

# Muscle depleted obesity in individuals screened for colorectal cancer

Monise Oliveira **SANTOS**<sup>1</sup>, Marla de Cerqueira **ALVES**<sup>1</sup>,  
Manoel Alvaro de Freitas **LINS NETO**<sup>2</sup> and Fabiana Andréa **MOURA**<sup>1,3</sup>

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**ABSTRACT – Background** – Colorectal cancer (CRC) is the third most incident cancer in the world and the second leading cause of cancer death. Significant decreases in incidence and mortality can be achieved by reducing risk factors and adhering to healthy lifestyle recommendations, as well as screening for the disease. **Objective** – To evaluate the clinical nutritional profile of individuals at medium risk screened for CRC residing in the city of Piranhas/Alagoas. **Methods** – Cross-sectional study conducted from September to October 2020, with individuals at medium risk for CRC, of both sexes and aged between 50 and 70 years old. Participants were screened for CRC with fecal immunochemical testing (FIT) and colonoscopy. Personal, socioeconomic, clinical, lifestyle and nutritional assessment data were collected. The latter was performed using anthropometric data (weight, height, arm circumference and triceps skinfold thickness), body composition (bioimpedance) and physical examination. Descriptive analysis of data frequencies and dichotomization according to the presence or absence of overweight was performed, followed by comparison of means and medians and frequencies by chi-square or Fisher's exact test. **Results** – In total, 82 people agreed to undergo the clinical nutritional assessment, most of them female (56.1%; n=46), adults (56.1%; n=46), with a mean age of 59.02 years ( $\pm 6.30$  SD). Pre-cancerous lesions were identified in 54.5% (n=42) of those screened, 52.4% (n=43) were smokers or former smokers, and 65.9% (n=54) did not practice scheduled physical activity. Nutritional assessment showed that 64.6% (n=53) were overweight according to body mass index. On the other hand, the muscle mass, % arm muscle circumference adequacy and body muscle mass (kg) markers showed that 32.9% (n=27) and 47.6% (n=39) of the subjects were muscle depleted, respectively. Above all, overweight participants had, in parallel, lower muscle mass ( $P < 0.05$ ), suggesting sarcopenic obesity in this population. **Conclusion** – Obesity is one of the main risk factors for CRC; when concomitant with sarcopenia, it favors worse health outcomes. In this context, evidence shows the need to assess muscle composition in people with obesity, especially through other methods of assessing body composition. Our results add to the evidence on the importance of the population being guided about screening and adherence to healthy lifestyle recommendations, especially strategies aimed at weight control and the practice of physical activity.

**Keywords** – Colorectal cancer; risk factors; obesity; screening; nutritional status.

## INTRODUCTION

Colorectal cancer (CRC) is the third most incident cancer in the world, after breast and lung cancer, registering in 2020 almost 2 million new cases and approximately 1 million deaths, considered the second leading cause of death from cancer<sup>(1)</sup>. In Brazil, according to data from the National Cancer Institute (INCA), this neoplasm also has high incidence and mortality rates, being the second most incident and the third that kills the most in both sexes<sup>(2)</sup>.

However, significant reductions in incidence and mortality can be achieved through some prevention strategies, such as reducing modifiable risk factors and adhering to healthy lifestyle recommendations<sup>(3,4)</sup>. Among the risk factors, excess weight is recognized in the increased incidence of CRC<sup>(5,6)</sup>, with excess body fat being one of the main risk factors for the development of this neoplasm<sup>(7)</sup>.

Another measure to prevent CRC is screening for the disease, in order to detect cancer or precursor lesions early<sup>(3,4,8)</sup>. Currently, screening is the most effective alternative to reduce mortality<sup>(9)</sup>, especially in countries that have implemented organized screen-

ing programs, resulting in sharp reductions in the incidence and mortality of the disease<sup>(4,10)</sup>.

