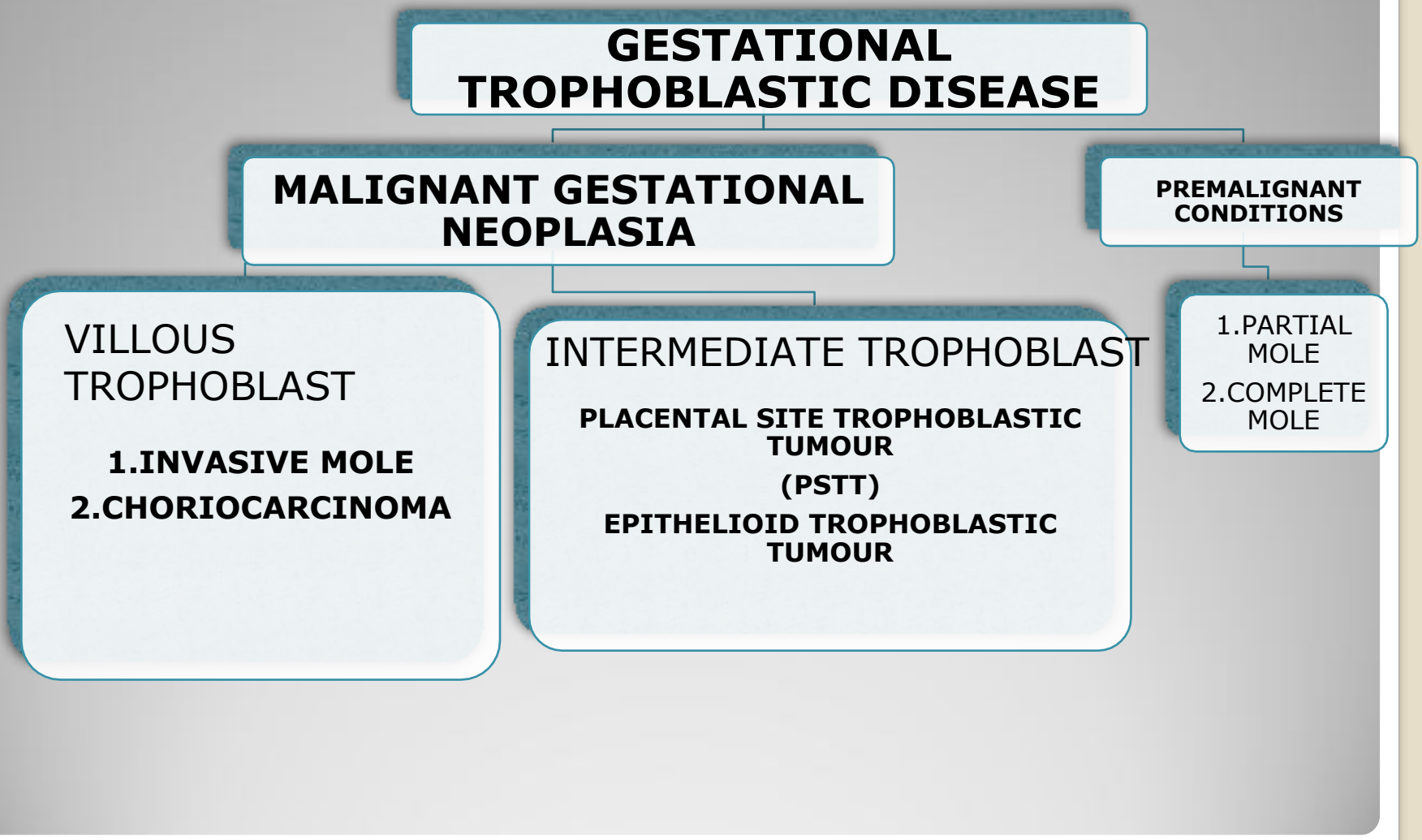
GESTATIONAL TROPHOBLASTIC NEOPLASIA



GESTATIONAL TROPHOBLASTIC NEOPLASIA

#MALIGNANT GESTATIONAL TROPHOBLASTIC DISEASE or PERSISTENT GESTATIONAL TROPHOBLASTIC DISEASE

Incidence is about 1 in 5000 pregnancies in oriental countries

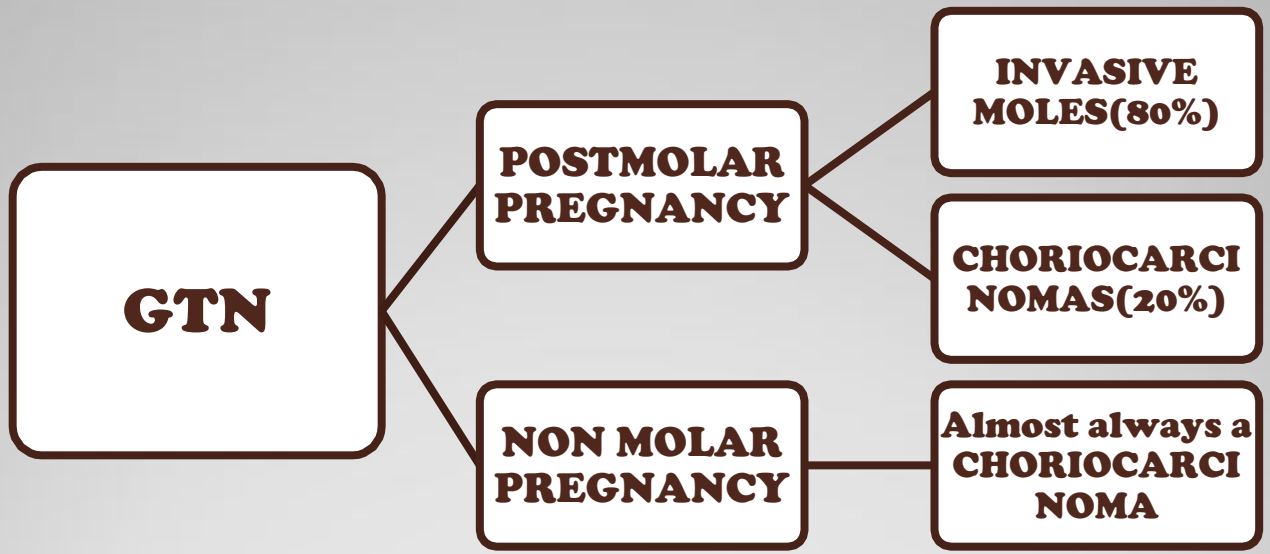
50%-molar pregnancy

25% after abortion and ectopic pregnancy and a few after normal pregnancy

Non metastatic (locally invasive}lesions -15%

Metastatic lesions -4% after molar evacuation

GTN can follow a molar pregnancy or normal pregnancy , abortion or ectopic



Non molar trophoblastic neoplasms include mainly CHORIOCARCINOMA Placental site trophoblastic tumor, and epithelioid trophoblastic tumor also occur rarely. These three are differentiated by the type of trophoblast they contain.

PERSISTENT GESTATIONAL TROPHOBLASTIC NEOPLASIA

Persistent GTN is evidenced by the persistance of trophoblastic activity following evacuation of molar pregnancy

IT IS CLINICALLY DIAGNOSED IF THE PATIENT PRESENTS WITH

1. • IRREGULAR VAGINAL BLEEDING
   • SUBINVOLUTION OF UTERUS
2. • PERSISTANCE OF THECA LUTEIN CYSTS
3. • LEVEL OF Hcg PLATEAUS OR
   • RE ELEVATES AFTER AN INITIAL FALL

DIAGNOSIS OF POSTMOLAR GTN

When the hCG level plateaus for 3 or more consecutive weeks or re elevates

After molar evacuation beta Hcg become normal in about 7-9 weeks.

GTN may present with irregular bleeding or even non gynaechological symptoms and signs.

GTN should be suspected in a women of reproductive age group presenting with metastatic disease from an unknown primary

INVASIVE MOLE

- These are the most common trophoblastic neoplasms that follow hydatidiform moles
- Almost all invasive moles arise from partial or complete.
- Although locally aggressive invasive moles are less prone to metastasis.

CHORIADENOMA DESTRUENS

EXTENSIVE TISSUE INVASION BY TROPHOBLAST AND WHOLE VILLI

PENETRATION IS DEEP INTO MYOMETRIUMSOMETIMES WITH THE INVOLVMENT OF THE PERITONEUM ADJACENT PARAMETRIUM OR VAGINAL VAULT.

