

**Ministry of health of Ukraine
Higher state educational establishment of Ukraine
“Ukrainian medical stomatological academy”**



«Approved

At the sitting of the chair of oncology
The minutes №2 from September 1, 2018.
Manager of chair of oncology
MD, professor V.P.Bashtan

**METHODICAL POINTING
FOR INDEPENDENT WORK OF STUDENTS
DURING PREPARATION TO PRACTICAL EMPLOYMENT**

<i>Educational discipline</i>	<i>Oncology</i>
<i>Module №</i>	<i>I</i>
<i>Semantic module №</i>	<i>I</i>
<i>Theme of employment</i>	Colon cancer
<i>Course</i>	<i>V</i>
<i>Faculty</i>	<i>Medical №1, №2</i>

Theme: “ Cancer of colon (large intestinal)”

Amount of hours: 4 educational hours.

1. Actuality of theme.

The cancer of colon bowel in Ukraine occupies the second place among the malignant diseases of gastric – intestine highway. In general morbidity for men this pathology arrives at 5,4%, and for women – 6,3%. In the world in oncologic morbidity of mortality of colon bowel occupies a fifth place, and in the economic developed countries is the second place. Most low level of morbidity in Africa, Asia and row of countries of Latin America. Morbidity on the cancer of colon bowel on Ukraine in 2006p made 20,4 cases on 100 pressed, for – to the Poltava area – 22,1.

More frequent a tumour strikes s-romanum bowel – 35% cases, right half of colon bowel – 30% cases, rarer —transverse colon and descending colon bowels 10 – 16% cases.

Among factors which attract, it is accepted to name of high quality tumours, factors of question, chronic illnesses of colon and malignant tumours in anamnesis. Most often marked initially is a plural cancer of colon, suckling gland and genitals.

3.1. Disciplines integration (base knowledge, abilities, skills, are necessary for a study themes)

Disciplines	To know	Able
Anatomy	Anatomic structure of colon.	To explain possibility of origin of those or other metastases.
Physiology	Circulation of blood and ways of taking of lymph.	Value of clinical inspections.
Therapy	Physiology of colon.	Able to laboratory analyses the results of the got inspections.
Radio-therapy	Review of patients with complaints about pathology in an abdominal region (palpation, collection of anamnesis).	Able to read abdominal X-ray (irrigoscopy).
Surgery	To know preparation to the colonoscopy and roentgenologic inspections of colon and direct bowel.	To conduct the clinical review of patients (finger inspection of rectum, researches of colon colonoscopy bowel)
	To know the volume of surgical interferences on colon and direct bowel	

Epidemiology.

From data of WHO in the world annually registered near 600 thousand of cases of colorectal mortality. In the countries of western Europe morbidity makes presently from 34 on 100 thousands for women to 45 on 100 thousands for men. In Ukraine morbidity on the tumours of this localization makes now 33 on 100 arriving at thousand (20,2 colon bowel and 18,7 rectum) most indexes (35 – 38 on 100 thousands) in south – east region of our country. But in the countries of Asia and Africa this pathology happens rarer (Senegal – 1,5). After a death rate a rectal cancer occupies a circle for men the second place after the mortality of lights, and for women – third after the mortality of lights and pectoral gland. Morbidity among men and women approximately identically more high at an urban population comparatively with rural. All of about 65% patients are persons over 60 years.

Etiology.

- **Food factors.** The high maintenance in a meat diet, especially beef and pork, animal fat and reduction **клетчатки** accelerates growth of intestinal bacteria which make carcinogens, attracts increase in cases colorectal carcinoma. This process capable to stimulate as well salts of bilious acids. Natural vitamins A, With also Are inactivate carcinogens. Sharp decrease in cases of disease among vegetarians is noted.
- **Ecological factors (industrial carcinogens).** High frequency colorectal carcinoma among workers asbestos manufactures, sawmills.
- **Genetic factors.** Possibility of hereditary transfer leads up presence family polyp syndromes and growth (in 3 – 5 times) risk of development colorectal carcinoma among relatives of the first degree blood relationship patients with carcinoma or polyps.

