

Project Report

On

DIET PREPARATION FOR PATIENTS WITH CANCER AND OTHER ASSOCIATED DISEASES IN AHSANIA MISSION CANCER AND GENERAL HOSPITAL

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Subject: Submission of project report.

Dear Sir,

I would like to take this opportunity to thank you for the guidance and support you have provided me during the course of this report. Without your help, this report would have been impossible to complete.

To prepare the report I collected The practical knowledge and experience during my internship period at **Ahsania Mission Cancer and General Hospital – AMCGH** under the supervision of **Tarana Jannat Mumu, clinical Dietitian**. Report preparation will immeasurably help in my future professional life. I request you to excuse me for any mistake that may occur in the report despite of my best effort.

I would really appreciate if you enlighten me with your thoughts and views regarding the report. In addition, if you wish to enquire about an aspect of my report, I would gladly answer your queries.

Thanking you again for your support and cooperation.

Yours Sincerely,



Progga Chakraborty


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CERTIFICATE OF APPROVAL

This is to certify that the dissertation entitled “Diet preparation for patients with cancer and other Associated Diseases” driven by Progga Chakraborty, ID-171-34-612 of the Department of Nutrition and Food Engineering has been approved for presentation and defence/viva-voice.

I am satisfied to hereby certify that the data and the finding presented in the report are the genuine work of Progga Chakraborty for further academic recommendations. In addition, I ensure that her report is a worth of fulfilling the partial requirements of NFE program. I wish her all success in life.



18/07/2021

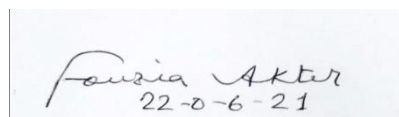
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TABLE OF CONTENT	
Particulars	Page No
Acknowledgement	iv
Abstract	1
Chapter One	2-8
1.1 Introduction	2
1.2 Risk factors	2
1.3 Cancer treatment options include	2
1.4 Side Effects of Cancer Treatment	3
1.5 Dietary modification	3
1.6 Calorie calculation	4
1.7 Adult requirement male and female	5
1.8 Food exchange list	5
1.9 Operational Definition	6
<ul style="list-style-type: none"> • Diet • Modified Diets • Neutropenic diet • NG tube feeding • Clinical nutrition • BMI 	
Key Words	
1.10 Research Question	7
1.11 Objective	7
General Objective	

Specific objectives	
1.12 Acronym	8
Chapter Two	9
2.1 Literature Review	9
Chapter Three	10-12
3.1 Materials	10
3.2 Methodological Approach <ul style="list-style-type: none"> • Study Location • Study design • Study Population • Study period • Data collection period • Sampling method • Sample size • Data collection method 	10
3.3 Data analysis process	11
3.4 Ethical consideration	12
Chapter Four	13-74
4.1 Result	13
4.2 Working data	13-70
4.3 Background information Gender Age Monthly income Family members Nutritional status of patients Weight	71-74
Chapter Five	75

5.1 Discussion	75
Chapter Six	76
6.1 Conclusion	76
Chapter Seven	77-80
7.1 Reference	77
7.2 Questionnaire	78

ABSTRACT

Bangladesh, at 142 million people, is that the ninth most populous country within the world. There are thirteen to fifteen lakh cancer patients in Bangladesh, with about 2 lakh patients newly diagnosed with cancer annually. As a summary, carcinoma and mouth-oropharynx cancer rank because the top two prevalent cancers in males. Other kinds of cancers are esophagus cancer and stomach cancer. In women, cancer uterine cervix and breast cancer are most prevalent. In 2020 both males and females and every one ages peoples affected several sorts of cancer. These cancer percentage for male esophagus 16.1%, lung 11.15%, stomach 5.8%, hypo pharynx 7.3%, other cancer 49.2%. and for female breast cancer 19%,cervix uteri 12%, esophagus 11.1%, gallbladder 7.8%, other cancer 43.4%.

The main purpose of this study is to assess the prevalence of cancer and to find the factors assess the prevalence of cancer and to classify the factors related with cancer among both male and womanly several group ages patients in Ahsania Mission Cancer and General Hospital, Uttara, Dhaka. Total 30 patients, 15 male and 15 female were involved this study. Cancer prevalence was much noticeable in time of life to older group age where stomach cancer 13.33%, ovary, breast, lung, tongue, liver and vocal lead cancer 40%, esophagus cancer 10%, blood, prostate, pharynx, brain tumer, , larynx, cervix cancer 36.66%. Most of them are suffering from the other disease like diabetes, hypertension and other problems, some patient treatment by chemotherapy, radio-therapy at different stages. Collected all patient height, weight, age and health condition of patients and to make diet chart for all patients.

Keywords: Cancer, Bangladesh, height, weight, age and health condition, chemotherapy, radiotherapy, prevalence, diabetes, hypertension, cardiovascular disease, diet chart.

Chapter One

1.1 Introduction

Cancer could be a set of diseases involving irregular cell growth with the likely to attack or spread to other parts of the body. Several of the body's cells grow uncontrollably and spread to other parts of the body. Cancer can start almost anywhere within the chassis, which is created of trillions of cells. Normally, human cells grow and multiply (through a process called cell division) to make new cells because the body needs them. When cells develop or become damaged, they die, and new cells take their place.

As an outline, carcinoma and mouth and oropharynx cancer rank because the maximum 2 prevalent cancers in males. Other kinds of cancers commonly noted include esophagus cancer, stomach cancer, lymphomas, and myeloma. In women, orifice cancer and carcinoma are most prevalent. Other cancer types which affect women are mouth and oropharynx cancer, carcinoma, and esophagus cancer. ^[1]

1.2 Risk factors for cancers

Tobacco use, alcohol use, unhealthy diet, physical inactivity and air pollution are risk factors for cancer (and other no communicable diseases). Hepatitis B and C viruses increase the possibility for liver and cervical cancer, respectively.

General risk factors for cancer include:

- Older age.
- A personal or family history of cancer
- Using tobacco
- Obesity
- Alcohol
- Some types of viral infections
- Specific chemicals
- Exposure to radiation, including ultraviolet radiation from the sun ^[2]

1.3 Cancer treatment options include

- Surgery: The goal of surgery is to get rid of the cancer or the maximum amount of the cancer as possible.
- Chemotherapy: Chemotherapy uses drugs to kill cancer cells.
- Radiation therapy
- Bone marrow transplant

- Hormone therapy
- Targeted drug therapy
- Radiofrequency ablation
- Clinical trials ^[3]

1.4 Side Effects of Cancer Treatment

- Anemia
- Appetite Loss
- Bleeding
- Constipation
- Diarrhea
- Edema (Swelling)
- Fatigue
- Fertility Issues
- Flu-Like Symptoms
- Hair Loss (Alopecia)
- Infection
- Memory or Concentration Problems
- Mouth and Throat Problems
- Nausea and Vomiting
- Nerve Problems
- Sexual Health Issues
- Skin and Nail Changes
- Sleep Problems and Insomnia
- Urinary and Bladder Problems ^[4]

1.5 Dietary modification

Before Treatment

Start aiming on healthy foods even before begin treatment. That's why it's a good idea to develop good nutrition now. It can help feel better and body stays strong.

- Fill patients fridge and pantry with healthy foods, especially those that need very little or no cooking.
- Nuts
- Applesauce

- Yogurt
- pre-chopped veggies
- microwaveable brown rice or other whole grains

During Treatment

Eat many protein and healthy calories. That may keep your body strong and help repair damage from your treatment.

- High-protein foods include: Lean meat, chicken, and fish, Eggs, Beans, nuts, and seeds, Cheese, milk, and yogurt
- dark green and deep yellow veggies
- Citrus fruits like oranges and grapefruits.

Try to have at least 2 1/2 cups of fruits and vegetables a day.

1.6 Calorie calculation

Mifflin equation: calculating BMI

Males: $10 \times \text{weight (Kg)} + 6.25 \times \text{height (cm)} - 5 \times \text{age (yr)} + 5$

Female : : $10 \times \text{weight(Kg)} + 6.25 \times \text{height(cm)} - 5 \times \text{age(yr)} - 161$

Required diet

CHO= 60%

Protein= 15%

Fat= 25%

Amount of needed CHO= $(\text{TER} \times 60\%) / 4.2$

Amount of needed Protein= $(\text{TER} \times 15\%) / 4.2$

Amount of needed Fat= $(\text{TER} \times 25\%) / 9$

1.7 Adult requirement male and female

Total energy requirement

Sex	Light	Moderate	Heavy
Male	1.55	1.78	2.1
Female	1.56	1.64	1.82

Micronutrient	High	Moderate	Low
CHO	55	55-65	60-65
Protein	18	15	10-12
Fat	20-25 or more	20-25 or more	20-25 r more

1.8 Food exchange list

Carbohydrate exchange list:

Foods	Calorie	CHO (gm)
Rice (1 cup)	140	30
Ruti (1 piece)	75	15
Puffed rice (1 cup)	75	15
Chira (1 cup)	150	30
Sago(25g)	75	15
Semai/ Nodules(25g)	75	15
Corn flex (25g)	75	15
Potato (1 piece)	25	5
Biscuit (4-5 pieces)	140	20

➤ Protein exchange list:

Foods	Calorie	Protein (gm)
Fish (30g)	30	6
Meat (30g)	30	6
Egg (1 Piece)	80	12
Peanut (10g)	40	6
Milk (1 cup)	80	4
Yogurt (1 cup)	160	6
Pulse (30 g)	100	7.5

Fat exchange list:

Foods	Calorie	Fat (gm)
Oil (15g)	135	15
Butter (20g)	135	15
Coconut(25g)	135	15
Nuts (25g)	135	15

1.9 Operational Definition

Diet: In nutrition, the sum of food consumed by someone or other organism is diet.

