
بسم الله الرحمن الرحيم

Epidemiology Of Hepatocellularcarcinoma

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HEPATOCELLULAR CARCINOMA

Epidemiology: -

Hepatocellular carcinoma is one of the most common malignant tumors found throughout the world.

Etiology: -

The two main etiological factors for HCC are cirrhosis and viral hepatitis.

HEPATOCELLULAR CARCINOMA

- **HCC accounts for 90% of all primary liver malignancy and its incidence is rising.**
- **It is the fifth most common neoplasm, accounting for more than 5% of all capcers, and is also the third most common cause of cancer-related death**

Incidence of HCC

- One of the most important epidemiological characteristics of HCC is its considerable **geographical variation.**
- The second epidemiological characteristic of HCC **its rising incidence**

HCC worldwide

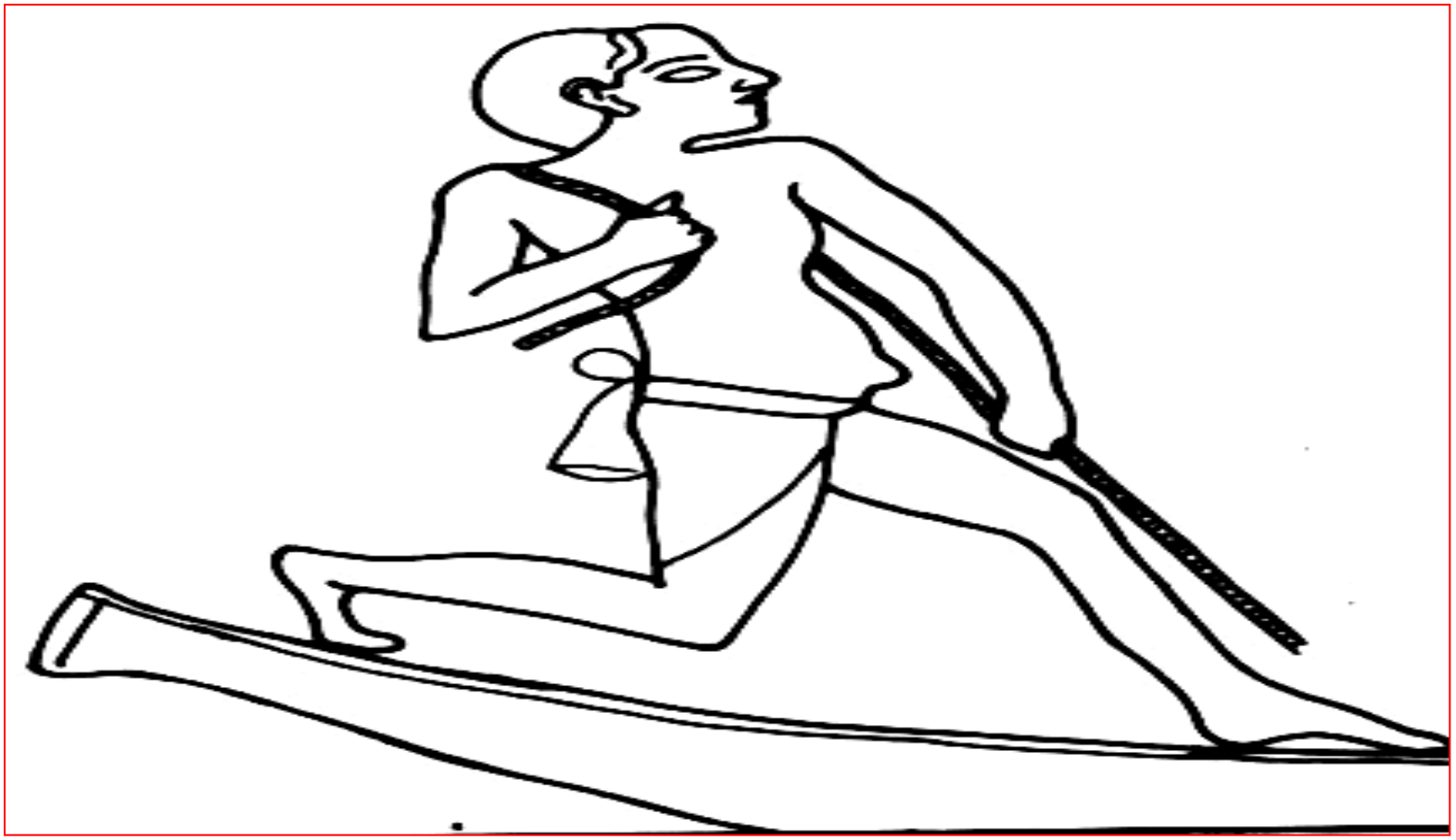
Worldwide

- 100 million cases
- 1.2 million case/yr
- 1 million deaths/yr
- 5th commonest cancer worldwide
- 3rd leading cause of cancer-related death

IN Egypt During the last 30 Years the incidence of HCC increased dramatically mainly due to change of liver pathology from bilharzias liver (not precancerous) to post viral cirrhosis or other factors

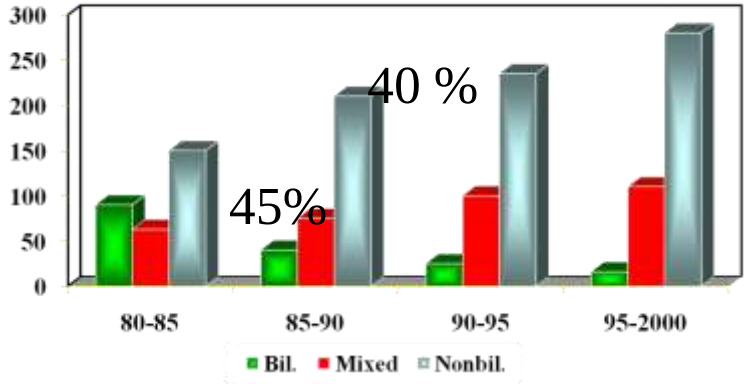
IN EGYPT

- **Incidence of HCV → > 5 %**
- **Liver pathology (form bilharzial to post HCV)**
- **Incidence of HCC↑**



Abdominal distension and umbilical hernia in boatman ptah-Hetep's tomb , Saqqara.

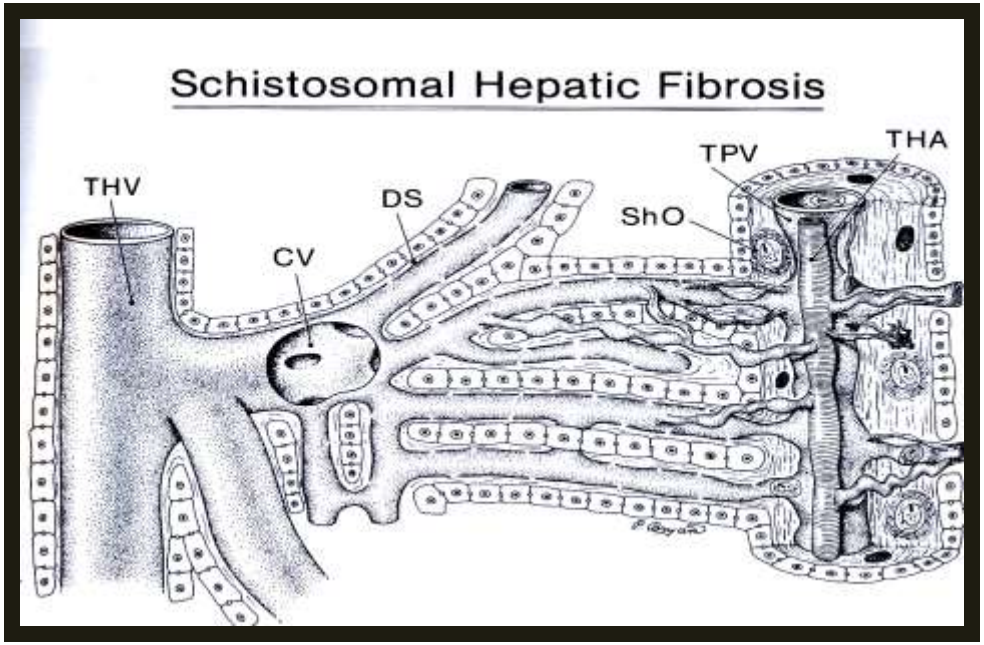
Evolution in liver pathology, last 30 years (1500 patients with portal hypertension)

