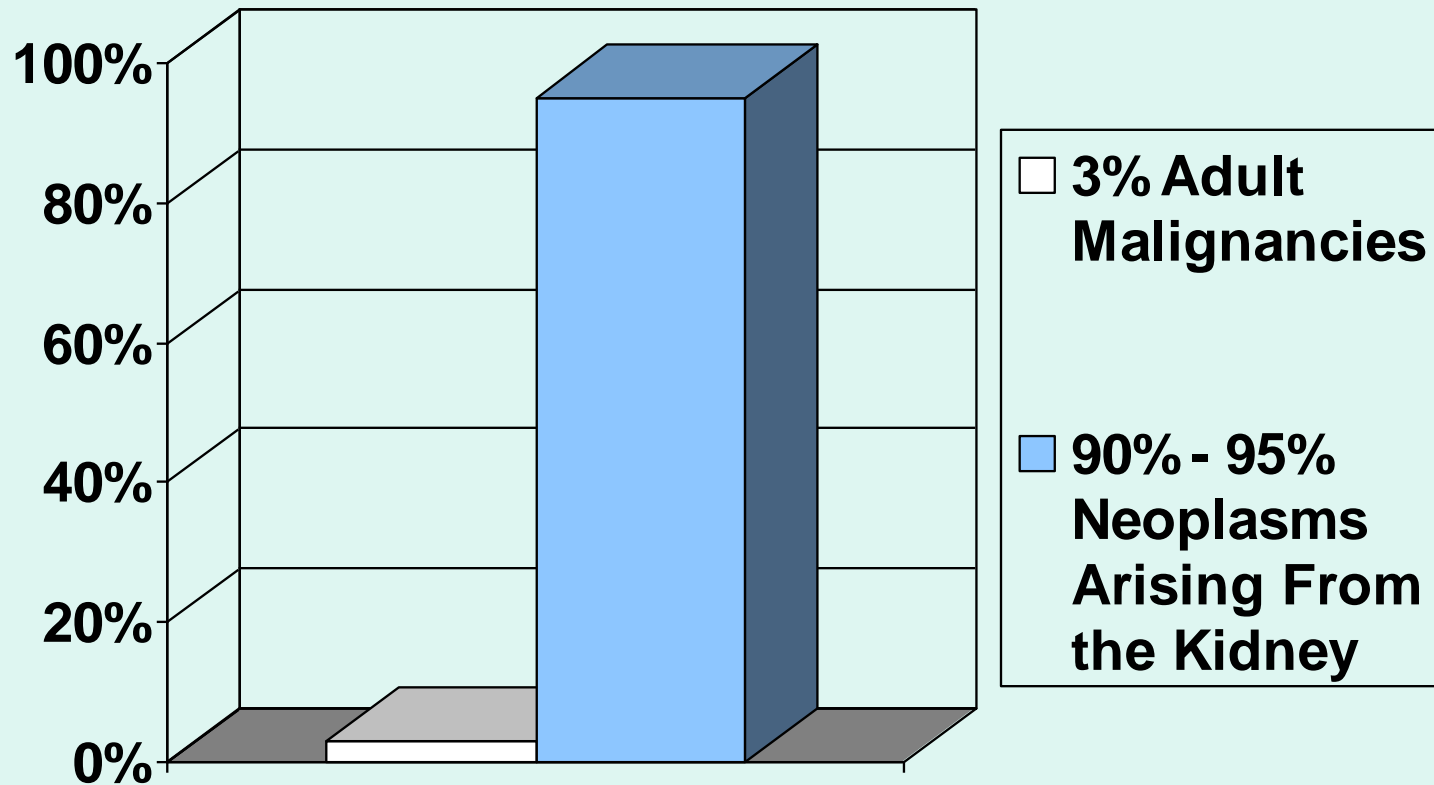
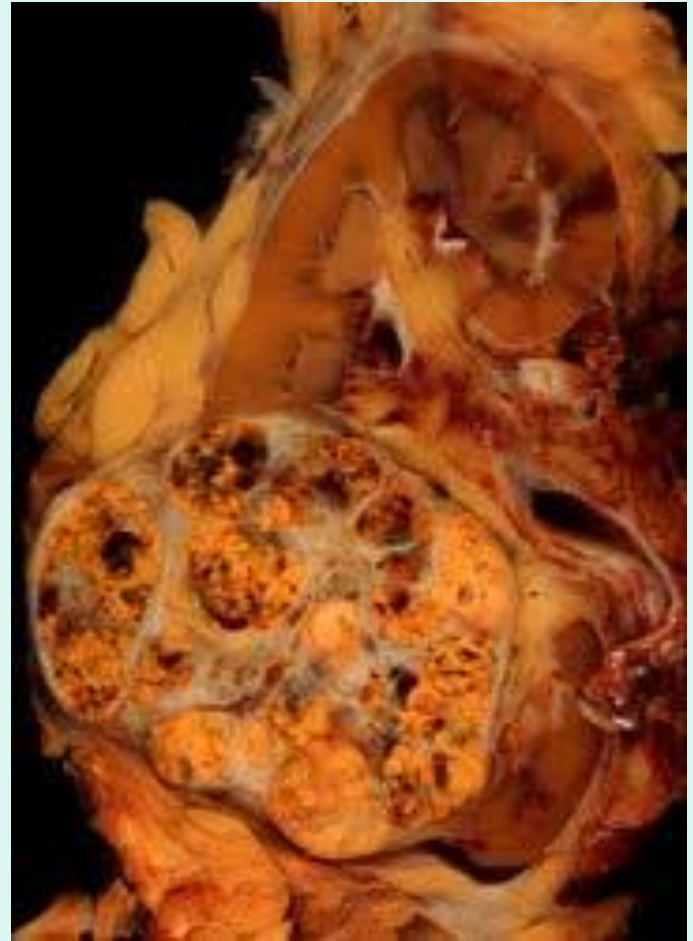