To supply nutrition & energy for maintaining body cells, tissues & organs, & for supporting normal growth & development intake the correct types & amount of food and drinks is named diet.

Modified Diets: Full Liquid, Clear Liquid, Soft/Low Fiber (avoids raw fruits and vegetables), Low Lactose, High Calorie, High Protein, Carbohydrate-Controlled.

Neutropenic diet: it's a special diet for cancer patients and doctors recommended this diet before and after certain sorts of chemotherapy and other cancer treatment. And even have some restriction about taken foods.

Food avoid list:

- Pulses and seed rich foods.
- Pell of some fruits like grapes, apple.
- Processed and spicy foods.

NG tube feeding: A nasogastric (NG) tube may be a small tube that goes into the stomach through the nose. It is accustomed give liquids and liquid foods, drugs or accustomed remove substances from the stomach. Giving food through a nasogastric tube may be a style of enteral nutrition.

Clinical nutrition: Clinical nutrition stands nutrition of patients in health care. Clinical during this sense refers to the management of patients, containing not only outpatients at clinics, but also inpatients in hospitals. It combines primarily the scientific fields of nutrition and dietetics.

BMI

Body Mass Index is a simple calculation using a person's height and weight.

The formula is $BMI = kg/m^2$

BMI	Weight Status
Below 18.5	Underweight
18.5—24.9	Normal
25.0—29.9	Overweight
30.0 and Above	Obese

Key Words: BMI, Diet, weight, cancer, nutrition, NG tube feeding.

1.10 Research Question

What is the Diet preparation for patients with cancer and other Associated Diseases in Ahsania Mission Cancer and General Hospital?

1.11 Objective

The objectives of this study are found for cancer patients in AMCGH. This study sends them an awareness message about food habit by giving their diet chart.

➤ General objective

To found out the stage of cancer and give they diet chart according to their need.

➤ Specific objectives

- To access the background information of patients
- To access the Knowledge about family of patients
- To access the supplements or medical history of patients
- To access the information about the dietary history of patients
- To identify food frequency habits of patients

1.12 ACRONYMS:

- AMCGH- Ahsania Mission Cancer and General Hospital
- BMI- Body Mass Index
- IHD- Ischemic Heart Disease
- DM- Diabetes Mellitus
- HTN- Hypertension
- HB- Hemoglobin
- RBC- Red Blood Cell
- WBC- White Blood Cell
- NG tube- Nasogastric tube

Chapter Two

Literature review

Cancer is recognized by health professionals as a phenomenon experienced by the whole family, not just by the individual member diagnosed with the disease.

Finding solutions to cancer – World Cancer Day 2020: Diamond light is playing its part in reducing the worldwide impact of cancer and supporting the aims of World Cancer Day. Research going down at Diamond is improving our understanding of cancer mechanisms and producing new opportunities for effective cancer therapies. ^[5]

Over the past two years Diamond has published over 345 publications associated with cancer research, covering numerous cancer types and lots of basic research studies on the structure of cancer cells and pathways. a selected focus has been utilizing the system to become more efficient in targeting cancer cells and designing new targeted therapies.

It was noted within the 1970s that individuals in many western countries had diets high in animal products, fat and sugar increased rates of such cancers. Diets that are high in processed or red meats and low in fruits and vegetables are linked with number of cancers. Diets high in fruits, vegetables, whole grains and spices were linked to reduced risks of cancers of the colon, stomach, liver, pharynx cancer.

Chapter Three

3.1 Materials

Equipment's	Purpose
Paper	To making a questionnaire
Measurement tape	To measure the Wrist Circumference
Microsoft	For report writing To making presentation
Computer	Whole report making by using some software
Excel	For analysis the data For making data chart and table

3.2 Methodological Approach

➤ Study Location

My study location was Ahsania mission cancer and General Hospital. So I collected data from the patients' file of the hospital.

➤ Study design

Data collection is done by personal interview with patients or their family member followed by the questionnaire system.

➤ Study Population

The study was conducted on Diet preparation for patients with cancer and other associated disease in Ahsania Mission Cancer and General Hospital. Collected 30 patients data.

➤ Study period

9th November 2020 to 20th February 2021.

➤ Data collection period

12 November 2020 to 30th January 2021.

➤ Sampling method

For this study used a systematic random sampling method.

➤ Sample size

The location of this study was Ahsania Mission Cancer and General Hospital, Uttara, Dhaka. In different ages people around 33 to 81 years' people. They all were cancer patients.

Total 30 cancer patients involved in this study. Most every individual them are affected by cancer and other Associated Diseases.

➤ **Data collection method**

- All the data were collected after their permission.
- Had to use selected the Bengali language of the patients.
- Data collected by taken personal interviews and some from patient's medical file.
- For data collection interview needed 5 to 10 minutes for each patients.
- All the answers were recorded as data.

3.3 Data analysis process

I used Excel software for analyzing the data and making graph. Microsoft Excel is a helpful and powerful program for data analysis and documentation.

Working process with Microsoft Excel

1. Enter data into Excel

2. Choose one of nine graph and chart options to make

3. Highlight data and 'Insert' desired graph

4. Add percentage

5. Adjust data's layout and colors

6. Change the size of chart's legend

7. Change the axis labels

8. Reorder data

9. Title all graph

3.4 Ethical consideration

The purpose and benefits of the study were narrated to the respondents. Then they willingly cooperated with the study.

Chapter Four

4.1 Result

This chapter about the data analysis result by the collected data from patients in AMCGH. In the data collecting questionnaire, the first questions about the background information of the respondents. Like the name, gender, occupation, family etc.

In this study sample size was 30. The respondent rate according to sample size was 100%.

From this 30 cancer patients, 15 patients are male and another 15 patients are female. In this study all cancer patients age at middle to higher and percentage was at higher at the age of 55-81 years (22%) and at middle age from 33- 48 years (8%).

4.2 Working data

1. Ovary cancer

Hazaira khatun

Age: 70 years

Weight: 50kg

Height: 148 cm

Fatty liver patient

Diabetic patient

$$\text{BMI} = \text{weight} / (\text{height})^2 = 50 / (1.48)^2 = 22.8$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} - 161$$

$$= 10 \times 50 + 6.25 \times 148 - 5 \times 70 - 161$$

$$= 500 + 925 - 350 - 161$$

$$= 914$$

$$\text{TER} = 914 \times 1.64$$

$$= 1498.96$$

$$= 1500$$

$$\text{CHO} = 1500 \times 0.6 / 4 = 225$$

$$\text{Protein} = 1500 \times 0.15 / 4 = 56.25 = 57$$

$$\text{Fat} = 1500 \times .25 / 9 = 42$$

Meals	Food items	Quantity
Morning	Chapatti	3 pc

	Vegetables	2 cup
Mid-morning	Egg Fruits	1 1
Lunch	Rice Fish/meat Vegetables Pulse Salad	2 cup 2 pc 2 cup 1 cup
Evening	Soup	1 bowl
Dinner	Chapatti Vegetables Fish/meat	2 pc 1 cup 2 pc
Bed time	Low fat milk/ sagu	1 glass

Food to avoid

- Processed food and canned food
- Smoking
- Oil, fat, spices
- Sugar
- Carbohydrate
- Thin skin fruits
- Dairy product