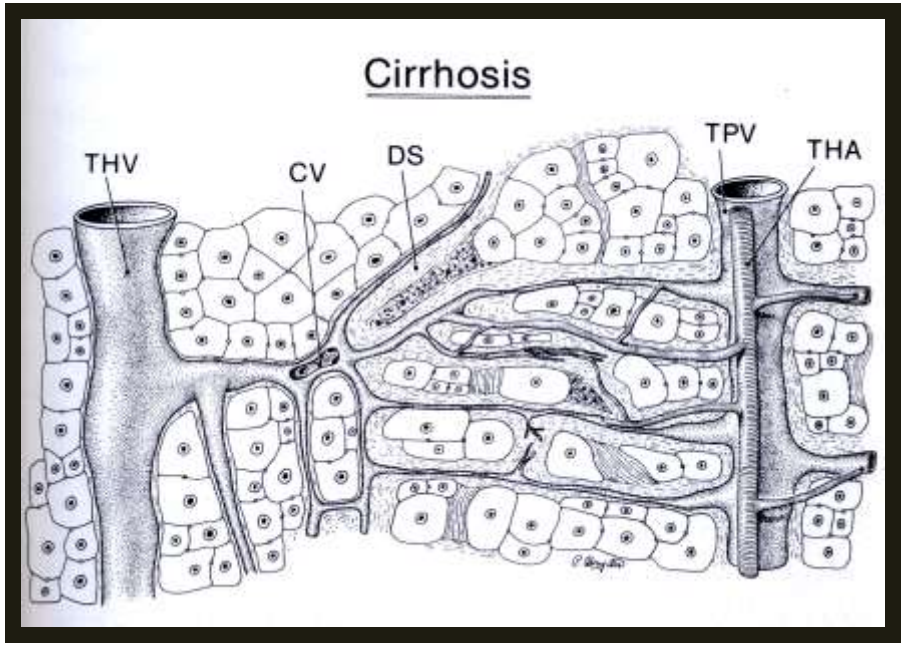


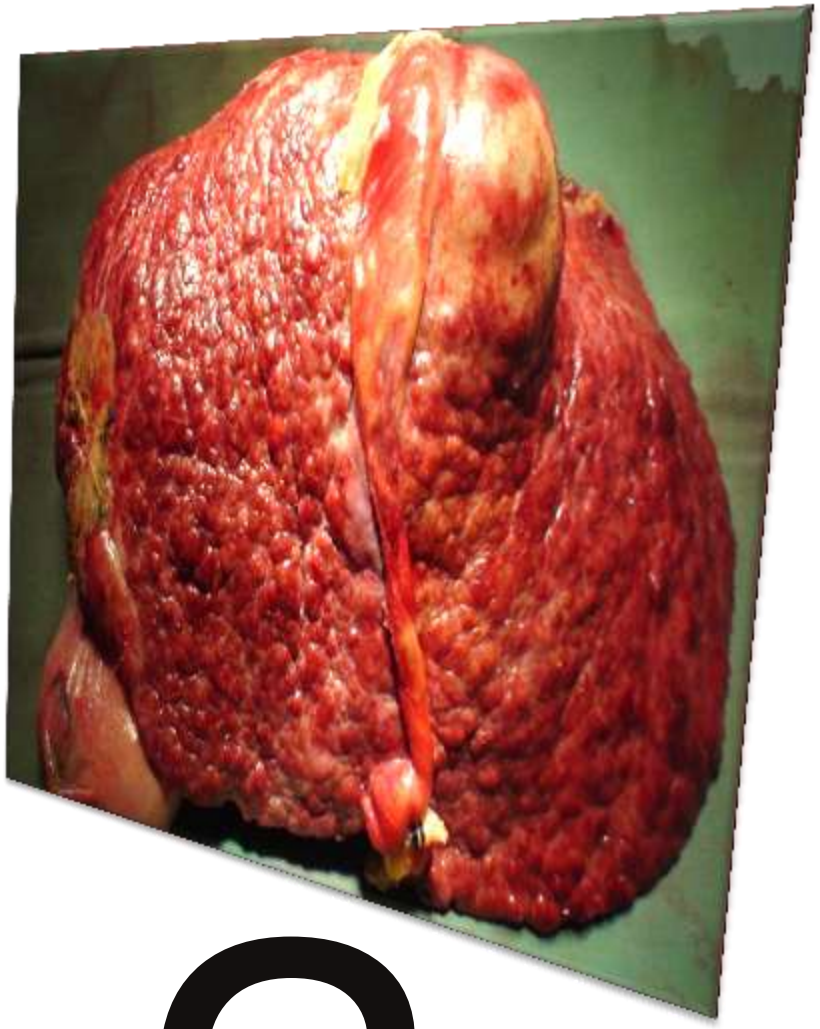
1980 --- 2000

45 % → 4 %

40 % → 75 %







Anti viral
Anti Bilharzial ?

Gastro Enterology Center
Gastro intestinal Malignancy (1986– 1994)

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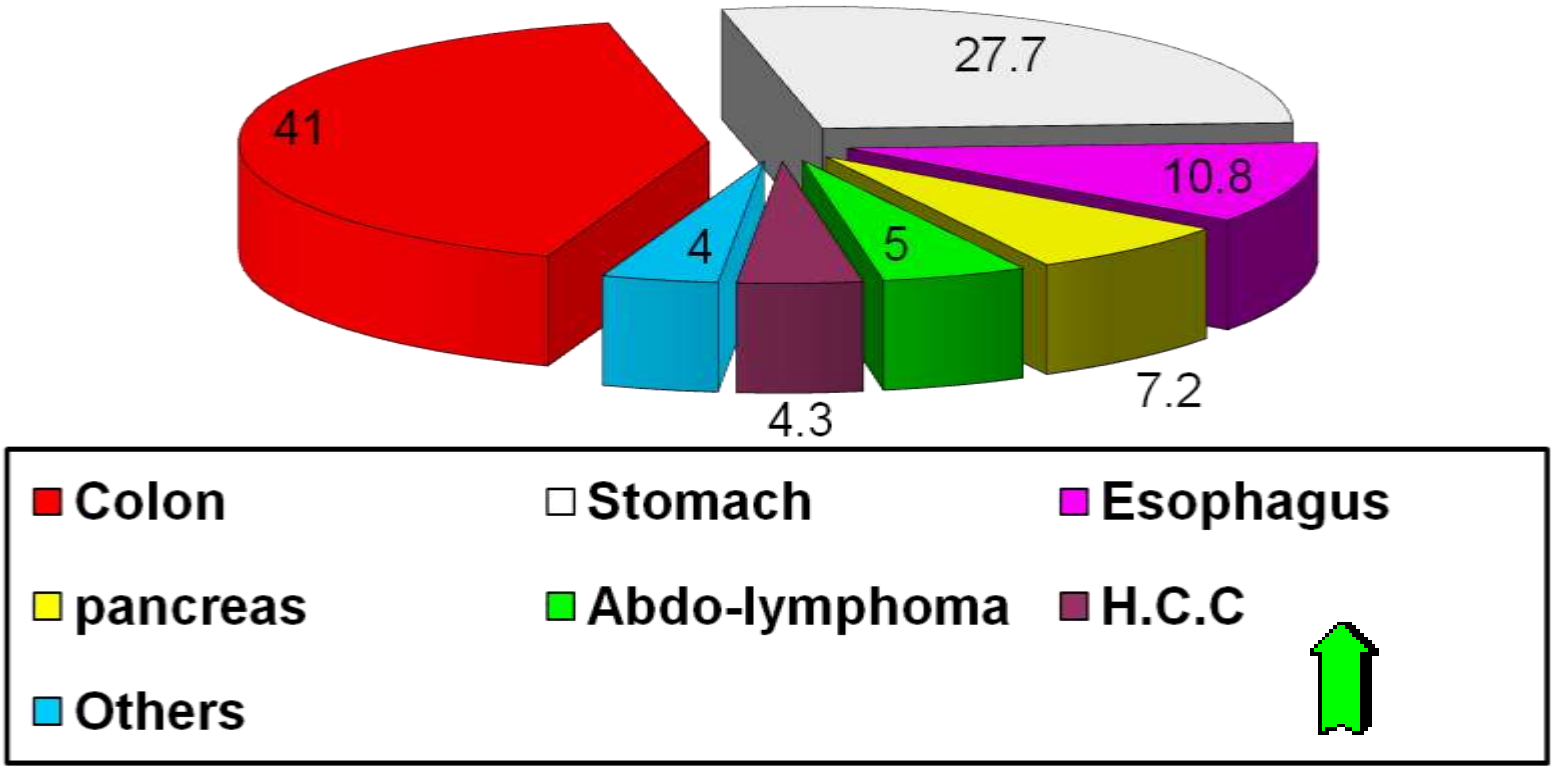
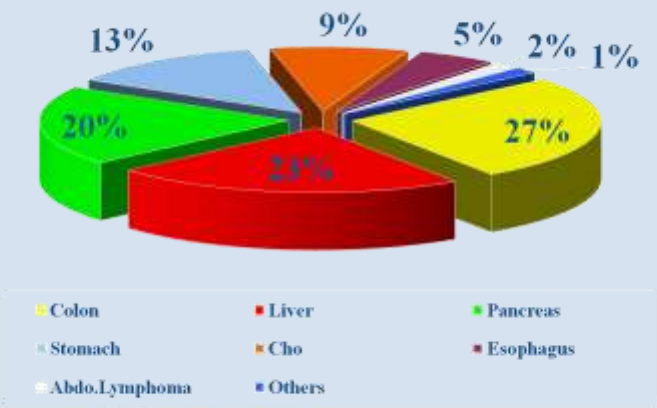