Brazil, as well as many countries in less socio-economically developed regions, has not yet implemented organized screening programs, this is probably due to limited financial resources, lack of necessary infrastructure and organization of health systems<sup>(11-13)</sup>. Oncology services, for example, are mainly concentrated in large Brazilian cities that have specialized doctors and infrastructure for prevention, diagnosis, and treatment<sup>(14)</sup>. Data from 2017 revealed that these highly complex oncology services are distributed in only 3.1% of the municipalities and 39.4% are concentrated in the capitals<sup>(15)</sup>. Thus, populations from socioeconomically disadvantaged areas are more vulnerable to the consequences of cancer<sup>(14)</sup>.

In this context, considering the effective possibility of prevention, since CRC is one of the most preventable in the world and the delay in diagnosis implies the greater severity of the disease<sup>(4,16)</sup>, the social actions committee of the Brazilian Society of Digestive Endoscopy (SOBED) coordinated the first action to prevent gastrointestinal cancer, with CRC tracking, in partnership with

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<sup>1</sup> Universidade Federal de Alagoas, Programa de Pós-graduação em Nutrição (PPGNUT), Maceió, AL, Brasil. <sup>2</sup> Universidade Federal de Alagoas, Faculdade de Medicina, Maceió, AL, Brasil.

<sup>3</sup> Universidade Federal de Alagoas, Programa de Pós-graduação em Ciências Médicas (PPGCM), Maceió, AL, Brasil.

Corresponding author: Monise Oliveira Santos. E-mail: monise1006@gmail.com

the Federal University of Alagoas and the University of São Paulo, in the municipality of Piranhas in Alagoas. The support of the municipal government was essential for the choice of the city, which, in addition to being a socioeconomically disadvantaged municipality in the interior of the state, especially in relation to the availability of a specialized infrastructure with medium to high complexity health services, added to a low number of inhabitants, allowed working with a representative sample of the population. Therefore, this study aims to evaluate the clinical nutritional profile of individuals at medium risk screened for CRC residing in the city of Piranhas/Alagoas.

## METHODS

### Participants

This is a cross-sectional study, carried out from September to October 2020, in the city of Piranhas/Alagoas. According to data from the Brazilian Institute of Geography and Statistics (IBGE), Piranhas has an estimated population of approximately 25 thousand inhabitants<sup>(17)</sup>. A total of 2196 fecal immunochemical test kits (FIT) were distributed for screening CRC in the population between 50 and 70 years of age – age group considered to be a medium risk factor for the development of CRC<sup>(18)</sup> – corresponding to 8.8% of the population total municipality.

### Methods for CRC screening

CRC screening was organized in two phases. In the first phase, individuals between 50 and 70 years of age were recruited to perform the FIT. This test consists of the investigation of occult blood in feces, through the measurement of hemoglobin in feces, through specific antibodies against human globin<sup>(19, 20)</sup>.

The health professionals of the Basic Health Unit of the city were instructed to carry out the dispensation of the FIT kits and pass on the instructions for the participants to carry out the collection of the fecal sample in their homes. Afterwards, the fecal samples were returned to the BHU and duly sent for laboratory analysis.

In the second phase, individuals who tested positive on the FIT were recruited to complete the screening with a colonoscopy exam. Lesions identified during this examination were biopsied or excised for pathological review.

### Clinical and nutritional assessment

The clinical and nutritional assessment was carried out respecting the dynamics of performing colonoscopy exams, especially arising in the waiting room when it was necessary to avoid crowding due to the sanitary standards required to control the new coronavirus (SARS-COV 2019). This fragment of the survey was aimed at participants who completed CCR screening with the colonoscopy exam.

The research was approved by the Research Ethics Committee of the Federal University of Alagoas (UFAL), CAEE: 60945316.7.0000.50136 and protocol number 3082515 – UFAL, all individuals consented to their participation. Data were collected through a structured interview, containing personal (sex, age, marital status) and socioeconomic (education, occupation, number of family members, family income – minimum wage value: R\$1,045.00 (US\$202.40), conversion in August 2021 – and ethnicity), clinical and lifestyle (personal pathological history, use of medication, smoking, alcohol consumption, physical activity, sleep,

gastrointestinal signs and symptoms), and nutritional assessment – anthropometric, body composition and physical examination. These last two carried out by a single researcher.