DIAGNOSIS

ON LAPROTOMY :

***PERFORATION OF UTERUS THROUGH WHICH PURPLE FUNGATING GROWTH IS VISIBLE**

***HEMOPERITONEUM**

HISTOLOGY

***THERE IS PENETRATION OF THE UTERINE WALL BY THE HYPERPLASTIC TROPHOBLASTIC CELLS WHICH STILL RETAIN VILLOUS STRUCTURES.**

***NO EVIDENCE OF MUSCLE NECROSIS**

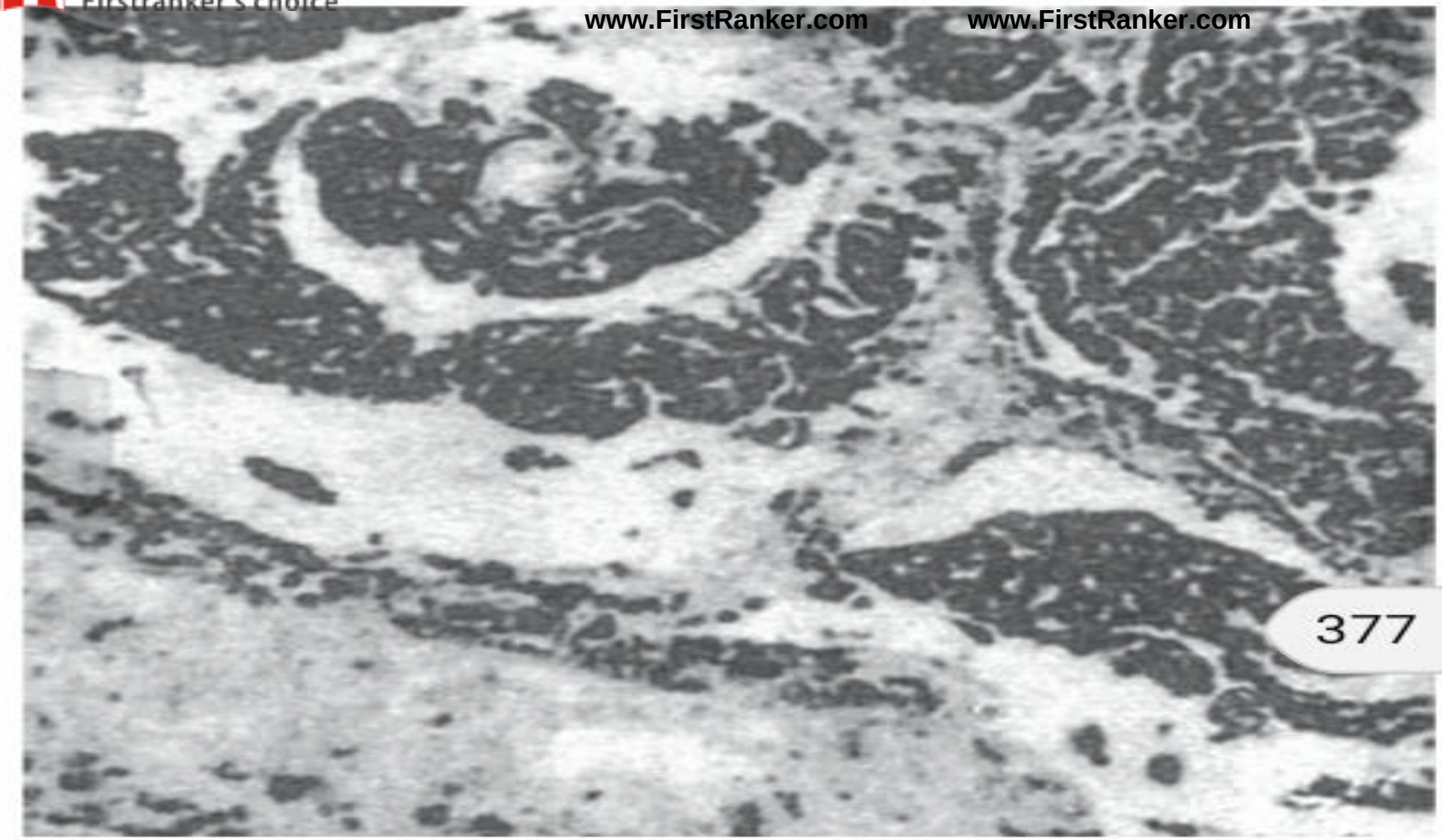


Fig. 23.12: Histological section of invasive mole showing structures of villi with marked trophoblastic proliferation deep in myometrium

CHORIOCARCINOMA

Carcinoma of the CHORIONIC EPITHELIUM

Follows term pregnancy or miscarriage.

Only third of cases follow a molar gestation

Choriocarcinoma are commonly accompanied by ovarian theca-lutein cysts.

PATHOLOGY

- PRIMARY SITE ANYWHERE IN UTERUS
- RARLEY- IN OVARY OR TUBE

MORPHOLOGY

GROSS

*Dark red or purple

*Involve the endometrium and extend outwards through myometrium to the serosa and blood vessels creating hemorrhage and necrosis

MICROSCOPY

. Choriocarcinoma is composed of cells reminiscent of early cytotrophoblast and syncytiotrophoblast with hemorrhage and necrosis, however, it contains no villi.