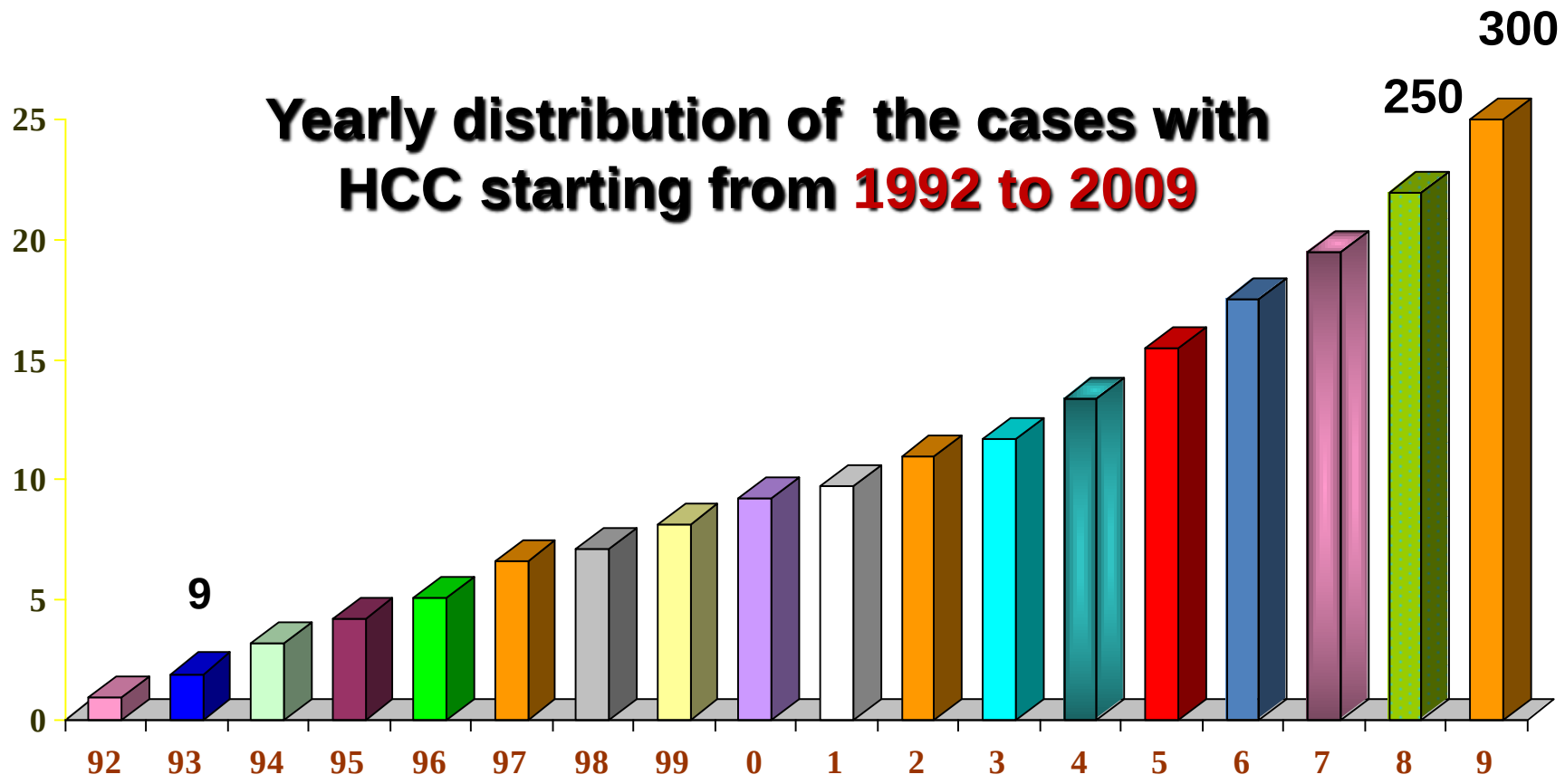
Gastro Enterology Center
Gastro. intestinal Malignancy (1994 – 2009)

		%
1.	Colon	26.7
2.	HCC	23.8
3.	Pancreas	20
4.	Stomach	13
5.	Cholangiocarcinoma	9
6.	Esophagus	5.1
7.	Abdo . Lymphoma.	1.7
8.	Others	1.5

Gastro Enterology Center
Gastro intestinal Malignancy (1994 – 2009)



Date at diagnosis HCC

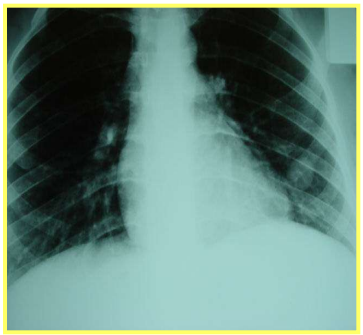





HEPATOCELLULAR CARCINOMA

1000 Case






Age

Age range	HCC 1000		CCC 440	
	NO	%	NO	%
20:30 years	8	.8	9	2
31:40 years	39	3.9	35	8
41:50 years	235	23.2	52	12
51:60 years	398	39.3	180	41
61:70 years	290	28.7	140	30
71:80 years	37	3.7	22	5
> 81years	5	0.5	9	2

SEX

Sex	HCC 1000	
	NO	%
Male	848	83
Female	164	17

RESIDENCE

	HCC 1000	
	NO	%
Rural	779	77
Urban	221	23

RESIDENCE

Governments	HCC 1000	
	NO	%
Dakhlia	639	63
Port Said	26	2.6
Dematt	122	12.2
Kafer El-Shech	71	7.1
Gharbia	79	7.9
Sharkia	21	2.1
Menophya	5	.5
Upper Egypt	4	.4