The weight and height of participants and the were measured; then body mass index (BMI) was calculated, expressed in kg/m<sup>2</sup>, and the appropriate cutoffs were used<sup>(21)</sup>. Arm circumference (AC) and triceps skinfold (TSF) were obtained, and arm muscle circumference (AMC) was calculated. AC, TSF and AMC were expressed as adequacy (%) of percentile for comparisons<sup>(22-24)</sup>.

The evaluation of body composition was carried out through the tetrapolar electrical bioimpedance (BIA) of the Sanny® brand, following the manufacturer's instructions. From the resistance and reactance results, the percentages of muscle mass, fat and phase angle (PA) were calculated in the specific BIA software. For muscle mass, the p50 of the sample was identified, according to sex and age, and those below this percentile were classified as inadequate; the classification of the percentage of body fat was based on Pollock and Wilmore (1993)<sup>(25)</sup>, according to sex and age, and the individuals were classified as having excess body fat and not excess; and for PA, the cutoff points according to sex and age were adopted from the meta-analysis by Mattiello et al. (2020)<sup>(26)</sup>, classifying the results above or below the cutoff point as adequate or inadequate, respectively.

### Data analysis

The statistical analysis was performed using the SPSS® version 20 software. Continuous variables were expressed as mean ± standard deviation (SD) or median and interquartile range (IQR), and categorical variables as frequency [n (%)]. The Mann-Whitney test was used for comparisons of median values and frequency comparison using the chi-square or Fisher's exact test, according to presence of excess weight. The normality of the distribution was evaluated by the Shapiro Wilk test and the homogeneity of the variances by Levene. Next, a binary logistic regression analysis was performed between nutritional biomarkers and precancerous lesions and adjusted for sex and age. Data were expressed as 95% confidence intervals (CI) and odds ratios (OR). Significance was considered when the *P*-value was <0.05.

## RESULTS

Of the FIT distributed, 193 participants returned with altered results, thus indicating the continuation of screening with colonoscopy. Of these, 144 individuals completed the proposed CRC screening and 56.9% (n=82) agreed to undergo the clinical and nutritional assessment.

According to socioeconomic data, most participants were female (56.1%; n=46), married/stable union (68.3%; n=56), adults (56.1%; n=46) and with a mean age of 59.02 years (±6.30 SD). Almost 90% (n=69) declared themselves black, 73% (n=60) had up to 4 years of education, 59.2% (n=48) were farmers or retired, 87.2% (n=68) had a family income of up to 2 minimum wages (MW) and 78.0% (n=64) lived with <4 family members.

A large part of the participants referred complaints about sleep (45.7%; n=37), with insomnia and/or interrupted sleep being the reported complaints. Despite these complaints, most reported sleeping ≥6 hours a day (85.5%; n=65). Regarding other lifestyle data, 18.3% (n=15) were smokers and 34.1% (n=28) were ex-smokers, 24.4% (n=20) reported consuming alcohol and 65.9% (n=54) did not practice scheduled physical activity.

Regarding the participants' nutritional data (TABLE 1), according to BMI, 64.6% (n=53) were overweight. However, when evaluating body composition using the indicators % of adequacy of TSF and % of body fat, we found prevalence of excess weight in 78% (n=64) and 92.7% (n=76), respectively. On the other hand, evaluating the participants in relation to the muscle mass markers – % of adequacy of the AMC and body muscle mass (%) – it is concluded that 32.9% (n=27) and 47.6% (n=39) were with muscle depletion, respectively.

TABLE 1. Nutritional profile of people at risk for colorectal cancer residing in the city of Piranhas/AL.

Variable	
<b>BMI</b>	
Underweight/malnutrition n (%)	4 (4.9)
Eutrophy n (%)	25 (30.5)
Excess weight/overweight/obesity n (%)	53 (64.6)
<b>AC adequacy (%)</b>	
Malnutrition n (%)	15 (18.3)
Eutrophy n (%)	44 (53.7)
Overweight/obesity n (%)	23 (28.0)
<b>AMC adequacy (%)</b>	
Eutrophy n (%)	55 (67.1)
Muscle depletion n (%)	27 (32.9)
<b>TSF adequacy (%)</b>	
Malnutrition n (%)	11 (13.4)
Eutrophy n (%)	7 (8.6)
Overweight/obesity n (%)	64 (78.0)
<b>Body fat (%)</b>	
Eutrophy n (%)	6 (7.3)
Overweight/obesity n (%)	76 (92.7)
<b>Muscle mass (%)</b>	
>P50 n (%)	43 (52.4)
<P50 n (%)	39 (47.6)
<b>Body water (%)</b>	
Mean ± SD	49.01 ± 6.51
<b>Phase angle</b>	
Adequate n (%)	55 (67.1)
Inadequate n (%)	27 (32.9)