Others Etiology factors.

- Ulcer colitis, especially colitis and disease by prescription more than 10 years.
- Kron disease.
- Cancer, adenoma of colon in the anamnesis.
- Syndrome a polyps: diffuse family polyps (risk of 90 %), single and plural polyps, fleecy tumours, and reliability of disease at Gardner's syndromes and Pejtt's-Egersa reaches 70-80 %.
- Cancer of female genitals or mammary gland in the anamnesis.
- Syndromes of a family cancer.
- Immunodeficiency syndromes.
- For last years a number of data about **эндокринных** infringements at sick of a cancer of colon is saved up, possibilities **гормонотерапии** this illness are thus discussed.

Pathological anatomy.

Macroscopically select three basic forms the cancer of colon bowel (for Dyuksom):

- I. Exophytic a form is tumours which grow in the road clearance of bowel.
 - Polyp cancer
 - A mushroom-like cancer is with the limited growth
- II. Endophytic growth form is tumours which infiltrative the wall of bowel and does not have clear limits.
 - Infiltrative (diffuse) cancer
 - Ulcerous cancer
 - ulcer-infiltrative cancer
- III. Mezophyt (mixed) a form is tumours which combine the elements of ex- and tumours ().

Sometimes tumours can grow in the different departments of colon (plural cancer). Tumours can appear simultaneously (synchronous cancer), or consistently through the certain interval of time (metachronous cancer).

Histological classification of tumours of colon.

- I. Adenokarcinoma
 - High-differentiated
 - Moderately differentiated
 - Undifferentiated
- II. (Colloid) cancer
- III. A cancer is undifferentiated
 - Solid cancer
 - Skir

Ways of metastases:

- ✓ Lymph nodes is a basic way of metastases. Lymph nodes, which are in of colon, and then Lymph nodes after motion of main vessels, is foremost struck .
- ✓ Gematogenic metastatic more frequent all in a liver, lights, cerebrum, bones. Possible the metastases of Virkhova are also remote, Shniclera, Krukenberga.
- ✓ Implantation of tumour mews in the wall of bowel below from localization of the first tumour.

Classification of mortalitys of colon and line of bowels (code of MKKH-10 c18 – c20) by system of TNM (6th editions, 2003).

TNM Clinical classification

T is the Primary tumour

Tx — not enough information for the estimation of primary tumour

T0 — a primary tumour is not determined

T_{of is} — carcinoma in situ: inwardly epithelium tumour or invasion of basal membrane

T1 — a tumour infiltrative a layer
 T2 — a tumour infiltrative a muscular layer
 T3 — a tumour penetrates through a muscular layer in a subserous layer or in fabric
 areas which are not covered a peritoneum round colon and line of bowels
 T4 — a tumour directly spreads on nearby organs or structures and germinates visceral peritoneum
 N is the Region lymphatic node.
 Nx — not enough information for the estimation of the state of Regional lymphatic node
 N0 — there are not signs of defeat of Regional lymphatic node
 N1 — there are metastases in 1-3 Regional lymphatic node
 N2 — there are metastases in 4 and anymore Regional lymphatic node
 m — metastases are Remote
 Mx — not enough information for determination of remote metastases
 M0 — remote metastases are not determined
 M1 — the present are remote metastases

p of TNM Patomorfolog classification

Categories of p of T, p of N and p of M answer the categories of T, N and M

pN0 — Material for histological research after regional lymphatic excise must include not less than 12 lymphatic node.
 G — Gistological gradation
 Gx — Degree of differentiation can not be certain
 G1 is the High degree of differentiation
 G2 is the Middle degree of differentiation
 G3 is the Low degree of differentiation
 G4 — a tumour is Undifferentiated

Grouping is after the stages

Stage 0	Tis	N0	M0
Stage I	T1	N0	M0
	T2	N0	M0
Stage II	T3	N0	M0
	T4	N0	M0
Stage III	Any T	N1	M0
	Any T	N2	M0
Stage IV	Any T	any N	M1

Clinic.

