous experience and medical studies have shown that long-term functional disorders in almost all organ systems often occur after COVID-19 disease. Millions of people who have survived the disease report numerous problems. Reduced physical performance, fatigue, shortness of breath, muscle aches, headaches, anxiety and concentration problems are just some of the problems that can occur after overcoming a disease. Numerous medical studies have already reported long COVID, as the long-term health consequences of overcoming the disease are referred to. These are various health problems that are present for more than four weeks from the time of infection with the SARS-CoV-2 virus.

Prolonged COVID-19 can affect many organs and organ systems. Impairments of the respiratory, cardiovascular, neuropsychiatric, gastrointestinal and musculoskeletal systems occur not only in patients who have had a more severe course of the disease, but also in those who have had the disease without complications and without the need for hospitalisation. Long COVID can develop in any patient after infection with the SARS-CoV-2 virus. The list of problems speaks of the need to rehabilitate the patient after contracting COVID-19 with a difficult course and the onset of long-term COVID-19. There are many symptoms that also occur in patients after treatment for severe cardiovascular, pulmonary, neurological, gastroenterological and oncological diseases.

COVID-19 poses a new challenge to the healthcare system, both for the treatment and rehabilitation of patients. Spa treatment can be actively included in the rehabilitation of patients after COVID-19, as it effectively contributes to faster and more comprehensive rehabilitation and recovery. A multidisciplinary approach and an individually tailored rehabilitation programme are important in the rehabilitation of post-COVID patients.

7. Sources and literature

- Berg K., Maki B., Williams J. I., Holliday P., Wood Dauphinee S. (1992). Clinical and laboratory measures of postural balance in an elderly population. *Arch Phys Med Rehabil* 73: 1073–83.
- Bogle Thorban L. D., Newton R. A. (1996). Use of the Berg balance test to predict falls in elderly persons. *Phys Ther* 1996 76: 576–85.
- Enright P. L., McBurnie M. A., Bittner V., et al. (2003). The 6-minute walk test: a quick measure of functional status in elderly adults. *Chest* 123: 387–98.
- Enright P. L., Sherrill D. L. (1998). Reference equations for the six-minute walk in healthy adults. *Am J Respir Crit Care Med* 158: 1384–7.
- Fischinger J., Fischinger D. (2013). *Zgodovina. Zdravniški vestnik*. Year 82/10: 702–8.
- Horvat U. (2000). Razvoj in učinki turizma v Rogaški Slatini. *Geografija Slovenije* 4: 37–50.
- Jakovljević M. (2013). Časovno merjeni test vstani in pojdi: pregled literature – Timed up and go test: literature review. *Fizioterapija* 21 (1): 38–47.
- Jakovljević M., Puh U. (2014). Ocenjevanje intenzivnosti bolečine z vidno analogno lestvico – Pain intensity assessment using visual analogue scale. *Fizioterapija: glasilo Društva fizioterapevtov Slovenije* 22 (2): 46–55.
- Klemen L., Prokšelj K. (2010). Šest minutni test hoje. 6-minute walk Test. *Med. razgl.* 49: 187-91.
- Lajoie Y., Gallagher S. P. (2004). Predicting falls within the elderly community: comparison of postural sway, reaction time, the Berg balance scale and activities – specific balance confidence (ABS) scale for comparing fallers and non-fallers. *Arch Gerontol Geriatr* 38: 11–26.
- Leskovar R. (1976). Rogaški zdravilni vreli v 16. stol. *Kronika časopis za slovensko krajevno zgodovino*. Year 24/1: 20–28.
- Marinček Č., Tepeš B., Krelj S. (2000). Zbornik predavanj Medicinska rehabilitacija v slovenskih naravnih zdraviliščih: 4–145.
- Medley A., Thompson M. (1997). The effect of assistive devices on the performance of community dwelling elderly on the timed up and go test. *Issues Aging* 20: 3–7.
- Podsiadlo D., Richardson S. (1991). The timed “Up & go”: a test of basic functional mobility for frail elderly persons. *J. Am Geriatrics Soc.* 39: 142–8.
- Redelmeier D. A., Bayoumi A. M., Goldstein R. S., et al. (1997) Interpreting small differences in functional status: the six minute walk test in chronic lung disease patients. *Am J Respir Crit Care Med* 155: 1278–82.
- Rugelj D., Palma P. (2013). Bergova lestvica za oceno ravnotežja – Berg balance scale. *Fizioterapija: glasilo Društva fizioterapevtov Slovenije* 21 (1): 15–25.
- Tepeš B. (2005). Zbornik predavanj Metode in uspešnost zahtevnejše medicinske rehabilitacije v naravnih zdraviliščih: 1–101.