OCCUPATION

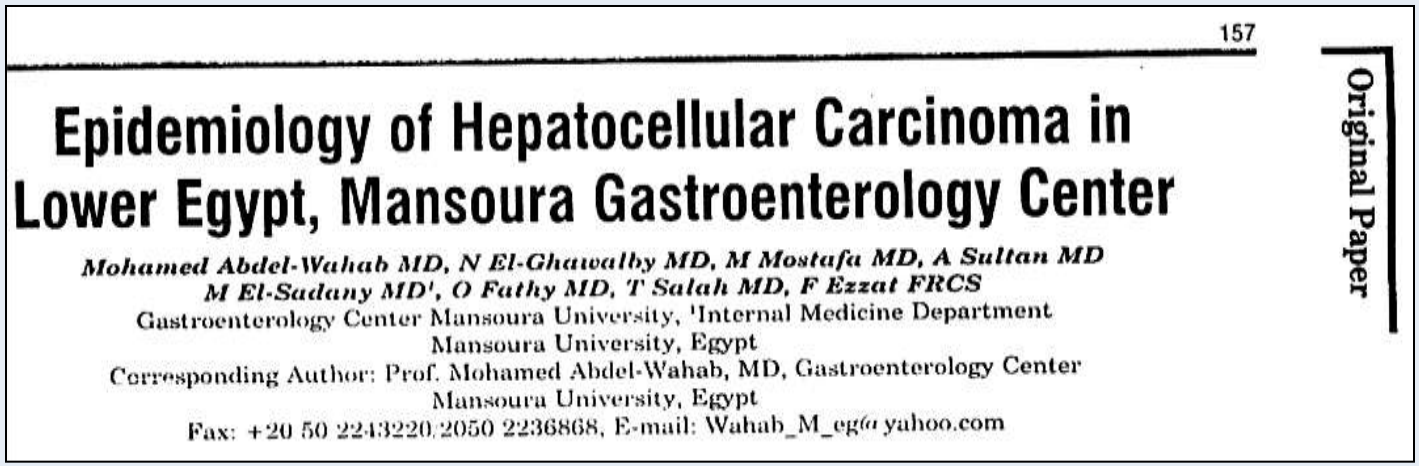
Occupation	HCC 1000	
	NO	%
Farmer	381	37
Worker	232	22
Phystion or medical	44	4.3
Accouter	47	4.6
Lowyer	21	2.1
Teacher	53	5.2
Housewife	130	12.8
Others	104	10.3

Risk factors of HCC

- Cirrhosis
- HCV infection
- Aflatoxin
- Environmental factors
  - HBV infection
  - Other viral infections
  - Alcohol
  - Non–alcoholic fatty liver disease (nafld)
  - Metabolic liver disease and HCC
  - Adenoma, contraceptives

Viral markers study in HCC patients

HCV		%
•Positive	806	79.6
•Negative	206	20.4
•HCV and HBs	36	3.6
HBs		
•Negative	942	93.1
•Positive	70	6.9
•HCV and HBs	36	3.6



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Original Paper

Epidemiology of Hepatocellular Carcinoma in Lower Egypt, Mansoura Gastroenterology Center

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Title: Aflatoxins as a risk factor for Hepatocellular Carcinoma in Egypt, Mansoura Gastroenterology Center study.

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Demographic Data of HCC patients and control (Aflatoxins)

	Patients N=80	Control N=20	
Mean age/years	52.88 ±7.27	53.17 ±6.78	P>0.05
Sex Male n (%) Female n(%)	66(82.5) 14(17.5)	17(85) 3(15)	P>0.05
Serum albumin gm/dl	3.35 ±0.66	4.2 ±0.34	P<0.0001
Prothrombin concentration %	70.45±19.93	95.8 ±2.4	P<0.0001
HCV n(%)	56(70)	0	P<0.0001
HBs n(%)	8(10)	0	P<0.0001
SGPT IU/ml	62.95±38.45	24±6.2	P<0.0001
SGOT IU/ml	75.18±43.4	21±5.4	P<0.0001
Serum bilirubin mg/dl	1.67 ±0.9	1.67 ±0.9	P<0.0001
Alpha feto protein ng/ml	167.28±268.1	0.7±0.2	P<0.001
Serum Aflatoxin B1 ng/ml	32.47±92.46	7.33±5.5	P<0.0001

Demographic Data of HCC patients and control (Aflatoxins)

	No	(%)	Aflatoxins ng/ml	P
Age groups(years)				
40-49	٢٤	٣٠.٠	١٤.٣٣٣٣	**P<0.001**
50-59	٣٨	٤٧.٥	*52.0421	
60-69	١٦	٢٠.٠	١٦.٣٥٠٠	
>70	٢	٢.٥	٧.٤٠٠٠	
Sex				
Male	٦٦	٨٢.٥	*35.5970	**P<0.05**
Female	١٤	١٧.٥	١٧.٧٥٧١	
Residence				
Rural	٦٢	٧٧.٥	*38.4839	**P<0.05**
Urban	١٨	٢٢.٥	١١.٧٧٧٨	
Governments				
Dakahlia	٤٨	٦٠.٠	٢٠.٤٠٤٢	**P<0.01**
Port Said	٦	٧.٥	١٣.٠٦٦٧	
Dematt	٨	١٠.٠	١٢.٧٠٠٠	
Kafer El-Shech	٨	١٠.٠	*162.2000	
Gharbia	١٠	١٢.٥	١٤.١٠٠٠	

Demographic Data of HCC patients and control(Aflatoxins)

Occupation	No	(%)	Aflatoxins ng/ml	P
Farmer	٢٨	٣٥.٠	*64.0714	P<0.05
Accountant	١٤	١٧.٥	٢٠.١٢٠٠	
Worker	١٠	١٢.٥	١٧.٧٢٠٠	
Teacher	١٠	١٢.٥	١٤.٨٠٠٠	
Medical	٤	٥.٠	١٢.٥٠٠٠	
Lawyer	٤	٥.٠	١١.٣٨٥٧	
Housewives	٤	٥.٠	١١.٥٠٠٠	
Others	٦	٧.٥	١٨.٥٠٠٠	

Conclusion

Aflatoxin B1 may play important role in occurrence of HCC in north Nile delta area specially in males, farmers, rural residence, HCV infection, cirrhotic liver and multi focal hepatoma patients. Aflatoxin B1 in high concentration associated with affection of hepatic parenchyma and can induce multi focal lesion.

Environmental factors


10 17:34


حيوان نافق على بعد امتار من
احدى محطات مياه الشرب
11 17:14

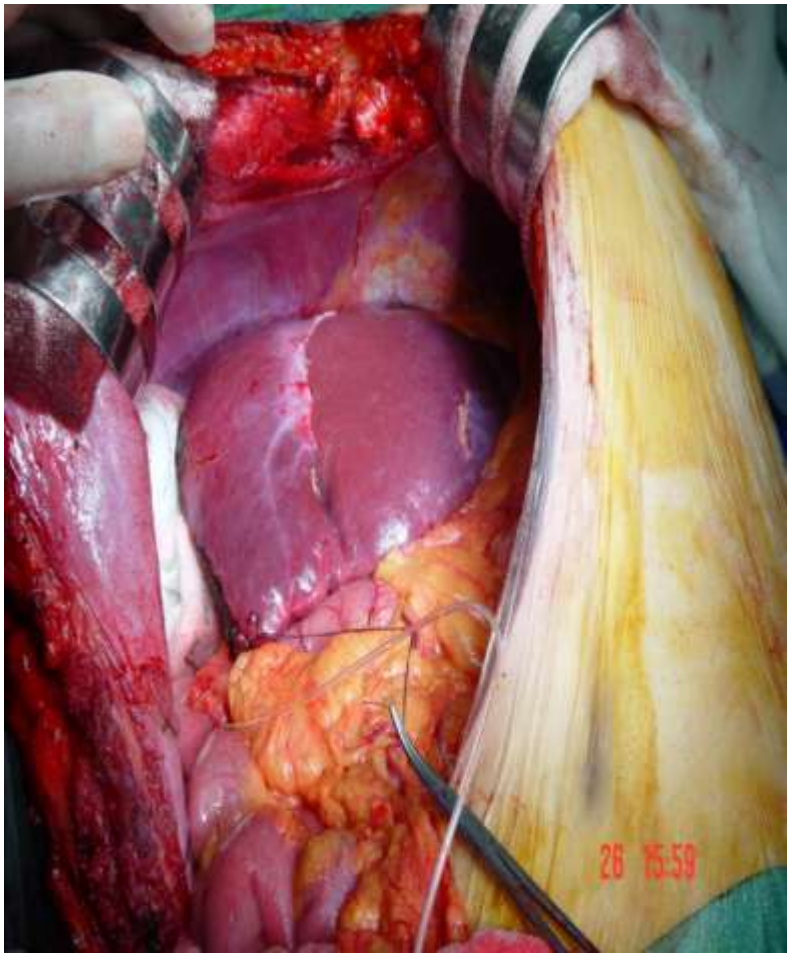
امام المدخل الرئيسى لإحدى محطات مياه الشرب