2. Breast cancer

Dipa Tripura

Age: 39 years

Weight: 57 kg

Height: 150 cm

Complication: less hemoglobin

Over uric acid

Gout patient

$$\text{BMI} = \text{weight} / (\text{height})^2 = 57 / (1.5)^2 = 25.33$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} - 161$$

$$= 10 \times 57 + 6.25 \times 150 - 5 \times 39 - 161$$

$$= 570 + 937.5 - 195 - 161$$

$$= 1151.5$$

$$\text{TER} = 1151.5 \times 1.64$$

$$= 1888.46$$

$$= 1600$$

$$\text{CHO} = 1600 \times 0.6 / 4 = 240$$

$$\text{Protein} = 1600 \times 0.15 / 4 = 56.25 = 60$$

$$\text{Fat} = 1600 \times .25 / 9 = 45$$

Meals	Food items	Quantity
Morning	Chapatti/bread Vegetables Egg	3 pc 2 cup 1
Mid-morning	Milk biscuits	1 glass 3-4 pc
Lunch	Rice Fish/meat Vegetables	2 cup 2 pc 1 cup
Evening	Noodles/ suji	2 serving
Dinner	Chapatti Vegetables Fish/meat	2 pc 1 cup 1 pc
Bed time	Pudding	2 pc

Food restriction

- Processed food or canned food
- Smoking
- Red meat, fish
- Pulses/ lentils
- Bean, pea-pod, mushroom
- Cabbage, cauliflower
- Food to eat
- Iron food
- Leafy vegetables

3. Cancer stomach

Mrs. Silpi khatun
Solid/semi-solid base diet

Age: 33 years
Weight: 45 kg
Height: 148 cm

Complication: fewer albumins
Less hemoglobin

$$\text{BMI} = \text{weight} / (\text{height})^2 = 45 / (1.48)^2 = 20.5$$

Calorie requirement:

$$\begin{aligned} &10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} - 161 \\ &= 10 \times 45 + 6.25 \times 148 - 5 \times 33 - 161 \\ &= 450 + 925 - 165 - 161 \\ &= 1049 \\ \text{TER} &= 1049 \times 1.64 \end{aligned}$$

$$= 1720$$

$$= 1800$$

Meals	Food items	Quantity
Morning	Corn flex Fruit juice	1 bowl 1 glass
Mid-morning	Egg Suji	1 1 cup
Lunch	Jau bhaat Pulse Egg white	2 cup 1 pc 1
Evening	Soup (without egg yolk)	2 serving
Dinner	Khichuri	3 cup
Bed time	Milk+sagu	2 serving

Food to avoid

- Pulses
- Thin skin fruits
- Citrus fruits

Food to add

- Egg white
- Tomato
- Protein
- Coconut water
- Pomegranate fruits, banana
- Red spinach

4. Semi solid base diet

MD. shazzaman khan

Age: 81 years

Weight: 69 kg

Height: 168 cm

Complication: DM, HTN, IHD

Severe aortic stenosis

$$\text{BMI} = \text{weight} / (\text{height})^2 = 69 / (1.68)^2 = 24.4$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} + 5$$

$$= 10 \times 69 + 6.25 \times 168 - 5 \times 81 + 5$$

$$= 690 + 1050 - 405 + 5$$

$$= 1340$$

$$\text{TER} = 1340 \times 1.78$$

$$= 2385.2$$

$$= 2400$$

Meals	Food items	Quantity
Morning	Suji (without sugar) egg	2 cup 1
Mid-morning	Low fat Milk Bread Fruit juice	1 glass 2 pc 1 glass
Lunch	Jau bhat Vegetables(mased/blend)	4 cup 2 cup
Evening	Soup Smoothie (nut, puffed rice, milk)	2 serving 2 serving
Dinner	Jau bhat Soup	2 serving 2 serving
Bed time	Pudding(use sugar free)	3 pc

5. Blood cancer (hematology)

Mrs. Loren Justin gomes

Age: 38 years

Weight: 58 kg

Height: 158 cm

Complication:

- Less hemoglobin
- Less sodium, potassium
- Constipation
- Fever

$$\text{BMI} = \text{weight} / (\text{height})^2 = 58 / (1.58)^2 = 23.2$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} - 161$$

$$= 10 \times 58 + 6.25 \times 158 - 5 \times 38 - 161$$

$$= 580 + 987.5 - 190 - 161$$

$$= 1216.5$$

$$\text{TER} = 1216.5 \times 1.64$$

$$= 1995$$

$$= 2000$$

Meals	Food items	Quantity
Morning	Chapatti/bread Vegetables Egg	3 pc 2 cup 1
Mid-morning	Milk + bread Fruits (banana)	1 glass + 2 pc 1
Lunch	Rice Fish/meat Vegetables Pulse	4 cup 2 pc 2 cup 1 cup
Evening	Noodles/ suji	2 serving
Dinner	Rice Vegetables Fish/meat pulse	2 cup 2 cup 1 pc 1 cup
Bed time	pudding	2 pc

Food to add

- Protein
- Banana, raw papaya
- Pomegranate
- Coconut water
- Psyllium husk (isopguler bhusi)

Food to avoid

- Sea food
- Thin skin fruits
- Smoking
- Raw or half boil vegetable

6. Cancer left vocal cord

Rekha mozumder

Age: 60 years

Weight: 63 kg

Height: 147 cm

Complication:

- Isthmic heart disease (IHD)
- Joint pain
- Hyper tension (HTM)

(Normal base high protein diet)

$$\text{BMI} = \text{weight} / (\text{height})^2 = 63 / (1.47)^2 = 29.2$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} - 161$$

$$= 10 \times 63 + 6.25 \times 147 - 5 \times 60 - 161$$

$$= 630 + 918.75 - 300 - 161$$

$$= 1087.75$$

$$\text{TER} = 1087.75 \times 1.64$$

$$= 1783.96$$

$$= 1600$$

Meals	Food items	Quantity
Morning	Chapatti/bread Vegetables Egg	2 pc 1 cup 1
Mid-morning	Soup Nut paste	1 bowl 10 gm
Lunch	Rice Fish/meat Vegetables Pulse	2 cup 2 pc 1 cup 1 cup
Evening	Chana	15 gm
Dinner	Rice Vegetables Fish/meat pulse	2 cup 2 cup 2 pc 1 cup
Bed time	Milk	1 cup

Food to add

- Protein
- Banana, raw papaya
- Pomegranate
- Coconut water

Food to avoid

- Sea food
- Thin skin fruits
- Smoking
- Red meat
- Oil, spices
- Fish's head, Egg

7. Prostate cancer

Mr. Ramkrisna shaha

Age: 71 years

Weight: 81 kg

Height: 165 cm

Complication:

- Less hemoglobin
- Less potassium
- Fewer albumin
- Over creatinine
- High sugar

$$\text{BMI} = \text{weight} / (\text{height})^2 = 81 / (1.65)^2 = 29.75$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} + 5$$

$$= 10 \times 81 + 6.25 \times 165 - 5 \times 71 + 5$$

$$= 810 + 1031.25 - 355 + 5$$

$$= 1491$$

$$\text{TER} = 1491 \times 1.78$$

$$= 2653$$

$$= 2400$$

Meals	Food items	Quantity
Morning	Chapatti/bread Vegetables Egg	2 pc 2 cup 1
Mid-morning	Soup (egg white+ chicken) Fruits Puffed rice	1 bowl 1 glass 1 cup
Lunch	Rice Fish/meat Vegetables	4 cup 3 pc 3 cup
Evening	Soup	2 serving

	Nut paste Milk (lowfat)	10 mg 1 glass
Dinner	Chapatti Vegetables Fish/meat	2 cup 2 cup 2 pc
Bed time	Milk (low fat) biscuit	1 cup 3-4 pc

Food to add

- Protein
- Mango, orange, Banana, raw papaya
- Pomegranate
- Beet
- Coconut water
- Red spinach
- Taro stem

Food to avoid

- Thin skin fruits
- Smoking
- Raw or half boil vegetable
- Seeds
- Sugar
- Pulse

8. Cancer esophagus

Kartik de

Age: 65 years

Weight: 78 kg

Height: 165 cm

Complication:

- Less hemoglobin

Soft diet

$$\text{BMI} = \text{weight} / (\text{height})^2 = 78 / (1.65)^2 = 28.65$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} + 5$$

$$= 10 \times 78 + 6.25 \times 165 - 5 \times 65 + 5$$

$$= 780 + 1031.25 - 325 + 5$$

$$= 1491.25$$

$$\text{TER} = 1491.25 \times 1.78$$

$$= 2654.425$$

$$= 2400$$

Meals	Food items	Quantity
Morning	Corn flax+ milk Egg (blend)	3 pc 1
Mid-morning	Fruits juice Soup	1 glass 1 serving
Lunch	Jau bhat Ghee Fish/meat	4 cup 2 tsp 2 pc
Evening	Suji+ milk	2 serving
Dinner	Khichuri Fish/meat	2 cup 1 cup
Bed time	Milk+ bread	1 glass+ 2 pc

Food to add

- Protein
- Banana, raw papaya
- Pomegranate
- Coconut water
- Psyllium husk (isopguler bhusi)