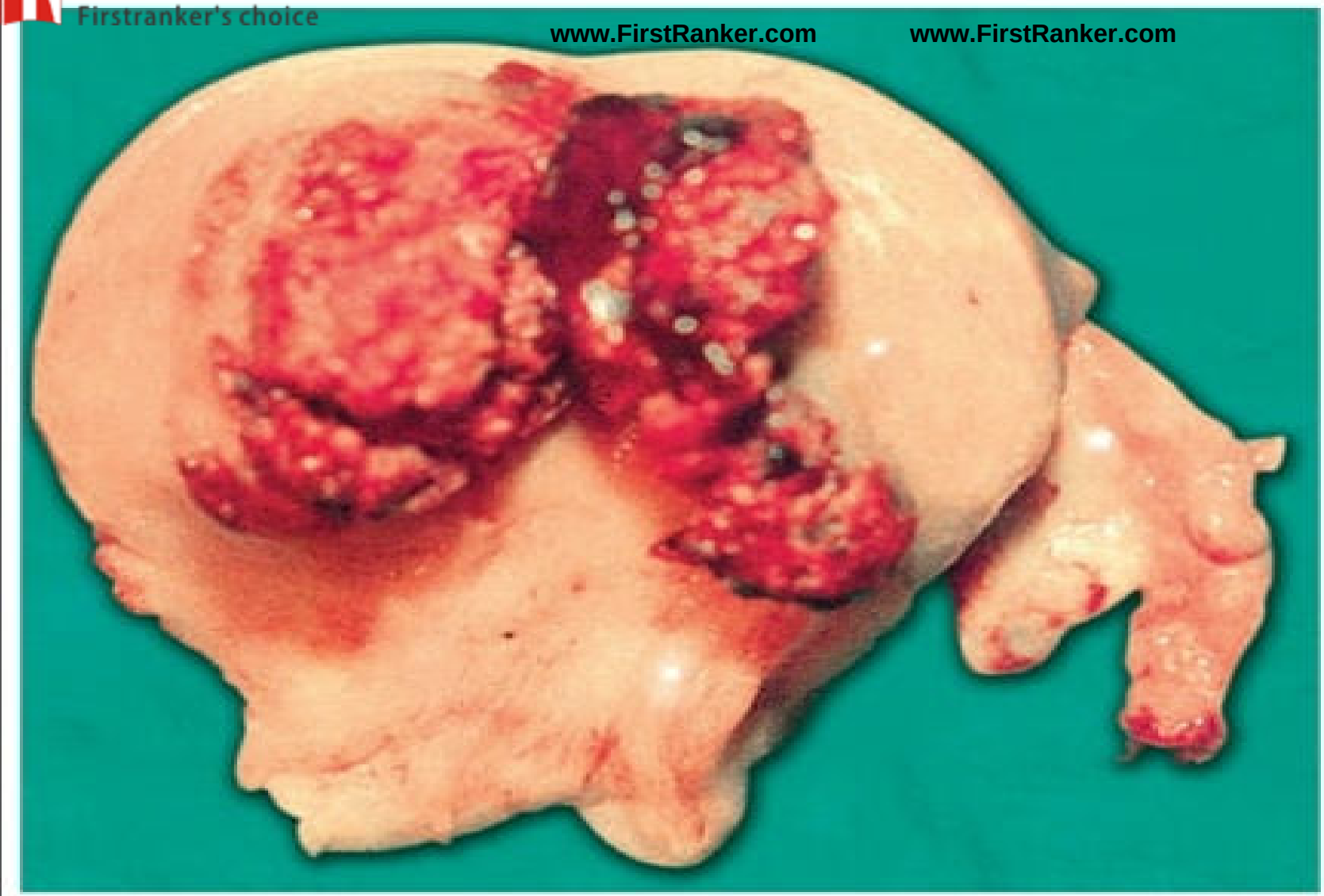


Fig. 23.14: Choriocarcinoma of diffuse type

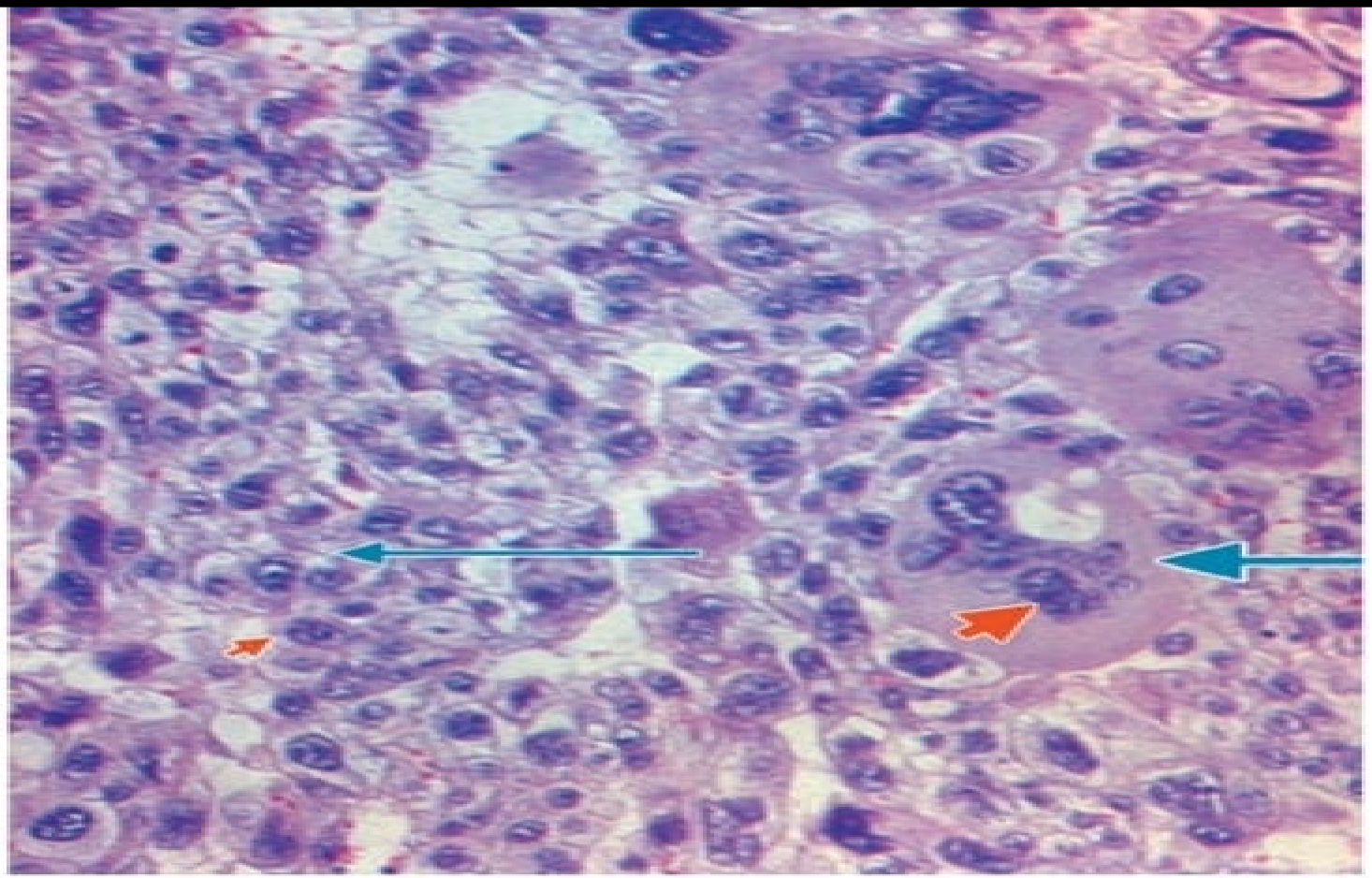


Fig. 23.15: Histologic picture of choriocarcinoma. The cytotrophoblast cells are well-defined with clear cytoplasm (thin arrow). The syncytiotrophoblast cells are arranged in sheets of multi-nucleated cytoplasm

THE CHARACTERISTIC DIFFERENCE FROM HYDATIDIFORM MOLE IS THE ABSENCE OF A VILLOUS PATTERN

THERE WILL BE MARKED ELEVATON OF SERUM BETA HCG

OBVARIAN ENLARGMENT

BILATRAL LUTEIN CYST ARE PREENT IN ABOUT 30 PERCENT

DUE TO EXCESSIVE PRODUCTIO OF CHORIONIC GONADOTROPHIN

PATIENT PROFILE

- HISTORY OF MOLAR PREGNANCY/TERM PREGNANCY/ABORTION/ECTOPIC PREGNANCY

Abnormal uterine bleeding ,Persistent ill health

Symptoms pertaining to metastasis elsewhere

1.Hemoptysis (lung-75%)

2.Features of Intra cranial space occupying lesion-headache ,convulsion .coma

3.Vaginal metastasis (50%)