11 14:35

مجرى مائى ملوث ومستنقع للقاذورات بين المساكن

خبز + الاتربه + عوادم
السيارات = ؟؟؟؟؟؟


Result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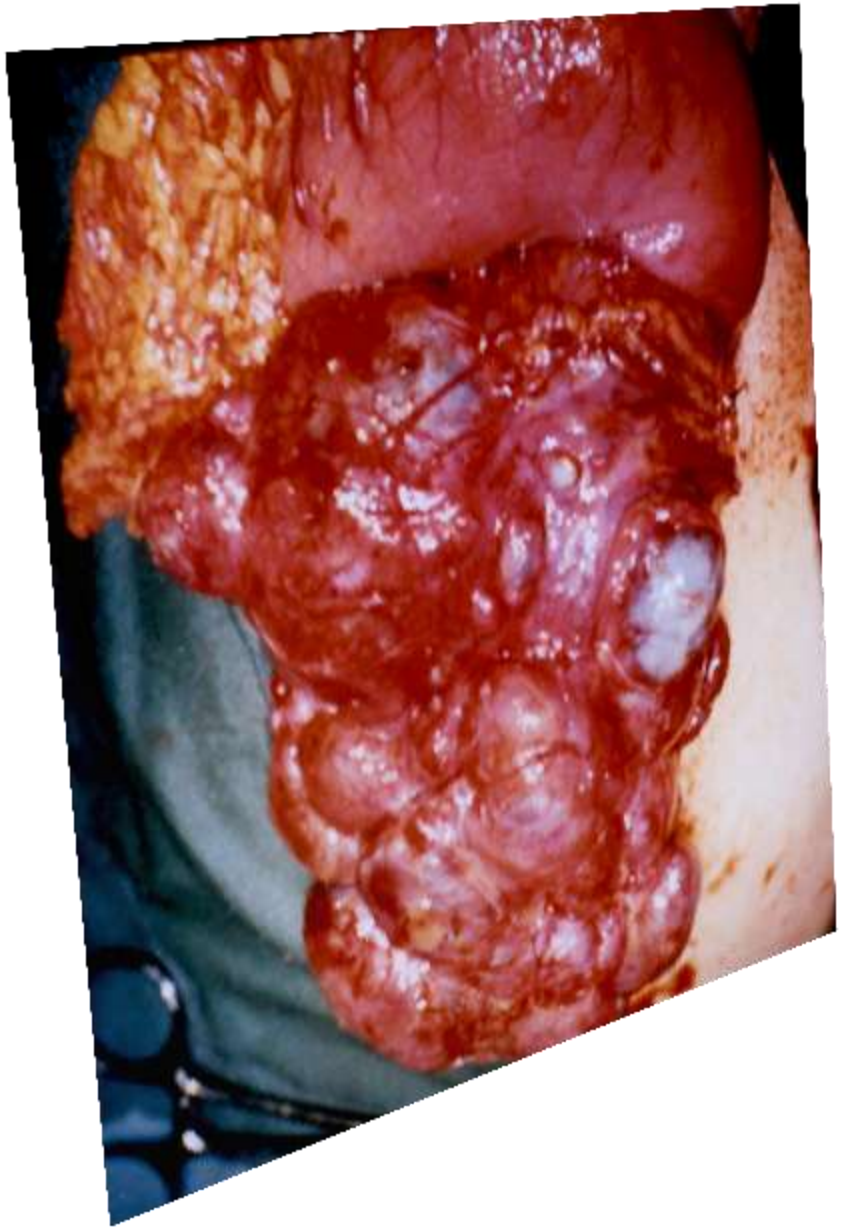
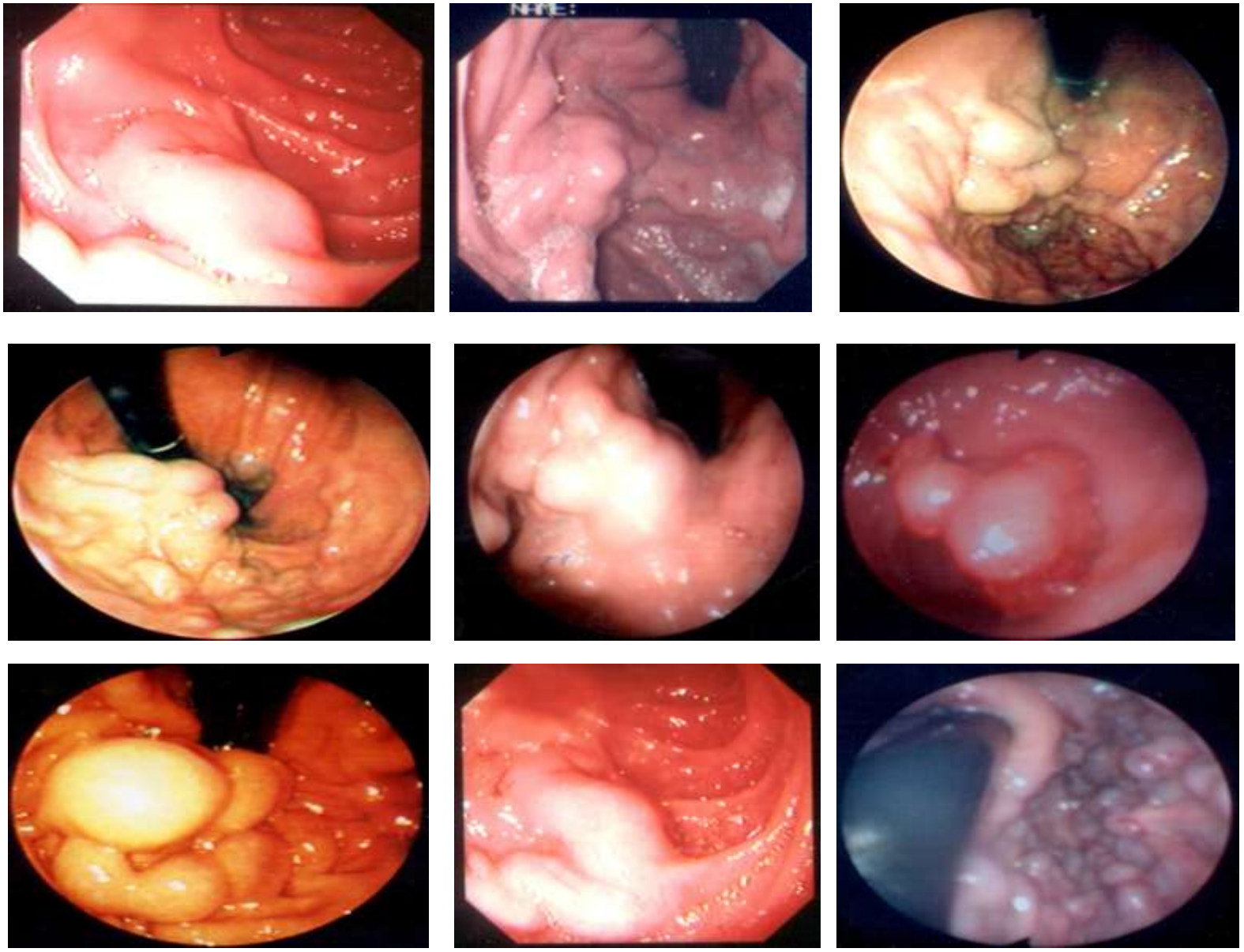
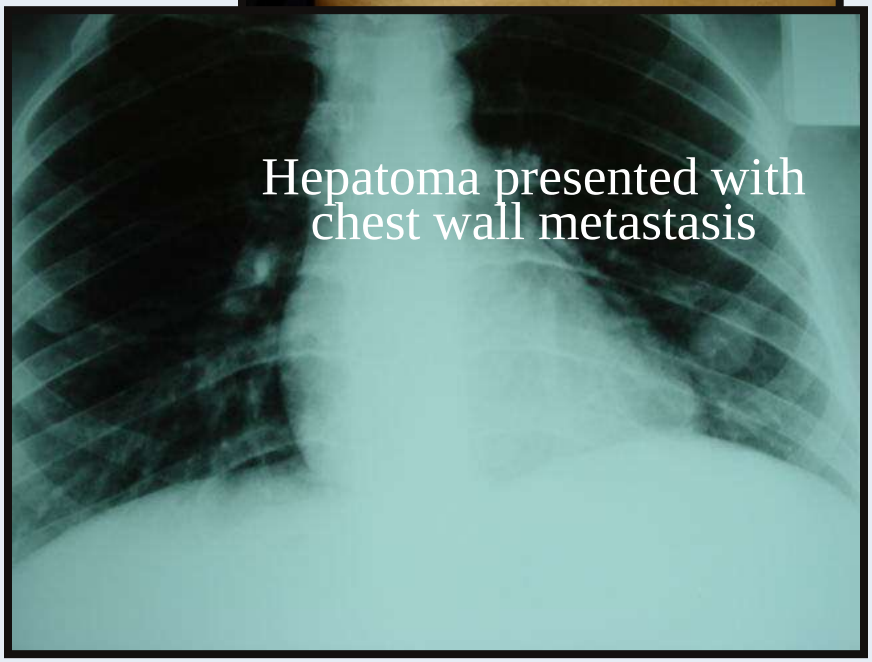