Food to avoid

- Sea food
- Thin skin fruits
- Smoking

9. Lung cancer

Abduruttar

Age: 68 years

Weight: 48 kg

Height: 161 cm

(Liquid and semi-solid diet)

$$\text{BMI} = \text{weight} / (\text{height})^2 = 48 / (1.61)^2 = 18.5$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} + 5$$

$$= 10 \times 48 + 6.25 \times 161 - 5 \times 68 + 5$$

$$= 480 + 1006.25 - 340 + 5$$

$$= 1151.35$$

$$\text{TER} = 1151.35 \times 1.78$$

$$= 2049.228$$

$$= 2200$$

Meals	Food items	Quantity
Morning	Suji Egg (blend)	2 serving 1
Mid-morning	Soup Fruits juice	1 bowl 1 glass
Lunch	Jau bhat Fish/meat ghee	4 cup 3 pc 2 tsp
Evening	Suji+ milk	2 serving
Dinner	Soup khichuri	1 serving 2 cup
Bed time	curd	2 serving (120gm)

Food to add

Protein

Banana,

Coconut water

Food to avoid

Sea food

Thin skin fruits

Smoking

Raw or half boil vegetable

Oil, spices

10. Buccal mucosa cancer

Mrs. Mohsena begum

Age: 55 years

Weight: 75 kg

Height: 158 cm

Complication:

- Less hemoglobin
- Less potassium, sodium
- High sugar

$$\text{BMI} = \text{weight} / (\text{height})^2 = 75 / (1.58)^2 = 30$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} - 161$$

$$= 10 \times 75 + 6.25 \times 158 - 5 \times 55 - 161$$

$$= 750 + 987.5 - 275 - 161$$

$$= 1301.5$$

$$\text{TER} = 1301.5 \times 1.64$$

$$= 2134.46$$

$$= 1800$$

Meals	Food items	Quantity
Morning	Chapatti/bread Vegetables	3 pc 2 cup
Mid-morning	Egg Fruits (citrus)	1 1 glass
Lunch	Rice Fish/meat Vegetables pulses	2 cup 2 pc 2 cup 1 cup
Evening	Soup Tea- biscuit	2 serving 1 cup+ 3-4 pc
Dinner	Chapatti Vegetables Fish/meat	3 cup 2 cup 1 pc
Bed time	Milk	1 glass

Food to add

- Protein
- Fresh fruit and vegetable
- Coconut water

Food to avoid

- Thin skin fruits
- Smoking
- Sugar
- Pulse

11. Base of the tongue cancer

Mr. Mosharof Hossain

Age: 54 years
Weight: 59 kg
Height: 165 cm

$$\text{BMI} = \text{weight} / (\text{height})^2 = 59 / (1.65)^2 = 21.7$$

Calorie requirement:

$$\begin{aligned} &10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} + 5 \\ &= 10 \times 59 + 6.25 \times 165 - 5 \times 54 + 5 \\ &= 1518.35 \end{aligned}$$

$$\text{TER} = 1518.35 \times 1.78$$

$$= 2702.485$$

$$= 2600$$

Meals	Food items	Quantity
Morning	Chapatti/bread Vegetables milk	4 pc 2 cup 1 cup
Mid-morning	Egg Fruits Suji	1 1 glass 2 serving
Lunch	Rice Fish/meat Vegetables pulse	4 cup 2 pc 2 cup 2 cup
Evening	Soup Corn flex Nut	2 serving 1 cup 1 glass
Dinner	Rice Vegetables Fish/meat pulse	2 cup 2 cup 2 pc 1 cup
Bed time	Pudding biscuit	2 pc 3-4 pc

Food to add

- Protein
- Fresh fruits and vegetables
- Coconut water

Food to avoid

- Thin skin fruits
- Smoking

12. Upper right pharynx cancer (throat cancer)

Md. Siddiqur rahman

Age: 55 years

Weight: 68 kg

Height: 158 cm

Complication: less uric acid,

Less creatinine

Semi solid/liquid diet

$$\text{BMI} = \text{weight} / (\text{height})^2 = 68 / (1.58)^2 = 27.2$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} + 5$$

$$= 10 \times 68 + 6.25 \times 158 - 5 \times 55 + 5$$

$$= 680 + 987.5 - 275 + 5$$

$$= 1397.5$$

$$\text{TER} = 1397.5 \times 1.78$$

$$= 2487.55$$

$$= 2200$$

Meals	Food items	Quantity
Morning	Suji Egg (blend)	2 cup 1
Mid-morning	Soup Fruits	1 bowl 1 glass
Lunch	Jao Fish/meat Ghee	4 cup 3 pc 2 tsp
Evening	Suji Milk	2 serving 1 glass
Dinner	Soup Fish/meat Egg	1 bowl 1 pc 1
Bed time	curd	120gm

Food to add

- Egg white
- Protein
- Fresh food
- Coconut water

Food to avoid

- Hot food
- Thin skin fruits
- Smoking

13. Sarcoma- right proximal hemeus

Bashed sikder

Age: 54 years

Weight: 42 kg

Height: 168 cm

Complication:

- Less hemoglobin
- Less potassium

$$\text{BMI} = \text{weight} / (\text{height})^2 = 42 / (1.68)^2 = 14.9$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} + 5$$

$$= 10 \times 42 + 6.25 \times 168 - 5 \times 54 + 5$$

$$= 420 + 1050 - 270 + 5$$

$$= 1205$$

$$\text{TER} = 1205 \times 1.78$$

$$= 2144.9$$

$$= 2200$$

Meals	Food items	Quantity
Morning	Chapatti/bread Vegetables milk	4 pc 2 cup 1 cup
Mid-morning	Egg Fruits Puffed rice	1 1 glass 1 cup
Lunch	Rice Fish/meat Vegetables Pulse	4 cup 2 pc 2 cup 1 cup
Evening	Soup Corn flex	2 serving 1 cup
Dinner	Rice Vegetables Fish/meat Pulse	2 cup 2 cup 2 pc 1 cup
Bed time	Milk biscuit	1 cup 3-4 pc

Food to add

- Fresh fruits and vegetables
- Protein
- Coconut water

Food to avoid

- Thin skin fruits
- Smoking
- Sea food

14. Brain tumor cancer (right front)

Haz. Abul Hashem

Age: 72 years

Weight: 72 kg

Height: 165 cm

Complication:

- Less hemoglobin
- HTN

$$\text{BMI} = \text{weight} / (\text{height})^2 = 72 / (1.65)^2 = 26.4$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} + 5$$

$$= 10 \times 72 + 6.25 \times 165 - 5 \times 72 + 5$$

$$= 720 + 1031.25 - 360 + 5$$

$$= 1396.25$$

$$\text{TER} = 1396.25 \times 1.78$$

$$= 2485.32$$

$$= 2400$$

Meals	Food items	Quantity
Morning	Chapatti/bread Vegetables Egg	4 pc 2 cup 1
Mid-morning	milk Fruits Puffed rice	1 cup 1 glass 1 cup
Lunch	Rice Fish/meat Vegetables Pules	4 cup 3 pc 3 cup 2 cup
Evening	Soup Tea-biscuits	2 serving 1 cup+ 3-4 pc
Dinner	Rice Vegetables Fish/meat pulse	4 cup 2 cup 2 pc 2 cup
Bed time	Pudding	2-3 pc

Food to add

- Fresh food
- Coconut water

Food to avoid

- Thin skin fruits
- Smoking

15. MD. Basir uddin

Age: 62 years

Weight: 60 kg

Height: 166 cm

Complication:

- Malignant cell, tissue from right lung lesion
- Less potassium

$$\text{BMI} = \text{weight} / (\text{height})^2 = 60 / (1.66)^2 = 21.77$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} + 5$$

$$= 10 \times 60 + 6.25 \times 166 - 5 \times 62 + 5$$

$$= 600 + 1037 - 310 + 5$$

$$= 1332$$

$$\text{TER} = 1332 \times 1.78$$

$$= 2370$$

$$= 2400$$

Meals	Food items	Quantity
Morning	Chapatti/bread Vegetables Egg	4 pc 2 cup 1
Mid-morning	milk Fruits Puffed rice	1 cup 1 glass 1 cup
Lunch	Rice Fish/meat Vegetables Pules	4 cup 3 pc 3 cup 2 cup
Evening	Soup Tea-biscuits	2 serving 1 cup+ 3-4 pc
Dinner	Rice Vegetables Fish/meat pulse	4 cup 2 cup 2 pc 2 cup
Bed time	Pudding	2-3 pc