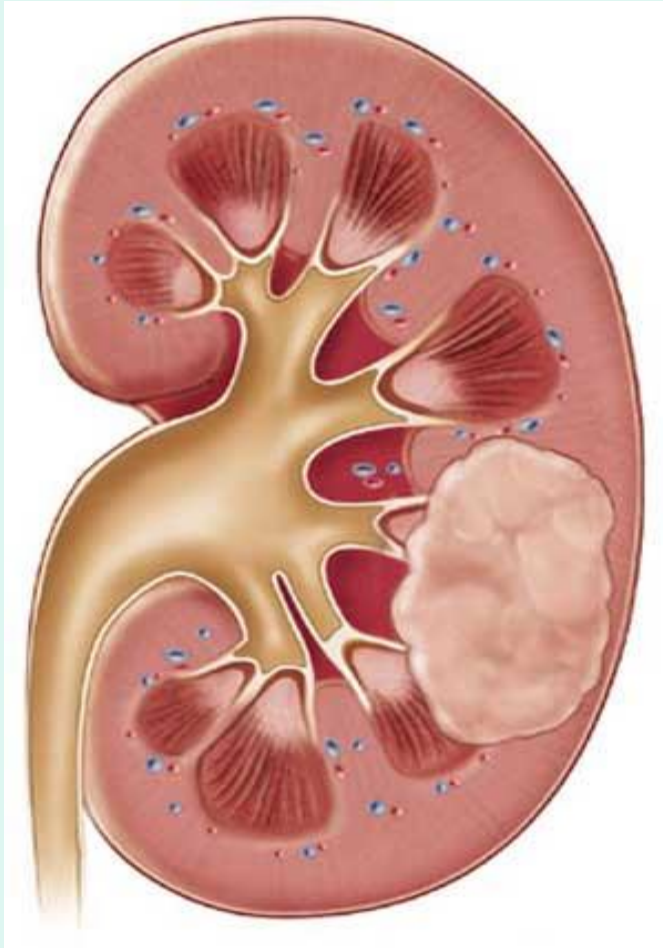