A clinical picture depends on localization, histological form, size of tumour and presence of metastases. Symptomatic of colorectal cancer is various. It is predefined the anatomic form of growth of tumour, and also related to the certain anatomy difference between the separate departments of colon. Some symptoms are present more frequent at the tumours of right half of colon bowel (pain, anaemia, dyspepsia symptoms, presence of tumour which palpation, symptoms of inflammatory process) other characteristic at the defeat of left half of colon (impassability, enterocolitis, pathological excretions).

Select the followings clinical forms the cancer of colon bowel :

- Obstruction form.
- Enterocolitis form.
- Anaemic form.
- Dyspeptic form.
- Pseudo inflammatory form.
- Tumour form
- Pain form.

Obstruction form. Characteristic symptom of chronic or sharp intestinal impassability, that it is linked from obstruction colon.

Enterocolitis form. A tumour shows up the symptoms of (diarrhea which is sometimes alternated with constipations).

Anaemic form. Anaemia of hypochrom character often is one of the first symptoms of mortality of blind and ascending guts. It should be noted that anaemia is a bleeding symptom from a tumour.

Dyspeptic form. In a clinic diseases prevail complaints about nausea, belch, inflation in a epigastric area.

Pseudo inflammatory form. A disease flows as inflammatory **інфільтрату** in an abdominal region with the clinical picture of sharp appendicitis, or other inflammatory processes

Tumour form. Sometimes the unique symptom of disease can be a presence of tumour which palpation.

Pain form. Often a disease appears pains of stomach. Sometimes by the unique symptom mortality of thick colon, especially left half, there can be a presence of pathological admixtures in incandescence (to blood, mucus).

It should be noted that separate symptoms, as a rule, are observed rarely. More frequent combination of clinical symptoms (pains, impassability, anaemia, presence of tumour but other) which gives yet more grounds to suspect the tumour of thick colon appears for patients.

Risk factors.

A value is important for early diagnostics and prophylaxis of mortality of colon has determination of risk factors.

To them belong:

- 1) the use of meal is with high maintenance of fats, albumens;

- 2) lack of vitamins A, B, C, D, E in a meal (increases the risk of disease twice);
- 3) frequent use of alcohol, in particular beer (increases a risk almost in 2 times);
- 4) obesity;
- 5) diminishing of physical activity;
- 6) smoking;
- 7) women have a decline of reproductive function;
- 8) operations are concerning the mortality of colon in the past (metachronic, plural cancer);
- 9) there are patients with the cancer of pectoral (chest) gland, cancer of endometrium (uterine), saccharine diabetes (identical factors of risk).

Diagnostics.

- Anamnesis of disease matters very much. It is necessary to find out the presence of symptoms, characteristic for the tumours of colon, their development in time.
- Instrumental investigation of inspection – it follows to turn the special attention on the color of skin (anaemia), palpation of stomach in different positions of patient. Rectal finger research most informing at mortality of rectum, it allows to define the presence of tumour, character of its growth, connection with contiguous organs.
- Colonoscopy research allows to specify localization of tumour of colon, take material for morphological of process.

Used:

- ✓ Rektoromanoskopy
- ✓ Fibrocolonoskopy
- Roentgenologic research:
 - ✓ survey sciagraphy of organs of abdominal region – necessary at suspicion on sharp intestinal obturation (tumour) impassability;
 - ✓ irigoscopy is contrasting research of colon with barium - allows to set the functional state of colon; localization of tumour, its sizes and slowness.
- Endorectal of ULTRASONIC RESEARCH (at mortality of rectum) allows to define the presence of distribution of tumour in contiguous organs (vagina, передміхурової gland).
- KT, ULTRASONIC RESEARCH, scytiografia liver. Conduct for the exception of remote metastases which will strike a liver primarily.
- Laparoscopiya – sometimes utilized for the exception of exsation of malignant process.