Food to add

- Fresh food
- Coconut water

Food to avoid

- Thin skin fruits
- Smoking

16. Pancreatic cancer

Sufia khatun

Age: 52 years

Weight: 46 kg

Height: 155 cm

Complication

- less hemoglobin
- less albumin
- less sodium
- diabetic

$$\text{BMI} = \text{weight} / (\text{height})^2 = 52 / (1.55)^2 = 19.1$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} - 161$$

$$= 10 \times 46 + 6.25 \times 155 - 5 \times 52 - 161$$

$$= 460 + 968.75 - 260 - 161$$

$$= 1007.75$$

$$\text{TER} = 1007.75 \times 1.64$$

$$= 1652$$

$$= 1700$$

Meals	Food items	Quantity
Morning	Chapatti/bread Vegetables Egg	3 pc 2 cup 1
Mid-morning	Fruits Soup Puffed rice	1 glass 1 bowl 1 cup
Lunch	Rice Fish/meat Vegetables Pulse Salad	2 cup 2 pc 3 cup 1 cup
Evening	Noodles/ suji	2 serving
Dinner	Chapatti Vegetables Fish/meat	2 pc 2 cup 2 pc
Bed time	Pudding(use sugar free)	2 pc

Food restriction

- Processed food or canned food
- Smoking
- Red meat
- Spices
- Pulses/ lentils
- Sugar
- CHO

Food to eat

- Fresh food
- Iron food
- Leafy vegetables

17. Return with regional CN and liver cancer

MD. delowar

Age: 45 years

Weight: 59 kg

Height: 158 cm

$$\text{BMI} = \text{weight} / (\text{height})^2 = 59 / (1.58)^2 = 23.6$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} + 5$$

$$= 10 \times 59 + 6.25 \times 158 - 5 \times 45 + 5$$

$$= 590 + 987.5 - 225 + 5$$

$$= 1357.5$$

$$\text{TER} = 1357.5 \times 1.78$$

$$= 2416.35$$

$$= 2400$$

Meals	Food items	Quantity
Morning	Chapatti/bread Vegetables Milk	4 pc 2 cup 1 glass
Mid-morning	Egg Fruits juice suji	1 1 glass 44 gm
Lunch	Rice Fish/meat Vegetables Pulse	4 cup 2 pc 2 cup 2 cup
Evening	Noodles/ suji	2 serving
Dinner	Rice Vegetables Fish/meat Pulse	2 pc 2 cup 2 pc 1
Bed time	pudding	2 pc

Food restriction

- Processed food or canned food
- Smoking
- Oil, spices

Food to eat

- Iron food
- Leafy vegetables

18. Rufikul nesa

Age: 75 years

Weight: 42 kg

Height: 142 cm

Complication

- DM, HTN
- Hyperlipidemia
- Jaundice
- Sodium low

$$\text{BMI} = \text{weight} / (\text{height})^2 = 42 / (1.42)^2 = 20.8$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} + 5$$

$$= 10 \times 42 + 6.25 \times 142 - 5 \times 75 + 5$$

$$= 420 + 887.5 - 375 + 5$$

$$= 937.5$$

$$\text{TER} = 937.5 \times 1.64$$

$$= 1668.75$$

$$= 1800$$

Meals	Food items	Quantity
Morning	Chapatti/bread	3 pc
	Vegetables	2 cup
Mid-morning	Egg	1
	Fruits juice	1 glass
Lunch	Rice	2 cup
	Fish/meat	2 pc
	Vegetables	2 cup
	pulses	1 cup
Evening	Soup	2 serving
	Tea(no sugar)-biscuits	1 cup+2-3 pc
Dinner	Chapatti	2 pc
	Vegetables	2 cup
	Fish/meat	1 pc
Bed time	milk	1 glass

Food restriction

- Processed food or canned food
- Smoking
- Red meat
- Fat
- Food to eat
- Iron food
- Vegetables
- Enough water

19. Liver cancer

Ali hossain

Age: 60 years

Weight: 47 kg

Height: 160 cm

Complication:

- DM, IHD,
- HTN
- Hypokalemia

$$\text{BMI} = \text{weight} / (\text{height})^2 = 47 / (1.6)^2 = 18.4$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} + 5$$

$$= 10 \times 47 + 6.25 \times 160 - 5 \times 60 + 5$$

$$= 470 + 1000 - 300 + 5$$

$$= 1175$$

$$\text{TER} = 1175 \times 1.78$$

$$= 2091.5$$

$$= 2200$$

Meals	Food items	Quantity
Morning	Chapatti/bread Vegetables milk	3 pc 2 cup 1 cup
Mid-morning	Egg Fruits Puffed rice	1 1 glass 1 cup
Lunch	Rice Fish/meat Vegetables Pulse	4 cup 2 pc 2 cup 1 cup
Evening	Soup Corn flex	2 serving 1 cup
Dinner	Rice Vegetables Fish/meat Pulse	2 cup 2 cup 2 pc 1 cup

Bed time	Milk biscuit	1 cup 3-4 pc
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Food to add

- Fresh fruits and vegetables
- Protein
- Coconut water

Food to avoid

- Thin skin fruits
- Smoking
- Sea food
- Sugar

20. Right let border of tongue cancer

Md. Jalal uddin sikder

Age: 64 years

Weight: 56 kg

Height: 158 cm

Complication:

- DM, IHD,
- Less hemoglobin
- Creatinine over

Semi-solid or liquid base diet

$$\text{BMI} = \text{weight} / (\text{height})^2 = 56 / (1.58)^2 = 22.4$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} + 5$$

$$= 10 \times 56 + 6.25 \times 158 - 5 \times 64 + 5$$

$$= 560 + 987.5 - 320 + 5$$

$$= 1232.5$$

$$\text{TER} = 1232.5 \times 1.78$$

$$= 2193$$

$$= 2200$$

Meals	Food items	Quantity
Morning	suji egg(blend)	2 serving 1
Mid-morning	Fruits juice Soup	1 glass 1 bowl
Lunch	Jau Fish/meat Ghee	4 cup 2 pc 2 tsp
Evening	Soup Corn flex	2 serving 1 cup
Dinner	Khichuri Egg	3 cup 1
Bed time	Milk biscuit	1 cup 3-4 pc

Food to add

- Fresh fruits and vegetables
- Protein
- Coconut water

Food to avoid

- Thin skin fruits
- Smoking
- Sea food
- Sugar
- Pulse
- Seeds

21. Rectum and anal canal cancer

Atawr rahman

Age: 65 years

Weight: 72 kg

Height: 164 cm

Complication:

- Less hemoglobin
- Creatinine over
- Less sodium, potassium

Semi-solid or liquid base diet

$$\text{BMI} = \text{weight} / (\text{height})^2 = 572 / (1.64)^2 = 26.8$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} + 5$$

$$= 10 \times 72 + 6.25 \times 164 - 5 \times 65 + 5$$

$$= 720 + 1025 - 325 + 5$$

$$= 1425$$

$$\text{TER} = 1425 \times 1.78$$

$$= 2536.5$$

$$= 2400$$

Meals	Food items	Quantity
Morning	Chapatti/bread Vegetables Egg	2 pc 2 cup 1
Mid-morning	Soup Fruits Puffed rice	1 bowl 1 glass 1 cup
Lunch	Rice Fish/meat Vegetables	4 cup 3 pc 3 cup
Evening	Soup	2 serving
Dinner	Rice	4 cup

	Vegetables Fish/meat	2 cup 2 pc
Bed time	Milk biscuit	1 glass 3-4 pc

Food to add

- Fresh fruits and vegetables
- Protein
- Coconut water

Food to avoid

- Thin skin fruits
- Smoking
- Sea food
- Pulse
- Seeds
- Red meat
- Mushroom
- Bean/ lima-bean, pea-pod
- Fat

22. Larynx cancer

Mojibur rahman

Age: 50 years

Weight: 56 kg

Height: 165 cm

Complication:

- Less hemoglobin
- Creatinine over
- Less sodium, potassium

Semi-solid or liquid base diet

$$\text{BMI} = \text{weight} / (\text{height})^2 = 56 / (1.65)^2 = 20.6$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} + 5$$

$$= 10 \times 56 + 6.25 \times 165 - 5 \times 50 + 5$$

$$= 560 + 1031.25 - 250 + 5$$

$$= 1346.25$$

$$\text{TER} = 1346.25 \times 1.78$$

$$= 2346.25$$

$$= 2400$$

Meals	Food items	Quantity
Morning	suji egg(blend)	2 serving 1
Mid-morning	Fruits juice Soup	1 glass 1 bowl
Lunch	Jau bhat Fish/meat Ghee	4 cup 2 pc 2 tsp
Evening	Soup Corn flex	2 serving 1 cup
Dinner	Khichuri Egg	3 cup 1
Bed time	Milk biscuit	1 glass 3-4 pc

Food to add

- Fresh fruits and vegetables
- Protein
- Coconut water
- Egg

Food to avoid

- Thin skin fruits
- Smoking
- Sea food
- Pulse
- Seeds

23. Ovary cancer

Mrs. Bilkis begum

Age: 55 years
Weight: 49 kg
Height: 146 cm

Complication:

- Less hemoglobin

Semi-solid or liquid base diet

$$\text{BMI} = \text{weight} / (\text{height})^2 = 49 / (1.46)^2 = 23$$

Calorie requirement:

$$\begin{aligned} &10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} + 5 \\ &= 10 \times 49 + 6.25 \times 146 - 5 \times 55 + 5 \\ &= 490 + 912.5 - 275 + 5 \\ &= 1132.5 \\ \text{TER} &= 1132.5 \times 1.78 \end{aligned}$$

$$\begin{aligned} &= 1857.3 \\ &= 2000 \end{aligned}$$

Meals	Food items	Quantity
Morning	Chapatti/bread	3 pc
	Vegetables	2 cup
Mid-morning	Egg	1
	Fruits juice	1 glass
Lunch	Rice	2 cup
	Fish/meat	2 pc
	Vegetables	2 cup
	pulses	1 cup
Evening	Soup	2 serving
	Tea(no sugar)-biscuits	1 cup+2-3 pc
Dinner	Rice	2 cup
	Vegetables	2 cup
	Fish/meat	1 pc
Bed time	milk	1 glass

Food to add

- Fresh fruits and vegetables
- Protein
- Coconut water

Food to avoid

- Thin skin fruits
- Smoking
- Sea food
- Dairy product

24. Esophagus cancer

Mrs. Sabina yasmin

Age: 39 years

Weight: 45 kg

Height: 144 cm

Semi-solid/ liquid base diet

$$\text{BMI} = \text{weight} / (\text{height})^2 = 45 / (1.44)^2 = 21.7$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} - 161$$

$$= 10 \times 45 + 6.25 \times 144 - 5 \times 39 - 161$$

$$= 450 + 900 - 195 - 161$$

$$= 994$$

$$\text{TER} = 994 \times 1.64$$

$$= 1630$$

$$= 1800$$

Meals	Food items	Quantity
Morning	Corn flx Fruit juice	1 bowl 1 glass
Mid-morning	Egg Suji	1 1 cup
Lunch	Jau bhaat Pulse Egg white	2 cup 1 pc 1
Evening	Soup	2 serving
Dinner	khichuri	3 cup
Bed time	Milk+sagu	2 serving

25. Esophagus cancer

Suruzzaman

Age: 48 years

Weight: 45 kg

Height: 154 cm

Complication:

- Less hemoglobin,
- Over creatinine

Semi solid/liquid food base diet

$$\text{BMI} = \text{weight} / (\text{height})^2 = 45 / (1.54)^2 = 19$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} + 5$$

$$= 10 \times 45 + 6.25 \times 154 - 5 \times 48 + 5$$

$$= 450 + 962.5 - 240 + 5$$

$$= 1177.5$$

$$\text{TER} = 1177.5 \times 1.78$$

$$= 2095.95$$

$$= 2200$$

Meals	Food items	Quantity
Morning	Suji	2 cup
	Egg (blend)	1
Mid-morning	Soup	1 bowl
	Fruits	1 glass
Lunch	Jao bhat	4 cup
	Fish/meat	3 pc
	Ghee	2 tsp
Evening	Suji	2 serving
	Milk	1 glass
Dinner	Soup	1 bowl
	Fish/meat	1 pc
	Egg	1
Bed time	curd	120gm

Food to add

- Protein
- Fresh food
- Mango, orange, pomegranate,
- Celery, taro stem,
- liver
- Coconut water

Food to avoid

- Hot food
- Thin skin fruits
- Smoking
- Pulse

26. Stomach cancer

Kaji surmin sultana

Age: 42 years

Weight: 50 kg

Height: 155 cm

Semi-solid/ liquid base diet

Complication

- High creatinine
- High uric acid
- High albumin

$$\text{BMI} = \text{weight} / (\text{height})^2 = 50 / (1.55)^2 = 20.81$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} - 161$$

$$= 10 \times 50 + 6.25 \times 155 - 5 \times 42 - 161$$

$$= 500 + 968.75 - 210 - 161$$

$$= 1097.75$$

$$\text{TER} = 1097.75 \times 1.64$$

$$= 1800.31$$

Meals	Food items	Quantity
Morning	Corn flex Fruit juice	1 bowl 1 glass
Mid-morning	Egg Suji	1 1 cup
Lunch	Jau bhaat Pulse Egg white	2 cup 1 pc 1
Evening	Soup	2 serving
Dinner	khichuri	3 cup
Bed time	Milk+sagu	2 serving

Food include

- Protein
- Fresh food
- Mango, orange, pomegranate,
- Celery, taro stem,
- liver
- Coconut water

Food to avoid

- Hot food
- Thin skin fruits
- Smoking
- Pulse
- Egg white
- Seed

27. Breast cancer

Mrs. Nurzahan

Age: 75 years

Weight: 48 kg

Height: 149 cm

Complication

- less hemoglobin

$$\text{BMI} = \text{weight} / (\text{height})^2 = 48 / (1.49)^2 = 21.62$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} - 161$$

$$= 10 \times 48 + 6.25 \times 149 - 5 \times 75 - 161$$

$$= 480 + 931.25 - 375 - 161$$

$$= 875.25$$

$$\text{TER} = 875.25 \times 1.64$$

$$= 1435.41$$

$$= 1400$$

Meals	Food items	Quantity
Morning	Chapatti/bread Vegetables	3 pc 2 cup
Mid-morning	Milk Egg	1 glass 1
Lunch	Rice Fish/meat Vegetables pulses	2 cup 2 pc 1 cup 1 cup
Evening	Noodles/ suji	2 serving
Dinner	Rice Vegetables Fish/meat	2 cup 1 cup 1 pc
Bed time	pudding	2 pc

Food restriction

- Processed food or canned food
- Smoking

Food to eat

- Iron food
- Leafy vegetables
- Coconut water
- Fresh fruits and vegetable

28. Cervix cancer

Sumi saha

Age: 36 years

Weight: 67 kg

Height: 153 cm

Complication:

Less hemoglobin

$$\text{BMI} = \text{weight} / (\text{height})^2 = 67 / (1.53)^2 = 28.62$$

Calorie requirement:

$$10 \times \text{weight} + 6.25 \times \text{height} - 5 \times \text{age} - 161$$

$$= 10 \times 67 + 6.25 \times 153 - 5 \times 36 - 161$$

$$= 670 + 956.25 - 180 - 161$$

$$= 1285.25$$

$$\text{TER} = 1285.25 \times 1.64$$

$$= 2107.81$$

$$= 2000$$

Meals	Food items	Quantity
Morning	Chapatti/bread Vegetables Fruits juice	3 pc 2 cup 1 glass
Mid-morning	Milk biscuits	1 glass 3-4 pc
Lunch	Rice Fish/meat Vegetables	2 cup 2 pc 2 cup
Evening	Noodles/ suji	2 serving
Dinner	Chapatti Vegetables Fish/meat	2 pc 2 cup 1 pc
Bed time	pudding	2 pc

Food restriction

- Processed food or canned food
- Smoking
- Red meat

Food to eat

- Iron food
- Leafy vegetables

29. Stomach cancer

Shiddikur Rahman

Age: 55 years

Weight: 68 kg

Height: 158 cm

NG tube feeding

Total 10 feed/day, 150 ml/meal

BMI= weight/ (height) ² = 68/ (1.58) ² = 27.23

Calorie requirement: 2200 calorie

150 ml food+ 50 ml water (10 times)

Meal	Time	Food items
Morning	8.00 am	Rice 2 cup Boil egg 1 Vegetables 1 cup Or Bread 2 pc Egg boil 1 Milk 1 cup Blend all the items and add water. Then stain the mixer
Mid-morning	10.00 am	Fruits juice 1 cup
Lunch	1.00 pm And 3.00 pm	Rice 2 cup Fish/ meat 2 pc Vegetable 1 cup Pulses 1 cup Blend all the items and add water. Then stain the mixer.
Afternoon	4.30 pm	Soup 2 cup
	5.30 pm	Green coconut water/ fruit juice 1 glass
Dinner	8.00 pm And 10.00	Rice 2 cup Fish/ meat 2 pc Vegetable 1 cup Pulses 1 cup Blend all the items and add water. Then stain the mixer

Bed time	11.00	Milk 2 cup
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Precaution

1. Blend any items and add water. Then strain the mixer
2. Can't put hot water in the tube.
3. Can't put leafy vegetable in the tube.
4. Can't put thick liquid food.

30. Mr. Abdul mahsin

Age: 54 years
Weight: 60 kg
Height: 162 cm

NG tube feeding

Total 10 feed/day, 150 ml/meal

BMI= weight/ (height) ² = 60/ (1.62) ² = 23

Calorie requirement: 2200 calorie

150 ml food+ 50 ml water (10 times)

Meal	Time	Food items
Morning	8.00 am	Rice 2 cup Boil egg 1 Vegetables 1 cup Or Bread 2 pc Egg boil 1 Milk 1 cup Blend all the items and add water. Then stain the mixer
Mid-morning	10.00 am	Fruits juice 1 cup
Lunch	1.00 pm And 3.00 pm	Rice 2 cup Fish/ meat 2 pc Vegetable 1 cup Pulses 1 cup Blend all the items and add water. Then stain the mixer.
Afternoon	4.30 pm	Soup 2 cup
	5.30 pm	Green coconut water/ fruit juice 1 glass
Dinner	8.00 pm And 10.00	Rice 2 cup Fish/ meat 2 pc Vegetable 1 cup Pulses 1 cup Blend all the items and add water. Then stain the mixer
Bed time	11.00	Milk 2 cup

Precaution

1. Blend any items and add water. Then strain the mixer
2. Can't put hot water in the tube.
3. Can't put leafy vegetable in the tube.
4. Can't put thick liquid food.