4.Metastasis also occur to

Vulva-irregular and at times brisk hemorrhage

Liver –epigastric pain,jaundice

Signs- patient looks ill ,pallor of varying degree

DIAGNOSIS

BIMANUAL EXAMINATION

SUBINVOLUTION OF UTERUS

PURPLISH RED NODULES IN THE LOWER THIRD OF ANTERIOR VAGINAL WALL

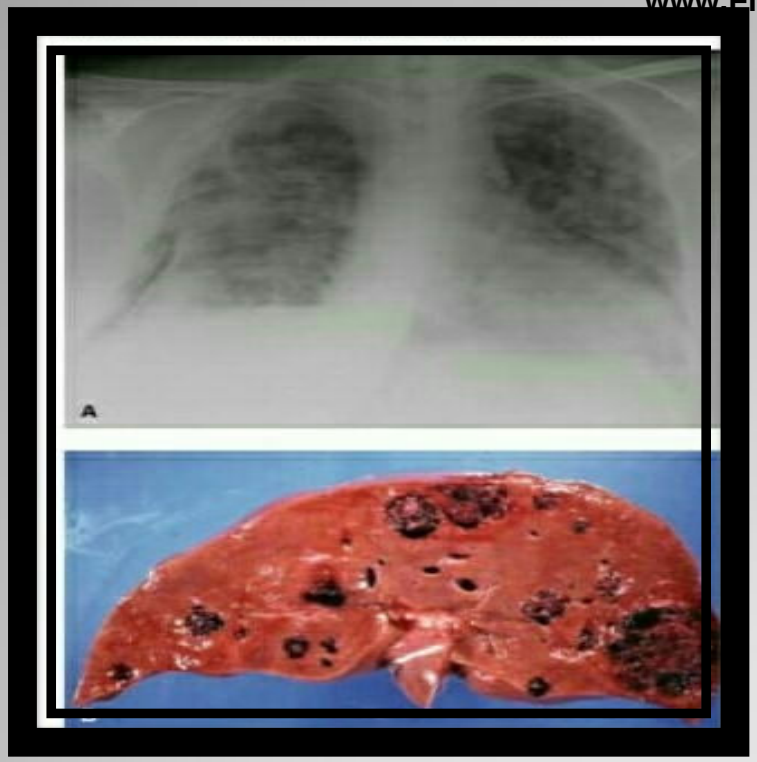
1.CHEST XRAY

2.PELVIC SONOGRAPHY(to differentiate from normal pregnancy

3.DIAGNOSTIC UTERINE CURETTAGE

4EXCISION BIOPSY OF VAGINAL NODULES

5.CT SCAN OR MRI OF BRAINL,LIVER



Histopathological diagnosis on doing curettage for irregular bleeding.
Rapidly increasing levels of serum beta hcg.

1.Chest x ray showing widespread metastatic lesions
2.Autopsy specimen with multiple hemorragic hepatic metastasis

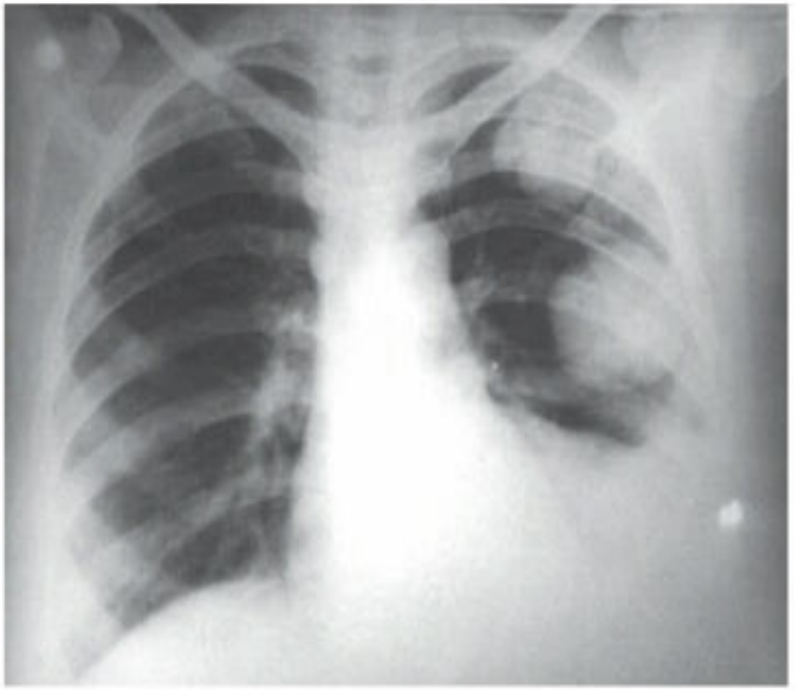


Fig. 23.17: Cannon ball shadow in the left apical and mid region of the lung with pleural effusion in choriocarcinoma [*By courtesy* — Eden Hospital, MCH, Kolkata]