Treatment.

Surgical interference at the tumours of colon bowel is a method of choice. The choice of character of surgical interference depends on localization of tumour, presence of complications or metastases, general state of patient. In default of complications (perforation or impassability) and remote metastases execute a radical operation – delete of the staggered areas of bowel together with mesentery

and regional lymphatic vehicle.

- **Types of operations at mortality of colon bowel:**

- ✓ At the mortality of right half of colon bowel is executed by right hemicolectomy with imposition of ileotransversoanastomosis.
- ✓ At mortality of middle third of transversal colon bowel – resection of transversal colon bowel with imposition end in an end.
- ✓ At mortality of left half of colon bowel – left-side hemicolectomy with imposition of transversosigmoidoanastomosis.
- ✓ At mortality of sigmoid colon – resection of segment of this bowel.
- ✓ At presence of tumour which can not be deleted from technical reasons, or remote metastases execute palliative or symptomatic operations with the purpose of warning of complications (intestinal impassability, bleeding) – roundabout or ileotransversoanastomosis, imposition of double-barrelled ileo- of sigmoidostoma
- ✓ **Radial therapy at a mortality of colon bowel** is not effective, although sometimes in the late stages can be used as a symptomatic measure.

- **Chemotherapy.** The role of chemotherapy in treatment of mortality of colon yet to the end is not studied. However, the last decade is widely studied and used method of adjuvant chemotherapy, which allowed to improve the remote results of radical operative interference (especially at the III stage). Protocol includes combination of 5-FU and levamisole or leucovorin, which are used for a year after an operation (not less than 5 courses). From data of many international researches, this method of treatment reduces the death rate of patients with the third.

One of perspective methods endolymphatic introduction of cytostatic is considered to to and after an operation.

Prognosis.

A general 5-years-old survival is 45 – 55% and in the last few years did not change substantially. At tumours which are limited a mucous membrane shell (T1), that discover in before clinic period at oncological cyclic inspection (tests on the hidden blood or at colonoscopy), life-span is 80-90%. At tumours with metastases in regional lymphatic node life-span makes only 30–45%. Basic factors which influence on the prognosis of surgical treatment of mortality of colon: **поширенність** tumours for the circumferences of intestinal wall, depth of germination, anatomic and histological structure of tumour, region and remote metastatic

COUNT OF LOGICAL STRUCTURE ON THE TOPIC: "Cancer of colon bowel" (FATE).

1. Etiology.

- features of feed;
- viral;

2. Pathological anatomy.

- adenocarcinoma
- highly differentiated;

- hormonal;
- professional factors.

3. Classification.

- clinical;
- on the system of TNM.

4. Forms of growth of tumours.

- Exophytic
- Endophytic
- mixed.

6. Localization of remote metastases.

- liver;
- brain;
- lights;
- metastasis of Virkhova;
- metastasis of Shniclera;
- metastasis of Krukenberga;
- belly-button;
- peritoneum.

8. Treatment.

- surgical;
- x-ray;
- chemotherapy.

- moderately differentiated;
- undifferentiated.
- Colloid cancer;
 - mucus adenocarcinoma
- a cancer is undifferentiated,
- solid cancer,
- skir.

5. Clinical symptoms.

A. Clinical picture of mortality of right half of colon:

- anaemia;
 - Exophytic growth of tumour;
 - its largenesses;
 - nausea;
- admixture of blood are in
incandescence.
malnutrition

B. Clinical picture of mortality of left half of colon:

- narrowing of road clearance of bowel;
- Endophytic form of growth;
- intestinal impassability;
- bleeding.

7. Clinical, laboratory and instrumental methods of research.

- an analysis of excrement is on the hidden blood;
- finger research of rectum;
- rectoscopy;
- irrigoscopy
- colonoscopy
- cancer embryo antigen;
- biopsy of tumour;
- ULTRASONIC RESEARCH;
- KT.