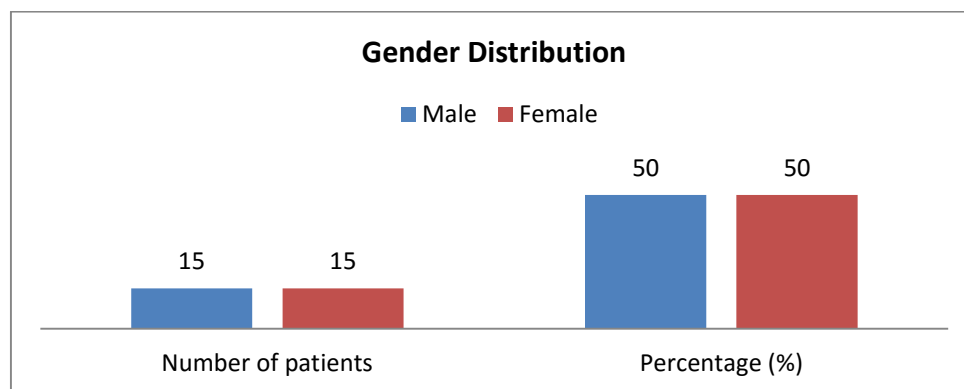
4.3 Background information

1. Gender

Table 1: Gender distribution

Gender	Number of patients	Percentage (%)
Male	15	50
Female	15	50

Chart 1



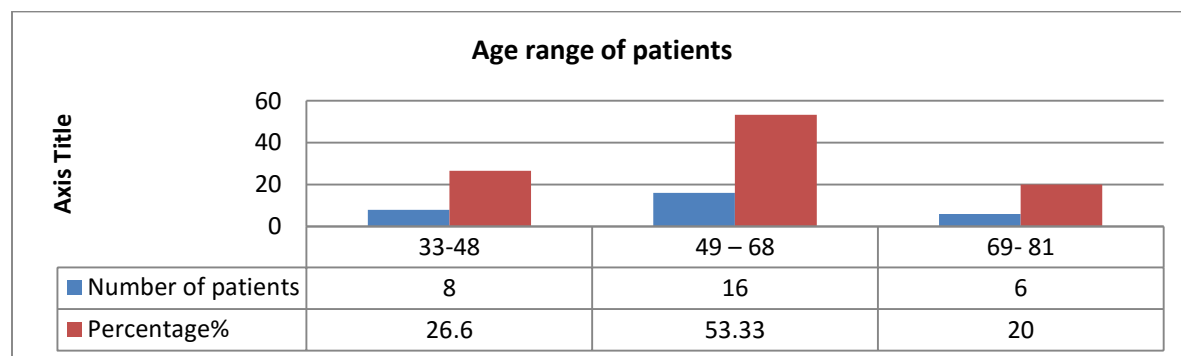
2. Age

Table 2: Age range of patients

Age range(years)	Number of patients	Percentage%
33-48	8	26.6
49 – 68	16	53.33
69- 81	6	20

The majority of patients in this table aged in between 49 to 68 (53.33%).

Chart 2



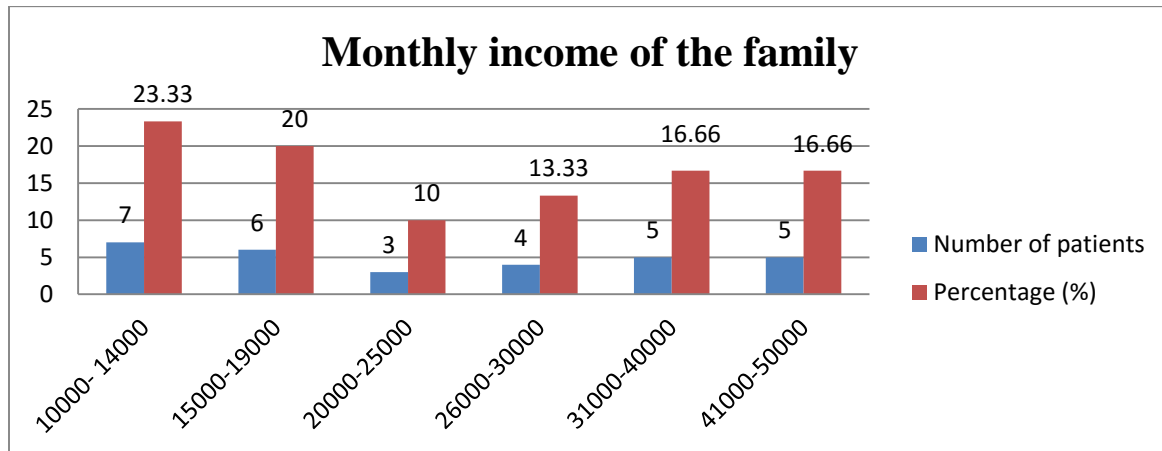
3. Monthly income

Table 3: Monthly income of the family

Income range (Taka)	Number of patients	Percentage (%)
10000- 14000	7	23.33
15000-19000	6	20
20000-25000	3	10
26000-30000	4	13.33
31000-40000	5	16.66
41000-50000	5	16.66

This table shows that the majority of these patients family income range per month in between 10,000 and 14,000 taka (23.33%).

Chart 3



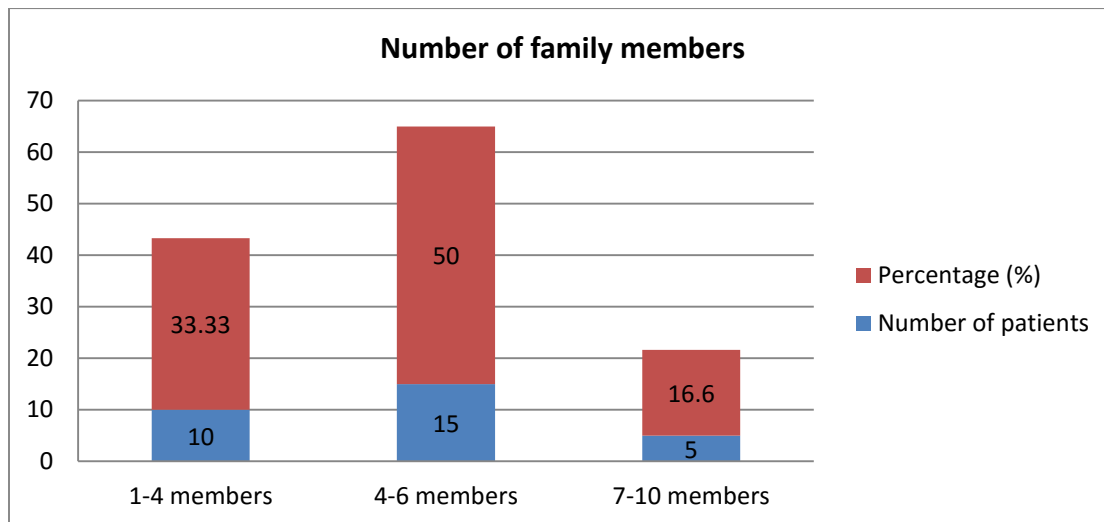
4. Family members

Table 4: Number of family members

Category	Number of patients	Percentage (%)
1-4 members	10	33.33
4-6 members	15	50
7-10 members	5	16.6

This table shows that the majority of patients family member were in between 4 and 6 members (50%).