HCC WITH METASTASIS

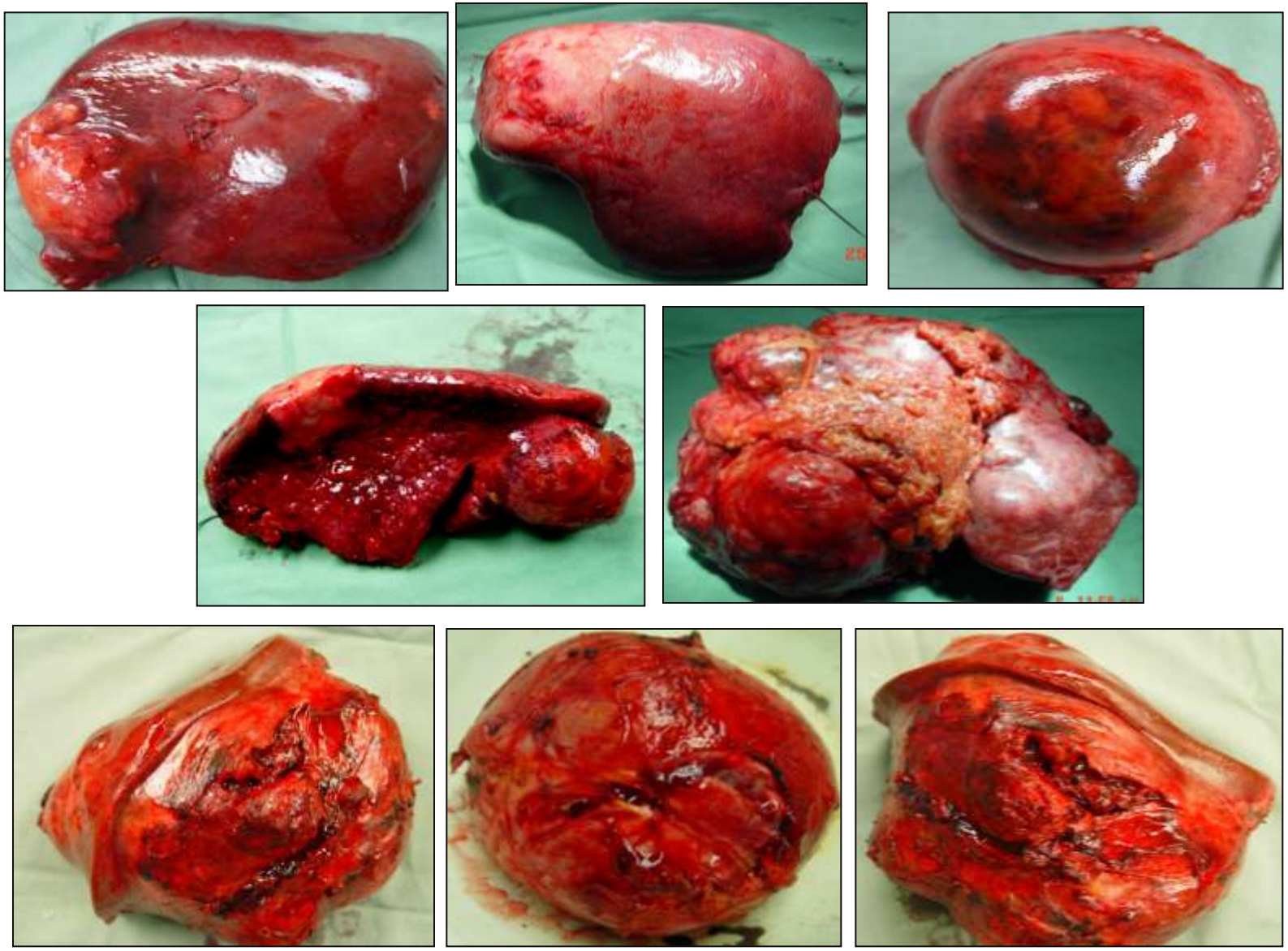


Hepatoma presented with chest wall metastasis

Hepatoma presented with umbilical nodule

X ray chest of patient with Hepatoma presented with pulmonary metastasis

PANORAMA OF DIFFERENT SURGICAL SPECIMEN OF HEPATOMA



HISTROY (RISK)

Symptoms	HCC 1000	
	NO	%
HCV	800	80
HBS	70	7
TYPHOID	?	?
GOLL STONES	50	5
DIABETES M.	137	13
BILHARZIASIS	380	38

CLINICAL PRESENTATION

Symptoms	HCC 1000	
	NO	%
Accidentally	89	8.8
Pain	793	7.8
Jaundice	34	3.4
Mass	72	7.1
Bleeding	56	5.5
Others	24	2.4