9. Prognosis.

10. Rehabilitation.

11. Prophylaxis.

12. Risk factors.

3.4.MATERIALS FOR SELF-CONTROL

A. Questions for self-control.

1. What anatomy physiology departments does a **ободова** bowel have?
2. What sizes of rectum?
3. **кровопостачання of ободової bowel?**
4. Deliever for bleeding of rectum?
5. Leading lymphatic from a rectum?
6. Clinical forms of cancer of coon bowel?
7. List of necessary inspections at suspicion on the cancer of colon bowel?
8. List of necessary inspections at suspicion on the cancer of rectum?
9. Most frequent histological structure of tumours of anal region?
- 10.Types of surgical interferences as does apply at the tumours of colon bowel?

B. Test for self-control.

1. Symptom complex intestinal impassability is an anchorman at a cancer:
 - 1) blind gut;
 - 2) ascending bowel;
 - 3) rectal ampulla ;
 - 4) left half of colon.
2. Anaemia, a weakness is most characteristic for a cancer:
 - 1) thin bowel
 - 2) sigmoid bowel
 - 3) right half of colon bowel
3. With most frequent is struck by malignant tumours:
 - 1) rectosigmoid department
 - 2) rectal ampulla department
 - 3) anal channel
4. Choose the most frequent combination of complications of cancer of **ободової** bowel:
 - 1) perforation
 - 2) pericolit sharp intestinal impassability
 - 3) bleeding
5. Most index of malignant is had:
 - 1) hyperplastic polypuses
 - 2) villous polypuses
 - 3) adenomatous polypuses
 - 4) plural adenomatous
6. A patient appealed to the doctor with complaints about the selection of blood from a rectum, frequent chair with plenty of mucus. Diagnosis previous and volume of inspection.
 - 1) Cancer of rectum
 - 2) Internal piles
 - 3) villous tumour
 - 4) Dactylar inspection
 - 5) Rectometer
7. The sick is hospitalized in a urgent order in surgical permanent establishment with the phenomena of intestinal impassability. What patients examination needs to be executed for clarification of diagnosis and decision of question about surgical interference
 - 1) In general lines clinical inspections
 - 2) Irrigосkopy

- 3) Surveying sciagraphy of abdominal region
- 4) a) and in)

8. At a patient on time a prophylactic review tumour education is discovered in a stomach not mobile not painfully. What volume of the special inspections of patient.

- 1) rectoscopy
- 2) Irrigoscopy
- 3) Fibrocolonoscopy
- 4) ultrasonic research of abdominal region
- 5) All foregoing

9. A patient appealed to the internist with complaints about a weakness, dizziness. At the inspection in the global analysis of blood the expressed anaemia. About the impression of what department of colon it is possible to think.

- 1) Right half
- 2) Left half
- 3) Sigmoid bowel

10. A patient appealed to the doctor with complaints about a frequent chair (to 10 times per days) with plenty of mucus. Infectious nature of disease is eliminated About the impression of what department of rectum is it possible to think?

- 1) Uper rectal ampulla
- 2) Middle rectal ampulla
- 3) Lower rectal ampulla

B. Problem tasks for self-control.

Task № 1

Before the therapeutic separation of hospital acted sick 55 years with complaints about a general sickness, infirmity, poured stomach-ache out, flatulence. The disease developed gradually during the last 2-3 months. Pale, good well-nourished. Emptying with propensity to constipation, an appetite is mionectic. A stomach is symmetric, smooth 'moderato, sickly in right hypochondrium, a liver not is megascopic. Blood test: Hb-48 g/L., Ep- $2,6 \times 10^{12}/L$, leukocyte $5,3 \times 10^9/\text{л.}$. About what disease is it possible to think? What additional researches does it follow to conduct? With what to differentiate disease?

Task № 2.