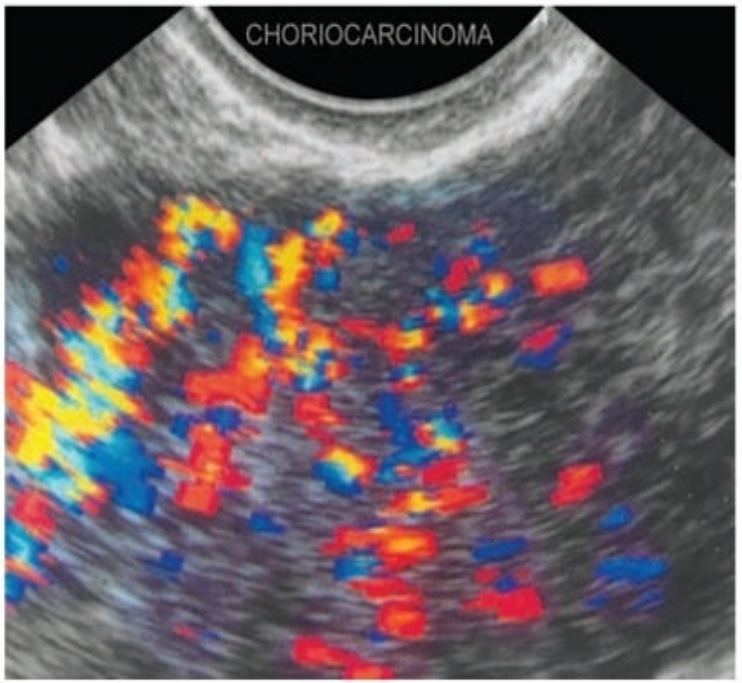


FIg. 23.13: Transvaginal color Doppler scan of chorio-carcinoma showing randomly dispersed vessels

PLACENTAL SITE TROPHOBLASTIC TUMOUR

*arise from INTERMEDIATE TROPHOBLAST at placental site.

*serum β-hCG levels that may be only modestly elevated.

*they produce variant forms of hCG, and identification of a high proportion of free β-hCG is considered diagnostic

Incidence- <1% of patients with GTN

15-20% OF PATIENTS DEVELOP METASTASIS

COMPOSED MAINLY OF **CYTOTROPHOBLASTIC ELEMENTS**

HPL IS SECRETED AND IS MONITORED DURING FOLLOW UP.
HPL IS USEFULL FOR IMMUNOHISTOCHEMICAL STUDIES FOR CONFIRMING THE DIAGNOSIS

*TREATMENT by hystrectomy is preferred.
(locally invasive tumours are ressistant to hystrectomy)

*For higher risk stage 1 and later stages,adjuvant multidrug chemotherapy is given.