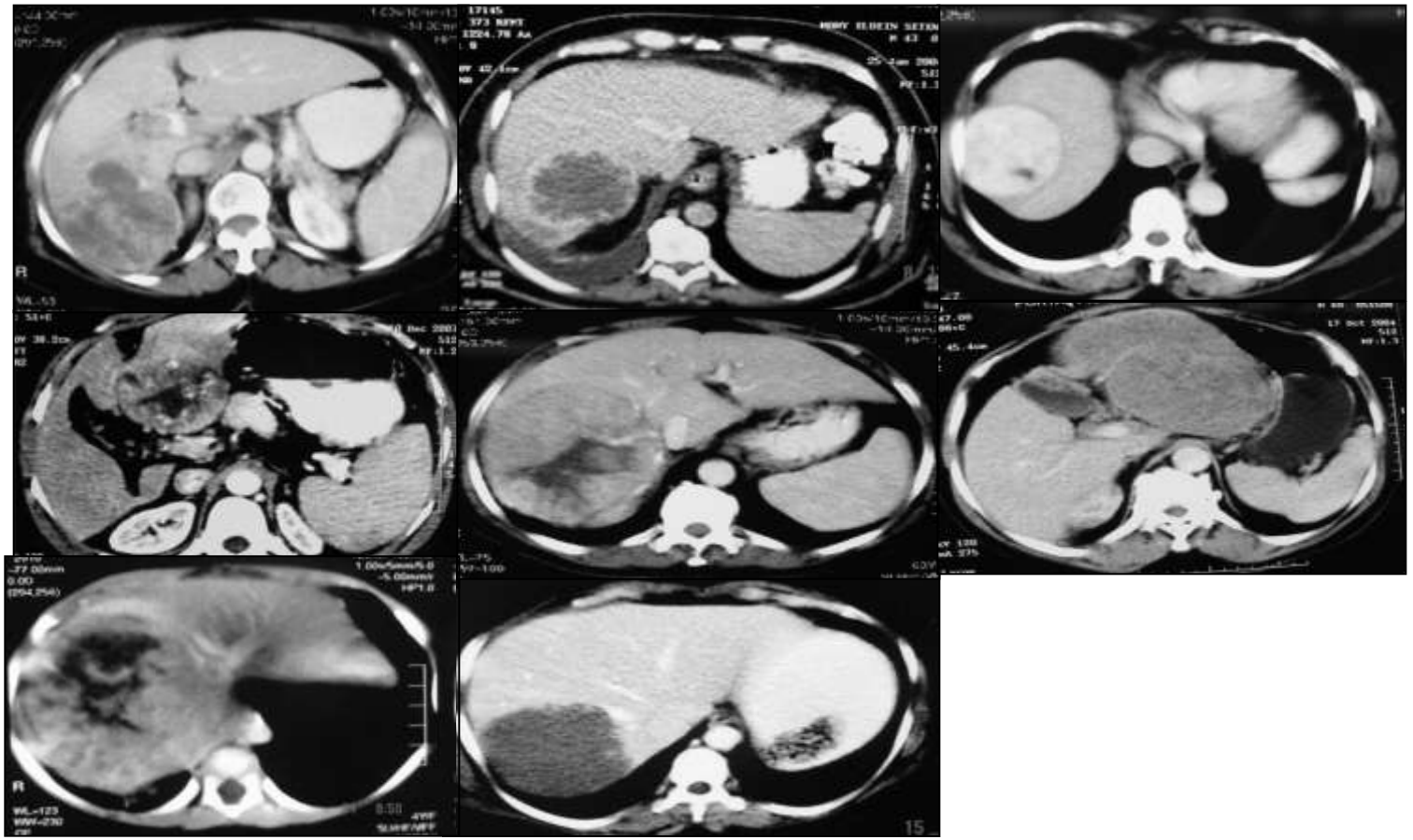
Treatment (1000) Case

	No	%
Conservative	392	38.7
Hepatic resection	261	25.8
Radio frequency	133	13.3
Chemo embolization	174	17.2
Mixed	35	3.5
Alcohol injection	9	0.9
Hepatic artery ligation	8	0.8

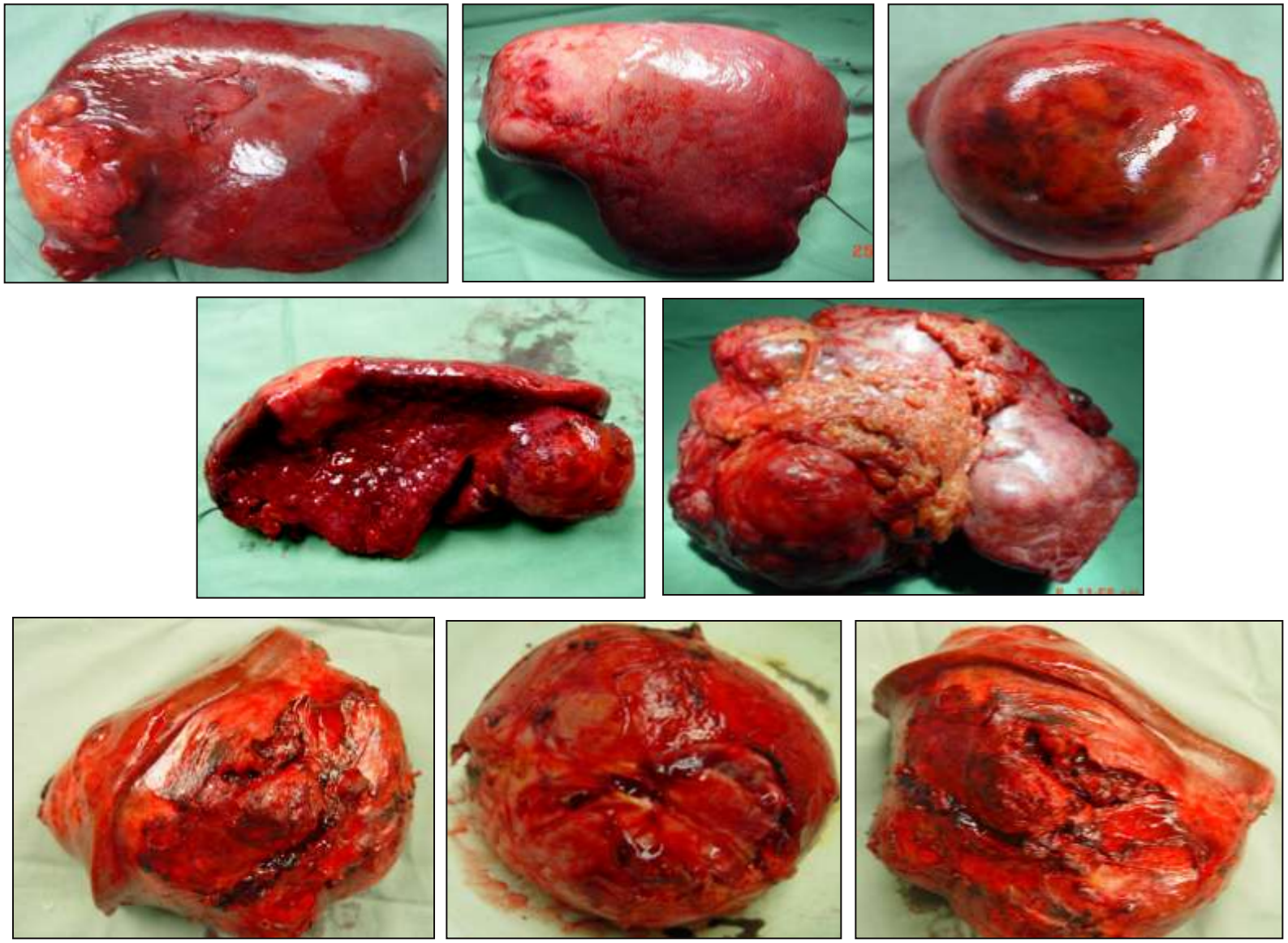
What are the Causes of Conservation (392) Case

- Child C — 27 %
- Distant metastasis — 14 %
- Diffuse — 10 %
- Portal vein thrombosis — 28 %
- Marked cirrhosis — 31 %

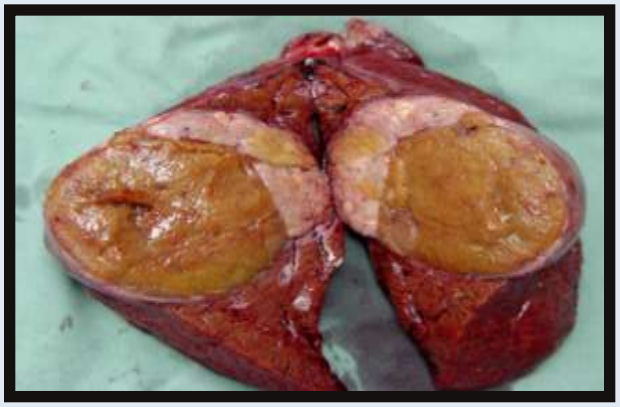
PANORAMA OF CT OF DIFFERENT TYPES AND SITE OF HEPATOCELLULAR CARCINOMA

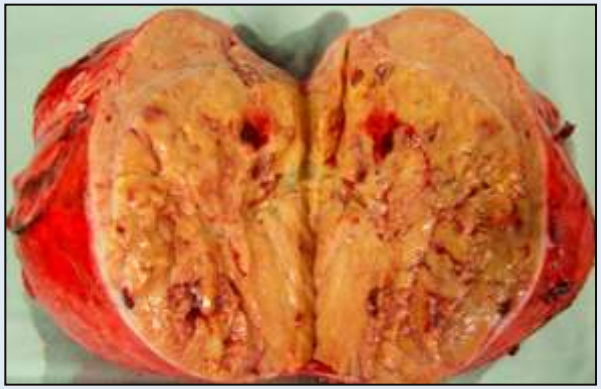
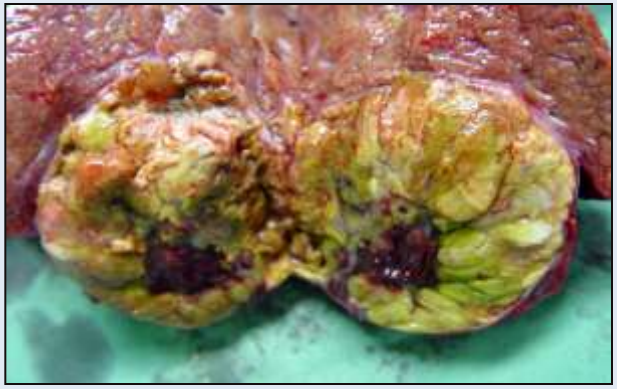
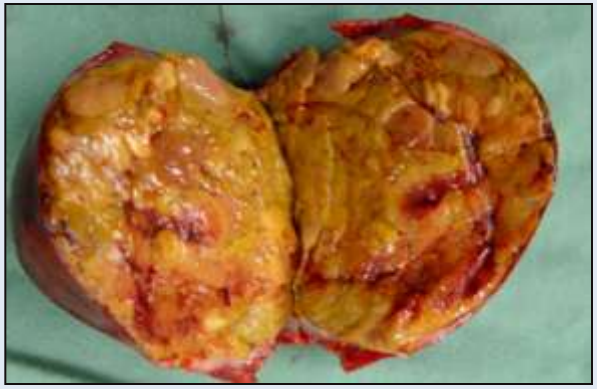