To the surgeon appealed sick 30 years with complaints about moderate pain and compression in a right **здухвинний** area. Pain appeared 5 months ago, compression the sick noticed 3 days ago. Skin of the normal colouring, appetite good, emptying in a norm, stomach soft, in a right lower pat abdominis the not mobile compression palpation measure 4x6 sm moderato painfully. Heart and lights without features. Blood test: Hb-74 **г/л.**, leukocytis – $6,0 \times 10^9/\text{л.}$ Previous diagnosis. With what to differentiate? Plan of resaerch.

Task № 3.

The sick 60 years appealed to the internist of doctor with complaints about frequent ones constipation, that change by diarrhea, flatulence, intestinal colic **с**т stomach-ache all. From 30 years suffered by a chronic spastic irritable colon colitis. All these complaints increased lately. Blood test: Eras. – $4,2 \times 10^{12}/\text{л.}$, leukocytis - $7,8 \times 10^9/\text{л.}$ Uralysis in a norm. Diagnosis of doctor: sharpening of chronic spastic colitis. Appointed diet, enema, absorbent carbon. Through 2 months at the repeated research the state of patient does not get better. Conducted of gastroenteric highway, a spastic colitis is set. radioscopy is conducted - the defect of filling concerns in the area of splenic corner. Kidneys in a norm. Diagnosis. Plan of treatment. Defects of inspection.

Task № 4

A patient 43 years acted to the hospital with complaints about the sharp swelling of stomach, delay of excrement and gases, occasional pains especially in the left half of stomach, which give in a lumbar area. Plenty of excrement and gases stepped back after a siphon enema, but pain in the left half of stomach and lumbar area remained. It is known from anamnesis, that a patient used a lot of alcohol, fed irregular, suffers chronic constipation. What diseases does it follow to think about to the doctor? What additional researches need to be conducted for differential diagnostics?

Task № 5

At a patient 70 years, which constipation , swelling of colon suffered long time, sharp intestinal progress impassability . In the urgent surgical separation under the

common anaesthetizing laparotomy is conducted: sweat is not present, exaggerated distant department of thin bowel and especially is colon to the middle department of sigma, where a tumor is 4x5 cm, which fully obturates bowel. The adducting department of colon is exaggerated to 8-12 cm, filled by a liquid excrement, taking department of **сигми** of to 3 cm in thick. What a surgeon must do? Variants.

Task № 6.

A patient 50 years acted urgent to the surgical separation on an occasion sharp large intestine impassability. At laparotomy tumor of caecum department of colon. A adducting department moderato stretched, sweat in an abdominal region is not present. Thick intestines mobile. Diagnosis. What a surgeon must do?

Task № 7.

Patient 60 years on the reception at a doctor complains on constipation admixtures of blood in an excrement. A doctor did not examine a patient, diagnosed: colitis, a piles appointed the reception of extracts of purgative herbares and hip-baths with solution of permanganate to potassium. The state of patient did not become better. In 2 weeks on an occasion bleeding excretions from an anus a patient appealed to the surgeon. At the dactylar inspection it is found out haemorrhoidal knots, and on a glove is excrement with the admixtures of blood. What additional researches does it follow to conduct? Previous diagnosis. Defects of inspection.

Task № 8.

Patient 60 years urgent got to the surgical separation on an occasion intestinal impassability: a stomach is blown away, and in the ampoule of rectum is mucus and blood. On operation: tumour in the rectosigmoid department of bowel which accreted with surrounding fabrics. Sigma sharply stretched an excrement and gases. It is not found out remote metastases. Diagnosis. What a urgent surgeon must do? Plan of subsequent treatment

Task № 9.

Sick 63 years appealed to the surgeon on an occasion the permanent admixtures of blood and mucus in an excrement. A blood with mucus appears before the output of excrement. Emptying with propensity to constipation. At dactylar rectal research found out haemorrhoidal knots which slept, and in transparent rectum is mucus and blood. A stomach is soft, painless. Previous diagnosis. What does it follow to differentiate the disease with? Plan of subsequent inspection

Task № 10.