BIA: bioimpedance; AC: arm circumference; AMC: arm muscle circumference; BMI: body mass index; TSF: triceps skinfold.

At the same time, looking at TABLE 2, we see that there was no significant association between these markers of nutritional status and the incidence of precancerous lesions, that is, the nutritional status did not influence the presence or absence of precursor lesions of CRC.

In addition, the use of bioimpedance for body composition analysis allowed us to make other inferences that did not be possible with the BMI results alone (TABLE 3). We see that the measures of excess adipose tissue (% of adequacy of TSF and total body fat) corroborate the excess weight identified by BMI. However, there is no significant difference between people without excess weight or

TABLE 2. Association between nutritional status and the presence of precancerous lesions in people at risk for colorectal cancer residing in the city of Piranhas/AL.

	OR	CI (95%)	P-value
Actual BMI (kg/m <sup>2</sup> )	1.076	0.664–1.744	0.766
Usual BMI (kg/m <sup>2</sup> )	1.141	0.875–1.487	0.329
AC adequacy (%)	1.082	0.906–1.293	0.385
TSF adequacy (%)	0.994	0.970–1.019	0.638
AMC adequacy (%)	0.980	0.838–1.146	0.798
Muscle mass (%)	1.357	0.519–3.552	0.534
Body fat (%)	1.349	0.501–3.635	0.553
Body water (%)	1.462	0.899–2.377	0.126
Phase angle	2.022	0.090–45.302	0.657

AC: arm circumference; AMC: arm muscle circumference; BMI: body mass index; TSF: triceps skinfold. Binary logistic regression, adjusted for sex and age.

TABLE 3. Anthropometric profile according to excess weight in people at risk for colorectal cancer residing in the city of Piranhas/AL.

	Without excess weight <sup>a</sup>	Excess weight <sup>a</sup>	P-value
<b>AC adequacy (%)</b>			
Overweight n (%)	0 (0.0)	23 (100.0)	<0.001
Adequate n (%)	28 (47.5)	31 (52.5)	
<b>TSF adequacy (%)</b>			
Overweight n (%)	13 (20.3)	51 (79.7)	<0.001
Adequate n (%)	15 (83.3)	3 (16.7)	
<b>AMC adequacy (%)</b>			
Depletion n (%)	13 (48.1)	14 (51.9)	0.083
Adequate n (%)	15 (27.3)	40 (72.7)	
<b>Muscle mass (%)</b>			
Depletion n (%)	8 (19.5)	33 (80.5)	0.005
Adequate n (%)	20 (48.8)	21 (51.2)	
<b>Body fat (%)</b>			
Excess n (%)	24 (31.6)	52 (68.4)	0.100
Adequate n (%)	4 (66.7)	2 (33.3)	
<b>Body water (%)</b>			
Mean ± SD	54.53 ± 4.61	46.15 ± 5.44	<0.001
<b>Phase angle</b>			
Inadequate n (%)	12 (44.4)	15 (55.6)	0.217
Adequate n (%)	16 (29.1)	39 (70.9)	

AC: arm circumference; AMC: arm muscle circumference; SD: standard deviation; TSF: triceps skinfold; BMI: body mass index. <sup>a</sup>According to body mass index. Comparison of means (standard deviation) was performed by *t* test; frequency comparison was performed by chi-square.

overweight by BMI ( $P>0.05$ ) in relation to excess total body fat; that is, individuals who are not overweight have excess adipose tissue. At the same time, it was observed that the overweight participants also had, in parallel, lower muscle mass and total body water ( $P<0.05$ ).