PANORAMA OF DIFFERENT SURGICAL SPECIMEN OF HEPATOMA

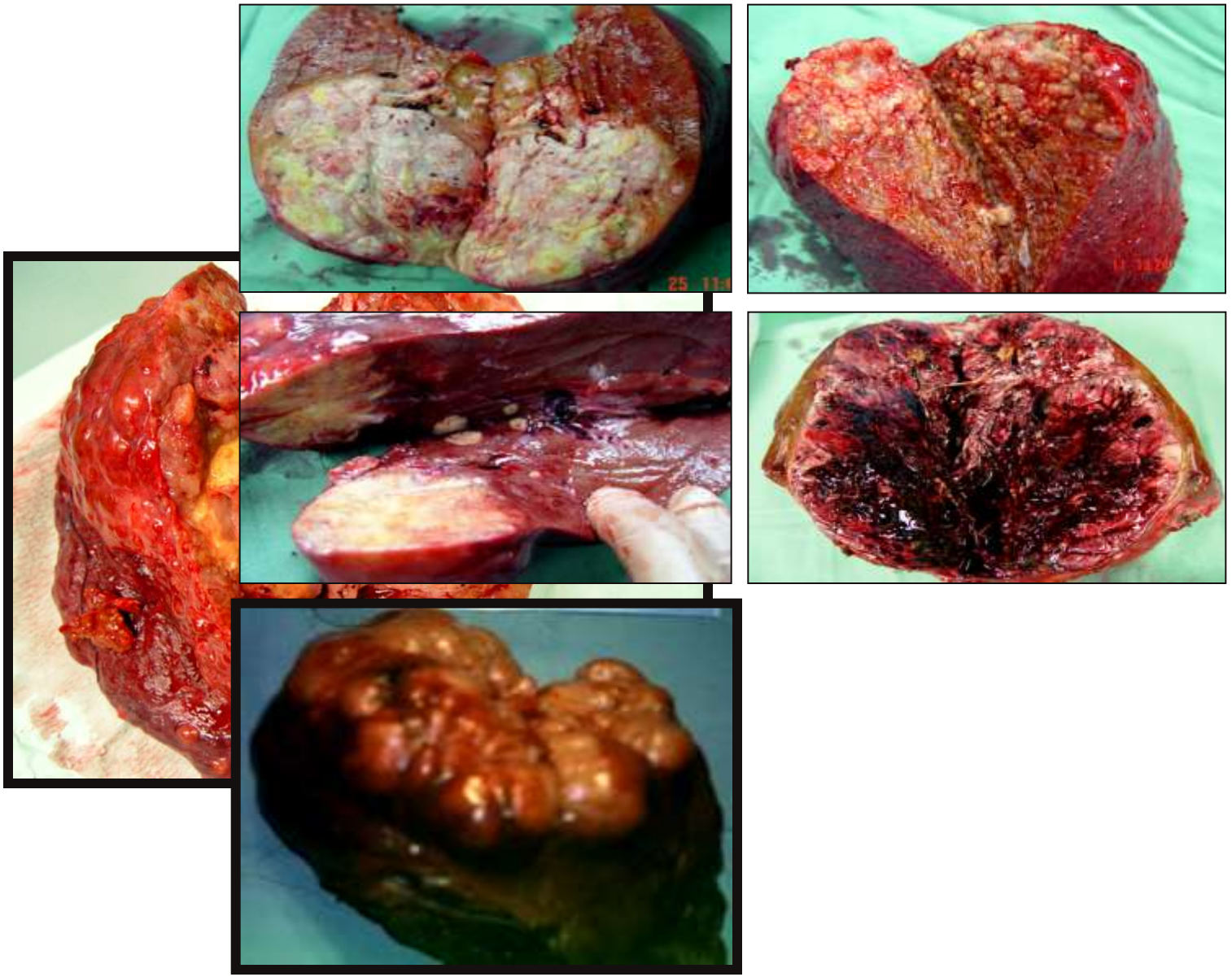


DIFFERENT TYPES OF CAPSULATED HEPATOMA

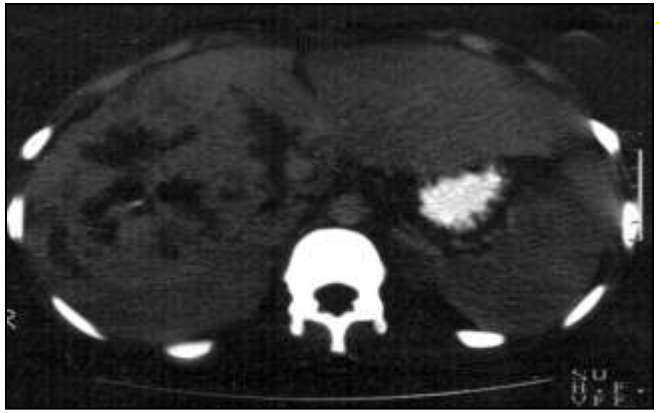



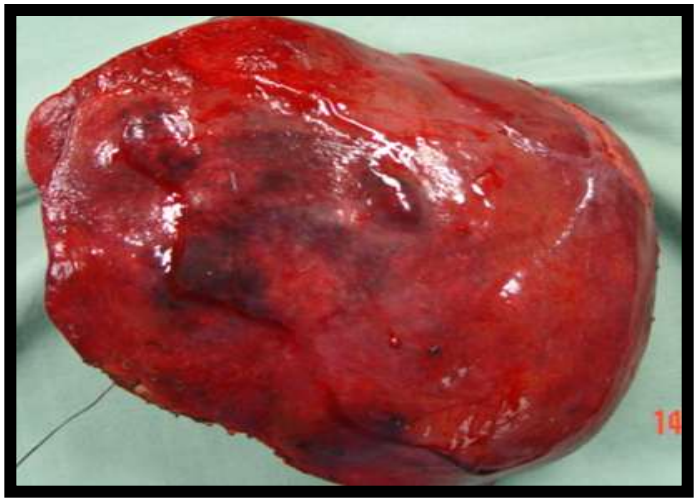
DIFFERENT TYPES OF NON CAPSULATED HEPATOMA



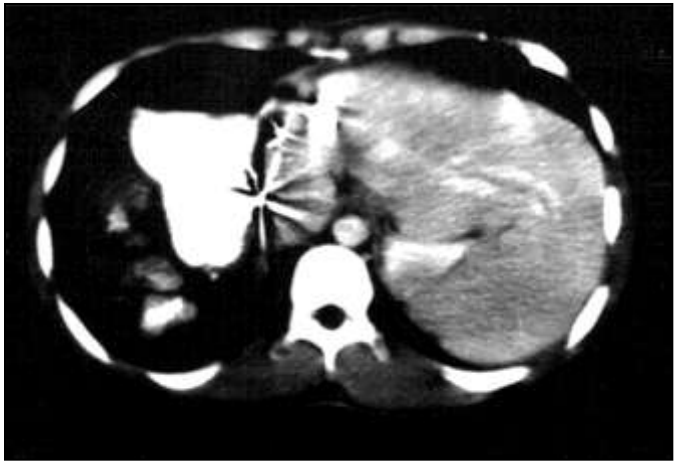
FIBROLAMELLAR CARCINOMA



Preoperative CT



Resected right lobe with the tumor



Postoperative CT

CONCOLUSION

- **The newly diagnosed patients with hepatocellular carcinoma increasing annually.**
- **The prevalence of HCC high in Nile Delta area, more common in male, rural residents and farmers especially in HCV patients.**
- **In rural area there are others risky factors that may be responsible for this high incidence and need more study as pollution, aflatoxins and use of insecticides.**

THANK YOU