Chart 4



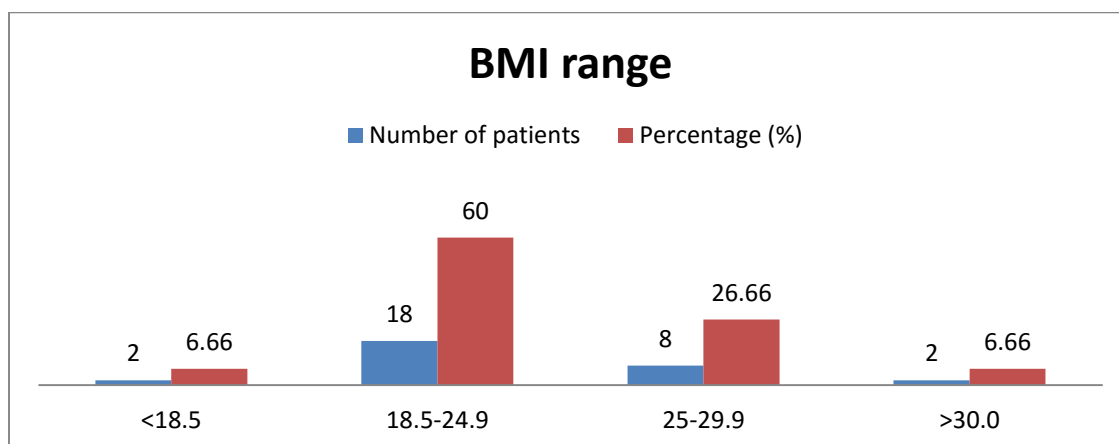
5. Nutritional status of patients

Table 5: BMI range

BMI range	Number of patients	Percentage (%)
<18.5	2	6.66
18.5-24.9	18	60
25-29.9	8	26.66
>30.0	2	6.66

The majority of patients body mass index were in between 18.5 and 24.9 (60%).

Chart 5



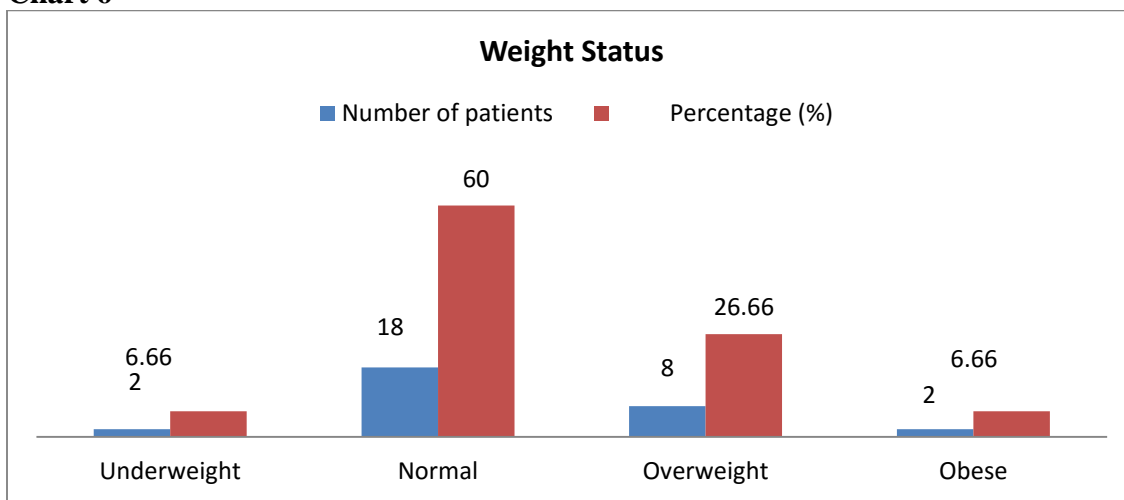
6. Weight

Table 6: Weight status

Category	Number of patients	Percentage (%)
Underweight	2	6.66
Normal	18	60
Overweight	8	26.66
Obese	2	6.66

The majority of patient weight status was normal range (60%).

Chart 6



Chapter Five

5.1 Discussion

This report has been conducted to assess the several forms of cancer patients and ready diet for these patients but they also laid low with other types diseases. Thanks to pandemic situation (COVID 19) and lockdown problems we only manage 30 patient's data, and dealing these data.

In 2020 both males and females and every one ages peoples affected several varieties of cancer these cancer percentage for male esophagus 16.1%, lung 11.15%, stomach 5.8%, hypo pharynx 7.3%, and other cancers 49.2% and feminine carcinoma 19%, orifice 12%, esophagus 11.1%, gallbladder 7.8%, and other cancer 43.4%.

According to this study both male and feminine cancer patient's percentage was equal (50%). the majority is affected with cancer due to illiteracy, poor socioeconomic status, gender discrimination, inadequate diagnosis availability, and non-secular problems in Bangladesh. Globally the three most cancer were lung, breast and stomach. Most of them patient are relations were in 4-6 members (50%) and their monthly income target between 10000-14000 Takas.

In this study majority of those patients affected with stomach and esophagus cancer (13.33%). And majority of patients produce other no disease like diabetes (23.33%) and hypertension (20%). the bulk of patients BMI range were at normal stage. Doctors suggest most of them patient are diet recommendation were normal diet (60%). In this hospital, majority of patients treated by surgery and chemotherapy.

Chapter Six

6.1 Conclusion

Cancer treatment may be a longer process and really much expensive. The study was in Ahsania Mission Cancer and General Hospital with 30 patients. This study discusses about dietary patterns of cancers patients but also affected other sorts of non-communicable disease. The study reflects the categories of cancer patient and its treatment depends on patients' condition like age, sex, and academic status, and income range, varieties of cancer and price of the treatment process.

There has no vaccination to stop cancer. There are several types treatment process of cancer these are surgery, chemotherapy, irradiation, bone marrow transplant, and immunotherapy. Cancer are most dangerous non-communicable disease, a patient cannot overcome almost from cancer. But these are some treatment processes of cancer for fewer days, months or years. ^[6]

Cancer patients have some restriction about eaten foods and maintain a correct diet plan was much effective for patients. These are some dietary modification of cancer patients like intake lower calorie rich foods, fresh vegetables and fruits, fiber rich foods like grains, nuts and beans. And reduced consumption of fat, white meat and processed meat and avoid smoking and alcohol rich foods.

Due to pandemic situation, it absolutely was difficult on behalf of me to try and do more work with cancer patients. But in future if I've got a scope, I need to figure with the cancer patients.

Preventing cancer

Cancer risk can be reduced by:

- not using tobacco;
- maintaining a healthy body weight;
- eating a healthy diet, including fruit and vegetables;
- doing physical activity on a regular basis;
- avoiding harmful use of alcohol;
- getting vaccinated against HPV and hepatitis B
- avoiding ultraviolet radiation (which primarily results from exposure to the sun)^[7]

References

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- [4] “Side Effects of Cancer Treatment - National Cancer Institute.” <https://www.cancer.gov/about-cancer/treatment/side-effects> (accessed Jun. 06, 2021).
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- [7] “Cancer prevention: 7 tips to reduce your risk - Mayo Clinic.” <https://www.mayoclinic.org/healthy-lifestyle/adult-health/in-depth/cancer-prevention/art-20044816> (accessed Jun. 06, 2021).

Questionnaire

Diet preparation for patients with cancer and other associated disease in Ahsania Mission Cancer and General Hospital

1. Interviewee and interviewer details:

Name of the hospital: -----

Name of the patients: -----

Date of interview: -----/-----/-----

2. Background characteristics and socioeconomic characteristics:

2.1. Age (✓): 30-50 years/51-60 years/ 61-85 years

2.2. Religion (✓): Islam/ Hindu/ Buddhism /Christian

2.3. Family members (✓):

- 1-2 members
- 4-6 members
- 7-10 members
- More than 10 members

2.4. Family income per month (✓):

- 10000-20000 Tk
- 21000-30000 Tk
- 31000-50000 Tk
- >50000 Tk

3. Measurement:

3.1. Weight: 40-50 kg/ 51-60 kg/ 61-70 kg/ >70 kg

3.2. Height: 140 cm/ 141-150 cm/ 151-160 cm/ >161 cm

3.3. BMI: <18.5/ 18.5-24.5/ 24-29.9/ >30.0

3.4. Nutritional status: Underweight/ Normal/ overweight/ Obese

4. Physical activities:

4.1. Did you perform physical activity?

- Yes
- No

4.2 Physical activity level: Low/ Moderate/ Heavy

4.3 Exercise: Yes/No

4.4 Did you have any food allergy? Yes/no.

5. Diagnosis report on biochemical analysis:

- Hemoglobin level-----g/DL
- Creatinine level-----mg/DL
- Sodium (Na) level -----mEq/L
- Potassium level (K)-----mmol/L

6. Other diseases

6.1 Do you have other disease?

- Yes
- No

6.2 Types of disease: Diabetes/ Hypertension/ Heart disease/ kidney disease

7. Diet plan

7.1 Do you follow any diet chart?

- Yes
- No

7.2 Types of diet: Normal/ Semisolid/Liquid/ NG tube feeding

7.3 Restriction about any food items: Yes/No

7.4 Do you eat any cholesterol rich foods? Yes/No

7.5 Do you eat sugar rich foods? Yes/No

7.6 Do you eat any processed and fast foods? Yes/No

7.7 No of meal you taken per day: 2 meals/ 3 meals/ 4meals/ 5 meals

8. Treatments:

8.1 Which types treatment you taken from this hospital?

- Surgery
- Chemotherapy
- Radiotherapy

8.2 Times of chemotherapy you taken: 1 time/ 2 times/ 3 times/ 4 times