A patient 52 years appealed to the internist on an occasion excretions of blood during the act of defecation. Other complaints are not present. Noticed the selection about 2 months ago. At first a blood was selected now and then in closing dates constantly. To the patient the conducted rectometer. In the distance 15sm found out a sanguifluous tumour which occupies near the half of neighbourhood of bowel, higher tumours a proctoscope not is conducted through the danger of

bleeding. At a biopsy histological is ferrous crawfish of rectum. A diagnosis is the cancer of rectum. Correctly diagnosed whether? What additional inspections are needed? Plan of treatment.

Standards of answers

№ 1

1. Cancer of colon with disintegration and anaemia.
2. Analysis of excrement on the hidden blood, rectometer, global analysis of urine, irrigoscopy.
3. Cancer of stomach, nephroncus right, chronic colitis cholecystitis .

№ 2

1. Suspicion on the cancer of blind gut.
2. periappendiceal, tumour of right ovary.
3. Review of gynaecologist, uranalysis, excritor pyelography, rectometer, colonoscopy, analysis of excrement on a blood, irrigoscopy, ULTRASONIC RESAERCH of organs of abdominal region.

№ 3

1. Cancer of splenic corner of colon.
2. Left-side hemicolectomy.
3. irrigoscopy, FKS not is conducted in good time

№ 4

1. Cancer of left half of colon, pancreatitis or nephrocolic with the reflex atony of colon, colitis spasm with sharp violation of tone.
2. Uranalysis and blood on an oryzyme, global analysis of urine, irrigoscopy, FKS, pyelography.

№ 5

1. Optimum is operation of Hartman to delete the area of bowel, that carries a tumour, to show out a near end on a front abdominal wall, remot tight to sew.

№ 6

1. Cancer of descending department of colon, complicated by obturation intestinal impassability.
2. Obstructive left-side hemicolectomy (operation as Hartman).

№ 7

1. Rectometer with a biopsy, irrigography, sciagraphy of organs of thorax, ULTRASONIC RESAERCH of organs of abdominal region.
2. Cancer of middle department of rectum.
3. The dactylar and instrumental inspection of rectum is not executed in good time.

№ 8

1. Cancer of department of rectum with complete obturation sigmoidorectal to the intestine. Complication is sharp intestinal impassability.
2. Operation of Hartman, at impossibility is imposition of inseparable bivalve unnatural anus.
3. chemotherapy treatment.

№ 9

1. Cancer of rectum (sigmoidorectal department).
2. Ulcerous colitis, piles, crack of anus.
3. Rectometer, irriography

№ 10

1. More precisely cancer of upper department of rectum of 1st. T2NXMX.
2. Irrigoscopy,
3. Front resection of rectum or abdominal-anal resection of rectum.

4. MATERIALS FOR AUDIENCE INDEPENDENT WORK

4.1. List of educational practical tasks which must be mastered on practical employment.

1. Collection of anamnesis
2. Review and to palpate of patients
3. to palpate of inguinal lymphonoduss
4. Rectal research
5. To know as a rectometer and fibrocolonoscopy is conducted
6. To be able to read sciagrams
7. To work out a plan of treatment of patient with the cancer of colon bowel
8. To work out a plan of treatment of patient with the cancer of rectum

4.2. Professional algorithm in relation to the capture by skills and abilities

Task:

1. To conduct the review of patient with suspicion on the cancer of colon bowel
2. To conduct the review of patient with suspicion on the cancer of rectum

Note: to pay attention to the common state of patient, feature of palpate of stomach, rectal inspection.

3. To take part in the endoscopy inspection of patient (rectometers and fibrocolonoscopy)

Note: to pay attention to the state of mucus, presence and form of tumours educations.

4. To read irrigigram (at the inspection of colon bowel and rectum)

Note: to pay attention to the form of bowels, presence of gaustry, filling by the barium of bowels, evacuation of contrast.