# Renal Cell Carcinoma



# Renal Cell Carcinoma



- Tenth leading cause of cancer deaths in males in the United States
- More common Northern European ancestry (Scandinavians) and North Americans
- Median age at Diagnosis 64 years of age
- Male-to-Female 6:1
- Reduced tobacco smoking in men has led to a decrease over the past decade

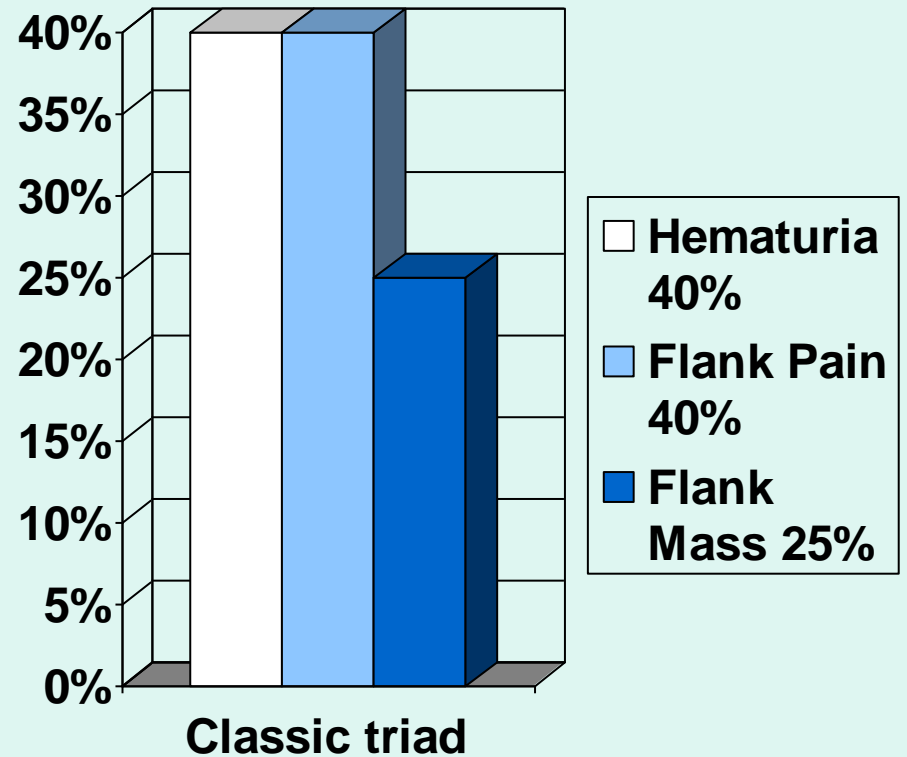
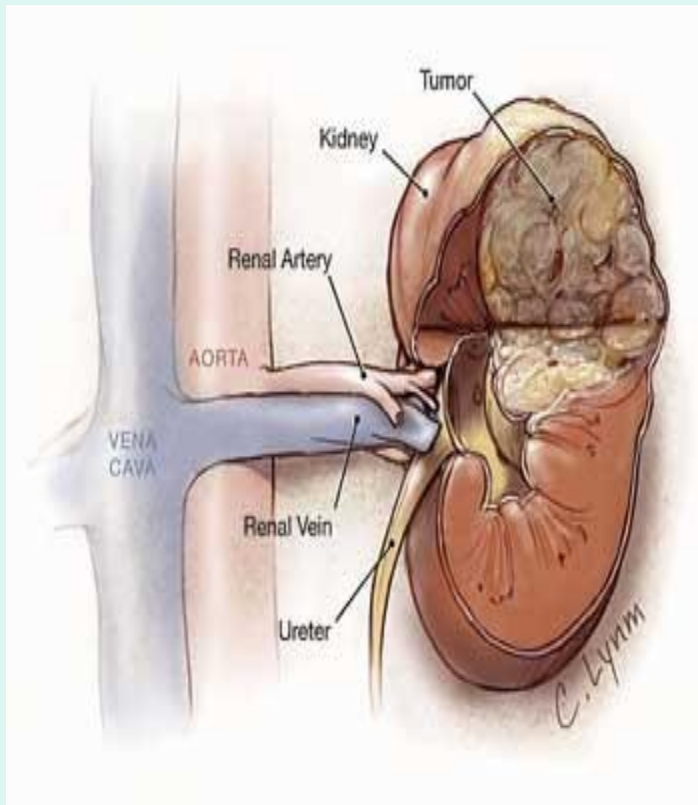
# Pathophysiology

- Origin is the proximal renal tubular epithelium
- Associated with structural alterations of the short arm of chromosome 3 (3p)
- Mutations of Tumor suppressors (*VHL-von Hippel-Lindau* , *TSC*)
- Mutation of oncogenes (*MET*)
- 40% of patients with *von Hippel-Lindau* develop Renal cell carcinoma

# RISK FACTORS

- Smoking
- Dialysis treatment
- Renal Transplantation
- High blood pressure
- Tuberous Sclerosis
- Von Hippel-Lindau disease
- Obesity

# Most Common Presentations



# Other signs and symptoms

- Weight loss (33%)
- Fever (20%)
- Hypertension (20%)
- Hypercalcemia (5%)
- Night sweats
- Malaise
- Varicocele, especially suspicious, usually left sided, due to obstruction of the testicular vein (2% of males)

# DIAGNOSIS

## PHYSICAL

- Gross hematuria
- Hypertension
- Supraclavicular adenopathy
- Flank or abdominal mass with bruit