Finally, regarding clinical data, 54.5% (n=42) of the participants had precancerous lesions, of which 75% (n=30) were adenomas. As for previous history, 62.3% (n=51) had chronic non-communicable disease (NCD), with systemic arterial hypertension (SAH) and/or diabetes mellitus (DM) (55%; n=45) being the most frequent, and 89.6% (n=43) were using medication to control these diseases.

## DISCUSSION

In the present study, most patients are adults, black, female, with low socioeconomic status and have modifiable risk factors for CRC, especially smoking, reduced physical activity and overweight; it was observed that although overweight patients had a higher % of body fat, they had a lower amount of muscle mass and body water, compared to those who were with adequate weight. Additionally, most participants had CRC precursor lesions.

Regarding the socioeconomic profile of the population evaluated, a higher prevalence of females was also observed in other CCR screenings<sup>(27,28)</sup>. Unlike our results, the participation of blacks and people with low socioeconomic status was not common in CCR screenings, a reflection of socioeconomic disparities, often explaining the higher incidence rates in these individuals<sup>(28,29)</sup>.

Among the modifiable risk factors identified in our study, being overweight was the most prevalent. Although the pathophysiological mechanism is not completely elucidated, overweight and obesity are recognized in the increased incidence of CRC<sup>(5,6)</sup>, with excess body fat being one of the main risk factors for the development of this neoplasm<sup>(7)</sup>. A meta-analysis published in 2007, which included 31 articles from prospective studies, found that a 5 kg/m<sup>2</sup> increase in BMI was linked to an increased risk of developing colon cancer in men and women, although the association was greater in men ( $P < 0.001$ ). In rectal cancer, BMI was positively associated in men [RR: 1.12 (95%CI: 1.09–1.16)] but not in women [(RR: 1.03 (95%CI: 0.99–1.08)]<sup>(30)</sup>. Another more recent meta-analysis, including 17 observational studies and 168,201 subjects, in order to assess the risk of colorectal adenoma in people with different BMI classifications, CRC screening participants, noted that subjects overweight and obese individuals had a higher risk of adenoma (ORR 1.44; 95%CI: 1.30–1.61; I<sup>2</sup>=43.0% and ORR 1.42; 95%CI: 1.24–1.63; I<sup>2</sup>=18.5%, respectively) compared to those with BMI <25 kg/m<sup>2</sup><sup>(6)</sup>.

Despite the acceptability of BMI for the assessment of body adiposity, our study showed that, even with the high prevalence of overweight in the population assessed, almost half also had muscle depletion, a result not identified by the BMI, as well as by the nutritional physical examination, evidencing the limitations of these methods in detecting muscle impairment, particularly in overweight and obese individuals. Other studies have also reported these limitations of BMI, hence the need to assess body composition by other methods, such as bioimpedance<sup>(31,32)</sup>.

One hypothesis for these results may be the presence of sarcopenia in this population. According to the update of the European consensus of geriatric medicine in 2018, sarcopenia is considered a muscle disease, resulting from adverse muscle changes, presenting with accelerated loss of muscle mass and function, common to the aging process, among older adults, also identified at younger ages and related to other causes<sup>(33)</sup>. Similar to the results of our study, in a survey of healthy people, the prevalence of sarcopenia ranged from 9% to 64% in individuals aged 45 years and over 85 years of age, respectively<sup>(34)</sup>. Many factors can be involved with the development of sarcopenia, which can be primary, when associated with aging and no other cause identified in the elderly, or secondary, due to diseases, nutritional factors – such as malnutrition, anorexia, and malabsorption - iatrogenic and inactivity – caused by a sedentary lifestyle and physical inactivity<sup>(33,35)</sup>. Among these factors, we highlight aging and physical inactivity, considering that most study participants have this profile.

The combination of these results reinforces the hypothesis of a

possible presence of sarcopenia in the studied population, since the reduction of muscle mass in overweight individuals has already been reported in several studies under the name of sarcopenic obesity, characterized by the concomitant presence of obesity and sarcopenia<sup>(36,37)</sup>. Despite not having an established definition, sarcopenic obesity affects especially older people, as the aging process leads to changes in body composition, due to metabolic changes, culminating in an increase in fat mass and a reduction in lean mass<sup>(38)</sup>.

