

Papilloma: forms finger like Transitional cell: urothelial(current naming) Melanoma=melanocarcinoma(used less)

Growth

- Epithelial tumours form nests, groups of cell . papillary growth and acini/tubules
- Glandular one may produce extracellular . mucin or retain intracellular mucin to form signet cells.
- Squamous cells form keratin in pearls or . within individual cells
- Papillary growths seen in squamous and . transitional types and glandular tumours

#### Excessive mucin production can cause electrolyte imbalance eg hypokalemia in some mucin-secreting tumors of the colon

### Differentiation

- The degree of tumour differentiation is determined by cell morphology
- Ranges from well differentiated resembling • mature cell to anaplastic ones that cannot be differentiated on cell morphology thus requiring immunohistochemistry.

#### Pap stain for keratin

#### Well differentiated

- Squamous and keratin ٠ pearls.Layers of cells with desmosomes
- Tubules, acini, ducts, . extracellular mucin/secretions in tubules or tissue. May form cystic structures
- Papillary structures with \* orderly cell arrangements
- **Poorly differentiated**
- · Sheets of cells, groups . No keratinization or desmosome formation
- Vacuolations and signet ring formation or no mucin
- formation. Solid masses. Sheets. No papillae or

layering of cells

## Benign

- seen in solid organs, epithelial linings . including skin
- May form solid masses or cystic masses when there is production of mucin or keratin that cannot be discharged on the surface

# Malignant tumours : Ca

- Seen in solid organs eg liver, kidney, endocrine ٩. organs etc
- Commonest malignant tumours constituting up to 80% of all malignancy
- Malignant tumours refered to as carcinomas . with a qualification that is squamous cell, adenocarcinoma or transitional cell

### CA: carcinoma

## Cancer is not synonymous with carcinoma

## Examples

### **SQUAMOUS**

Gingiva

Cervix

· Anus

Esophagus

Salivary duct

### · Skin

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- GLANDULAR · Thyroid
- Breast
- Salivary glands
- Liver
- **Ovaries**
- Prostate

## Cervix: ectodermal vs endodermal

# Examples - Transitional/urothelial

- Renal pelvis
- Ureters
- Urethra
- Urinary bladder
- ovary
- Kidneys

- Stomach and intestines

## Miscroscopic appearance

- Demonstration of keratin using H/E .
- Mucin is demonstrated using PAS, Alcian blue, Mucicarmine
- Desmosomes shown using light and electron microscopy

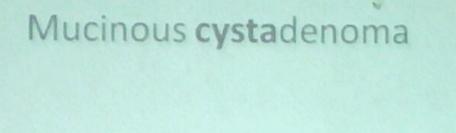
PAS: periodic acid Schiff; used to detect polysaccharides such as glycogen, and mucosubstances eg mucin