EPITHELIOID TROPHOBLASTIC TUMOUR

*Arise from **chorionic-type intermediate trophoblast**

***The uterus is the main site of involvement**

***bleeding and low hCG levels are typical findings**

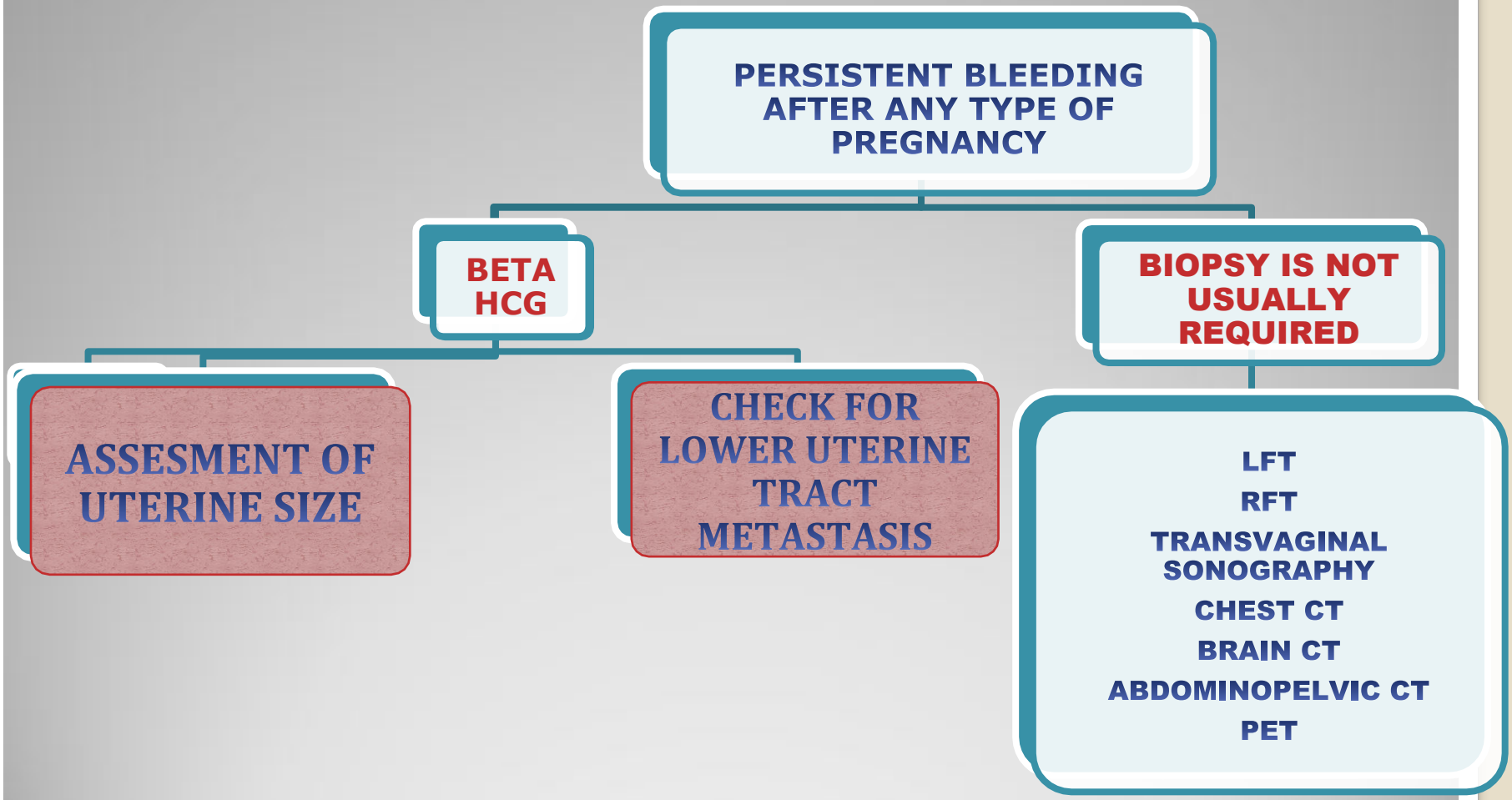
- Primary treatment is hysterectomy because this tumor is relatively resistant to chemotherapy.
- Metastatic disease is common, and combination chemotherapy is employed

CRITERIA FOR DIAGNOSIS OF GESTATIONAL TROPHOBLASTIC NEOPLASIA

- Plateau of serum beta hcg level(+_10%)for four measurements during a period of 3 weeks or longer days 1,7,14,21
- Histological criteria for choriocarcinoma

- Rise of serum beta hcg level>10 percent during a period of 3 weekly consecutive measurements during a period of 2 weeks or more days 1,7,14

- Serum beta hcg level remains detectable for 6 months or more



MODIFIED WHO PROGNOSTIC SCORING SYSTEM

SCORE	0	1	2	4
AGE	<40	> or =to 40	-	-
ANTICEDENT PREGNANCY	MOLE	Abortion	Term	-
Interval after index pregnancy(mo)	<4	4-6	7-12	>12
Pretreatment serum beta hcg(mIU /mL)	<1000	1000-10,000	10000-100000	>or =to100000
Largest tumor size(including uterus)	<3cm	3-4cm	>or=5 cm	-
Site of metastasis	-	Spleen, kidney	GI	Liver, brain
Number of metastasis	-	1-4	5-8	8
~~Previous failed~~ chemotherapy drugs	-	-	~~1~~	~~> or=2~~

INTERNATIONAL FEDERATION OF GYNEACOLOGY AND OBSTETRICS STAGING AND DIAGNOSTIC SCORING SYSTEM FOR METASTATIC TUMOURS

STAGE 1	DISEASE CONFINED TO THE UTERUS
STAGE 2	GTN EXTENDS OUTSIDE THE UTERUS BUT LIMITED TO THE GENITAL STRUCTURES (ADENEXA,VAGINA,BROAD LIGAMENT)
STAGE 3	GTN EXTENDS TO THE LUNGS WITH OR WITHOUT GENITALTRACT INVOLVMENT
STAGE 4	ALL OTHER METASTATIC SITES

FIGO 2009-CLINICAL DIAGNOSIS

THANK YOU