

## **Vesalius SCALpel™ : Random Facts**

### **Mammogram:**

13% false positive, 20% false negative  
70% of new breast cancers diagnosed by mammo  
24% DCIS  
10% called back, 10% of callbacks get Bx, 10% of Bx =Ca  
lobular, mucinous, medullary, cystosarcoma hard to see  
radial scar, fat necrosis mimic cancer  
20% detected by BSE  
5/1000 CBE detect cancer  
80% of breast cancers ER+  
70% of those responsive to hormone manipulation  
20% of breast cancers HER2-neu+  
IHC: protein overexpression  
FISH: gene amplification  
15% of unilateral, single duct bloody discharge malignant  
33% of ADH core upgraded to DCIS on excisional bx  
10% of women <40 with breast cancer will be pregnant  
young women more ER-, worse prognosis  
25% of new dx premenopausal  
90% of local recurrences at lumpectomy bed  
90% of recurrences found by CBE or patient complaint  
ALND 30% lymphedema, SLN 5%

### **Nutritionally associated conditions:**

essential FA: linoleic, linoleic: dermatitis, alopecia  
ZN: “ plus loss of taste  
Fe, Cu, vitE: anemia, neutropenia (Cu)  
Chr: encephalopathy, neuropathy  
Se: cardiomyopathy  
glutamine: trophic for gut mucosa

### **Hyperparathyroid symptoms:**

moans: headaches, lethargy, polydipsia, wt. loss  
groans: GERD, pancreatitis, nausea, anorexia, constipation, dyspepsia  
stones: renal hematuria, colic  
bones: extremities mostly, osteopenia/porosis, path fractures,  
10% subperiosteal resorp. phalanges  
(psych): concentration, depression, insomnia, forgetfulness, confusion, psychosis

### **Malignant hyperthermia Rx:**

stop agent  
oxygenate 100%  
dantrolene 2.5mg/kg  
bicarb/alkalinize

glucose/insulin  
cool  
volume/saline  
diurese/lasix  
tachycardia Rx

**Charcot's triad (cholangitis)**

fever/chills  
jaundice  
RUQ pain

**Reynold's pentad**

hypotension  
mental status change

**Non-pancreatitis causes of hyperamylasemia:** perf. ulcer, ischemic bowel, SBO, renal failure, salivary gland inflammation, ectopic, ovarian tumor/cyst; ketoacidosis, macroamylasemia (kidney can't filter, low urine amylase)

**Differential benign liver lesions**

**hemangioma:** peripheral to central filling, 90% solitary; most common

**adenoma:** OCP assn., 30% rupture, no RE (Kupffer)/no nucleotide (Tc99) uptake; pregnancy rupture risk, malignant potential

**focal nodular hyperplasia (FNH):** central scar; Tc99 uptake; quick enhancement and washout; no malig. potential, observe

**BRCA defective tumor suppressor**

1 82% lifetime risk breast, 44% ovary; 30% of hereditary breast ca

2 10% of male breast cancers, colon cancer; 20% of hereditary brst Ca

**FAP:** loss autosomal dom. APC tumor suppressor; loss of 2 alleles; colon, gastric, thyroid

Gardner's: + osteoma, exostosis, desmoid

Turcot: + CNS (medulloblastoma)

**HNPCC:** loss series DNA/mismatch genes

type 1: colon only, 75% risk by 75

type 2: + endometrial, ovarian, breast, gastric, renal cell

**Peutz-Jegher's:** autosomal dom. hamartomas, most small bowel, obstruction, intussusception, bleeding, melanin spots, malignant potential

Cronkhite-canada: hamartomas without cancer

**Li-Fraumeni:** p53 tumor suppressor defect, sarcoma, breast (<1% of genetic breast ca), brain, adrenocortical, leukemia, gastric

**Cowden:** PTEN, hamartomatous colon polyps, breast (50% incidence of breast cancer, <1% of genetic breast Ca)

**Klinefelter's:** XXY, 20X male breast cancer

**WT:** Wilm's tumor, embryonal renal, aniridia, GU abnormalities

**Rb1:** retinoblastoma, sarcoma, brain, melanoma

**CDKN2A:** familial melanoma

**neurofibromatosis type 2:** meningioma, glioma

**chemo side effects:**

cardiotoxicity: adriamycin, doxorubicin

pulmonary fibrosis: bleomycin

liver, kidney: methotrexate, cisplatin (kidney)

hemorrhagic cystitis: cyclophosphamide

skin pigmentation: 5FU

**trauma terrible trio: hypothermia, acidosis, coagulopathy**

90% mort without damage control intervention, 60% with

**GIST:** interstitial pacemaker cells of Cajal

markers: CD34, CD117 (C-Kit proto-oncogene overexpression, tyrosine kinase receptor); PDGFR alpha

distribution: 65% stomach, 25% small bowel, 5% colon, 5% esoph.

**Carcinoid:** Neuroendocrine nterochromaffin cells crypts of Lieberkuhn

**Pagett-vonSchrotter:** subclavian/axillary v. thrombosis

**Kassebach-Merritt:** platelet trapping in large hepatic hemangioma

**May-Turner:** compression of L iliac v. by R common iliac a.

**Stroke:** 75% thromboembolic, 25% hemorrhagic

**Sheehan's:** hypovolemic/hypotensive infarction of hypertrophied pituitary in pregnancy

**Budd-Chiari:** hepatic V thrombosis/obstruction; 50% polycythemia or myeloproliferative disease assn.; ascites, liver failure

**Felty's:** rheumatoid arthritis, neutropenia, leg ulcer, splenomegaly