As in the present research, the interrelationship between sarcopenia and CRC has also been previously observed. In a retrospective cohort of 3,262 patients with early-stage CRC, the authors found that 42% were sarcopenic and that, among these, patients with greater adiposity and less muscle tissue exhibited worse survival and women, especially, had a higher risk of overall mortality<sup>(39)</sup>. Therefore, it is important to understand that inadequacies in muscle reserves are not only present in the most severe form of the disease, but it is also a situation present in individuals with cancer diagnosed early, in all BMI classifications<sup>(39)</sup>. Additionally, it was noticed that patients with CRC associated with sarcopenia and obesity had higher rates of postoperative complications, length of stay and hospitalization costs<sup>(40)</sup>.

The phase angle, considered a predictor of health status, has been used to assess unfavorable clinical outcomes of several diseases, including CRC<sup>(41,42)</sup>. Furthermore, it was seen that this marker is also associated with sarcopenia in patients with this neoplasm<sup>(43)</sup>, an expected association, since it is pointed out as one of the parameters of muscle mass and function<sup>(44)</sup>. However, we did not see this association in our study, probably because none of the participants had CRC.

Another outcome observed in overweight individuals was the lowest % of body water, possibly related to the presence of dehydration in this population, a result also reported in some studies<sup>(45-47)</sup>. In a cross-sectional study carried out in the United States (USA) with 9,528 individuals aged 18 to 64 years, people with inadequate hydration, measured by urinary osmolality, had a higher BMI and greater risk of being obese compared to hydrated participants. Therefore, the authors conclude that water should deserve greater attention in studies of weight control and clinical strategies<sup>(45)</sup>. In the work by Stookey et al. (2020) more than 65% of participants did not meet the hydration criteria, 97.3% of these were underhydrated and were associated with an increased prevalence of obesity and other chronic diseases<sup>(47)</sup>.

Regarding the screening results for CRC, precancerous lesions were identified in more than half of the population evaluated, the majority being adenomas. Other CRC screening studies carried out in Brazil, with screening by FIT and colonoscopic evaluation for positive results, also found a high rate of detection of pre-neoplastic lesions<sup>(13,48)</sup>. The study by Perez et al. (2008), for example, with a design similar to ours, analyzed 3,640 FIT, of which 10.7% had positive results and from the 212 colonoscopies performed, at least 80 adenomas were identified among other lesions<sup>(48)</sup>. Individuals diagnosed with these lesions, in turn, have a higher incidence of CRC<sup>(49,50)</sup>. According to Erichsen et al. (2016), the absolute risk of CCR in 10 years in patients with the presence of precancerous lesion ranges from 2.5% and 4.4% for patients with sessile serrated polyps, depending on the presence or absence of other polyps or dysplasia, 4.5% for patients with traditional serrated adenoma and 2.3% for patients with conventional adenomas<sup>(51)</sup>. Another study showed that the risk for incident CRC in individuals with polyps diagnosed at screening colonoscopy increased from 3.35 (95%CI:



1.37–8.15) for large, serrated polyps and more than 4 (95%CI: 2.89–5.72) for advanced adenoma compared to people without these lesions on endoscopy<sup>(49)</sup>. In this context, as recommended by international guidelines, it is essential to carry out CCR screening and, especially, to continue with follow-up and colonoscopic surveillance after altered results, to detect early precursor lesions and cancer, to prevent and reduce the incidence and mortality from disease<sup>(10, 18, 49)</sup>.

The limitations of this study include the incompleteness of the clinical and nutritional assessment in the entire population, due to the dynamics of performing the exams. Additionally, the cross-sectional design does not allow inferences to be made longitudinally. Despite these limitations, our results showed the importance of promoting CRC screening, as well as evaluating the nutritional profile beyond the BMI, being fundamental strategies for the prevention of the disease and for the development of effective actions aimed at populations at higher risk.