## IMAGING

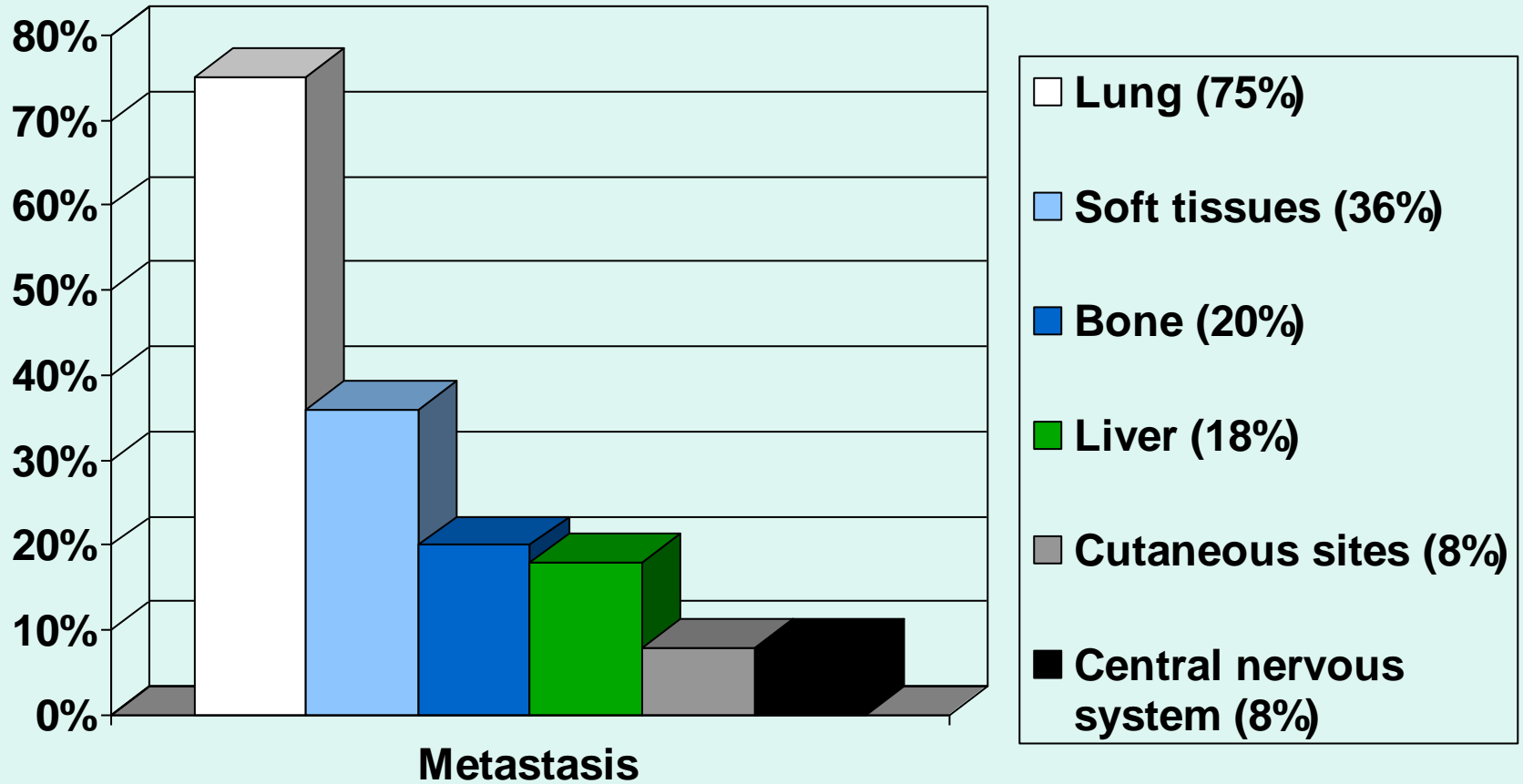
- CT Scan
- Ultrasonography
- Arteriography
- Venography
- MRI
- PET
- Excretory urography



# Laboratory Studies

- Workup for paraneoplastic syndromes
  - Urine analysis
  - CBC with differential
  - Electrolytes
- Liver function tests (AST and ALT)
- Calcium
- Erythrocyte sedimentation rate
- PT, PTT

# Metastasis



# TREATMENT

- Radical Nephrectomy If Local, cure 90%
- Medications such as IL-2  
(Proleukinandreg)
- Chemotherapy may be used for  
Metastasis, cure is unlikely

# PROGNOSIS