Large cell keratinizing sq cell ca



The red dots: keratin pearls

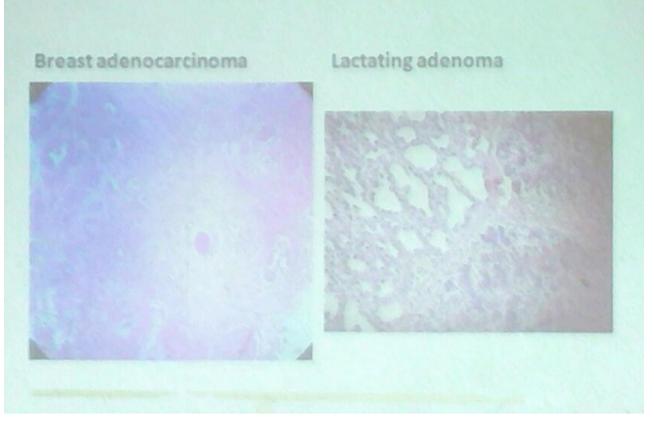




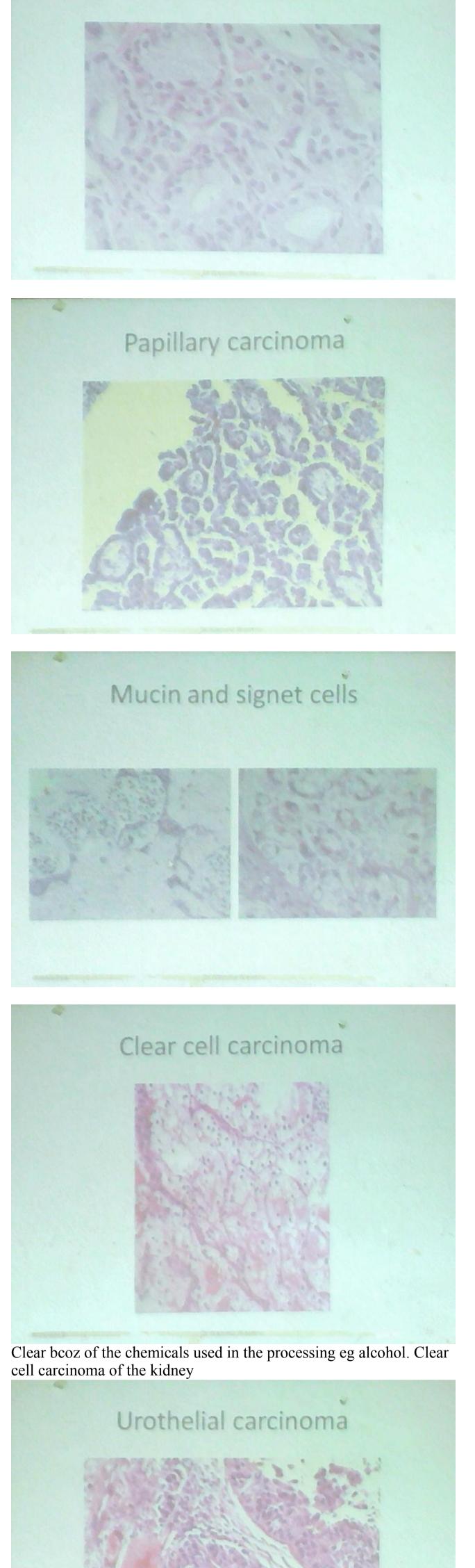
Pic from ovary

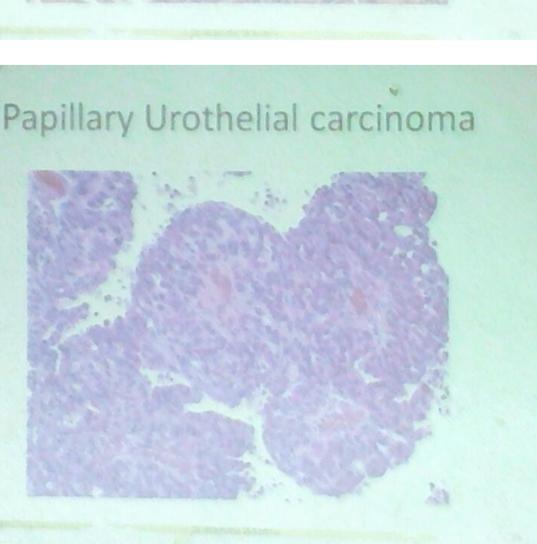
ORAL metastatic adenoca from lung

### **Breast tumours**

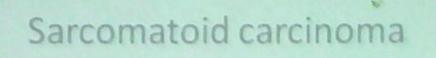


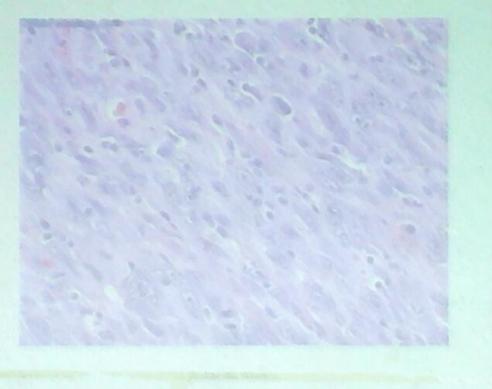
Prostatic carcinoma





Cervix can also have papillary growth





Sarcomatoid carcinoma of the kidney