### CONCLUSION

The clinical nutritional profile of individuals screened for CRC is characterized by the greater participation of adults, females, with low socioeconomic status and prevalence of risk factors for CRC. Among these factors, overweight was prevalent in most individuals screened, associated with reduced muscle mass, aspects involved in the development of sarcopenic obesity. Obesity is one of the main risk factors for CRC and, when concomitant with sarcopenia, it favors worse health outcomes. In this context, evidence shows

the need to assess muscle composition in obese people, especially through other methods of assessing body composition, as BMI does not discriminate between fat and muscle mass. Thus, our results add to the evidence on the importance of the population being guided on the need for screening and adherence to healthy lifestyle recommendations, especially strategies aimed at weight control and the practice of physical activity, to preventing CRC and possible sarcopenic obesity, a condition common to the aging process and to a sedentary lifestyle, which is associated with worse survival in patients with CRC, regardless of the stage of the disease.

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### Authors' contribution

Santos MO: data collection, research execution e text writing.  
Alves MC: data collection. Lins Neto MAF: research idealization.  
Moura FA: research idealization e statistical analysis.

### Orcid

Monise Oliveira Santos: 0000-0002-2546-4050.  
Marla de Cerqueira Alves: 0000-0001-8303-3286.  
Manoel Alvaro de Freitas Lins Neto: 0000-0003-1903-844X.  
Fabiana Andréa Moura: 0000-0003-0625-0193.

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**RESUMO – Contexto** – O câncer colorretal (CCR) é o terceiro câncer mais incidente no mundo e a segunda principal causa de morte por câncer. Diminuições significativas da incidência e mortalidade podem ser alcançadas a partir da redução de fatores de risco e adesão às recomendações de estilo de vida saudável, bem como rastreamento da doença. **Objetivo** – Avaliar o perfil clínico nutricional de indivíduos em risco médio rastreados para o CCR residentes na cidade de Piranhas/Alagoas. **Métodos** – Estudo transversal, conduzido de setembro a outubro de 2020, com indivíduos de médio risco para o CCR, de ambos os sexos e idades entre 50 e 70 anos. Os participantes realizaram rastreamento para o CCR com teste imunológico fecal (FIT) e colonoscopia. Foram coletados dados pessoais, socioeconômicos, clínicos, de estilo de vida e avaliação nutricional. Esta última foi realizada através de dados antropométricos (peso, altura, circunferência do braço e prega cutânea tricúspita), composição corporal (bioimpedância) e exame físico. Foi realizada análise descritiva das frequências dos dados e dicotomização segundo a presença ou não de excesso de peso, seguida da comparação de médias e medianas e das frequências por qui-quadrado ou teste exato de Fisher. **Resultados** – No total, 82 pessoas aceitaram realizar a avaliação clínica nutricional, a maioria do sexo feminino (56,1%; n=46), adultos (56,1%; n=46), com média de idade de 59,02 anos ( $\pm 6,30$  DP). Foram identificadas lesões pré-cancerígenas em 54,5% (n=42) dos rastreados, 52,4% (n=43) eram tabagista ou ex-tabagista e 65,9% (n=54) não praticavam atividade física programada. A avaliação nutricional demonstrou que 64,6% (n=53) estavam com excesso de peso pelo índice de massa corporal (IMC). Em contrapartida, os marcadores de massa muscular, % de adequação da circunferência muscular do braço (CMB) e massa muscular corporal (kg), mostraram que 32,9% (n=27) e 47,6% (n=39) dos indivíduos estavam com depleção muscular, respectivamente. Sobretudo os participantes com excesso de peso apresentavam, paralelamente, menor massa muscular ( $P < 0,05$ ), sugerindo obesidade sarcopênica nessa população. **Conclusão** – A obesidade é um dos principais fatores de risco para o CCR; quando concomitante a sarcopenia, favorece a piores desfechos para saúde. Nesse contexto, as evidências mostram a necessidade de avaliar a composição muscular em pessoas com obesidade, sobretudo, por outros métodos de avaliação da composição corporal. Nossos resultados se somam as evidências sobre a importância da população ser orientada sobre o rastreamento e adesão às recomendações de estilo de vida saudável, principalmente estratégias voltadas para o controle de peso e a prática de atividade física.

**Palavras-chave** – Câncer colorretal; fatores de risco; obesidade; triagem; estado nutricional.

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