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Rever a anatomia do trato urinário nas diferentes espécies

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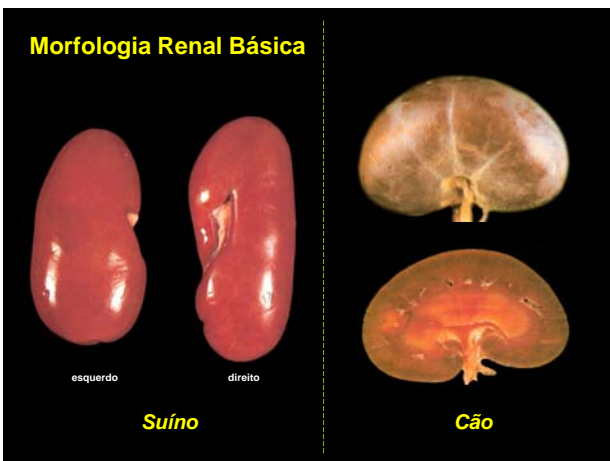
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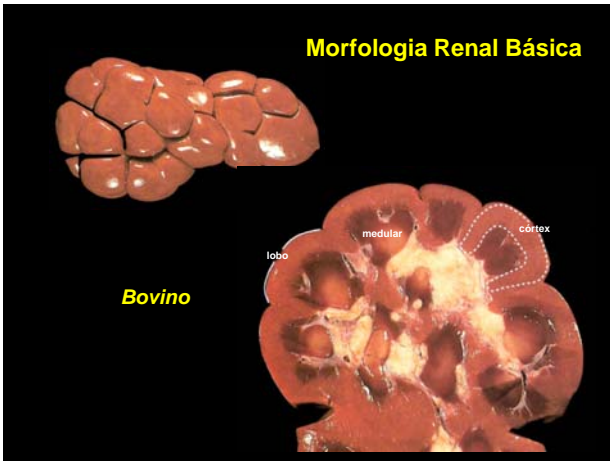
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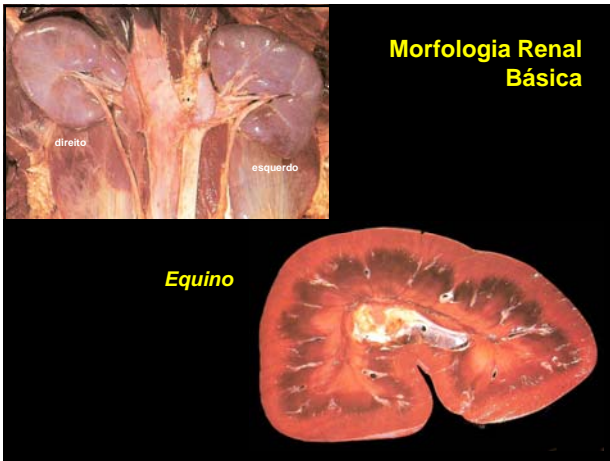
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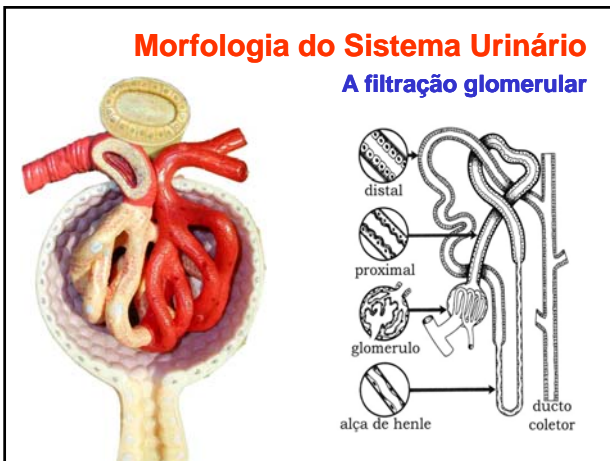
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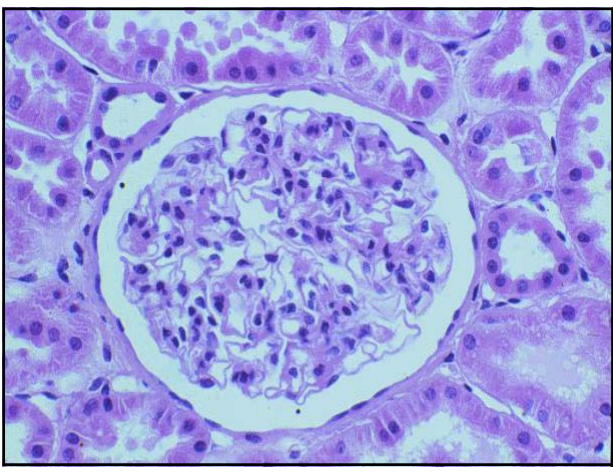
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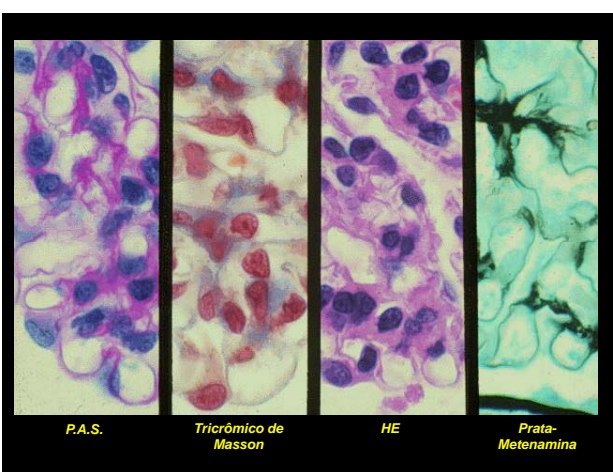
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## Função do Sistema Urinário

Manutenção do equilíbrio hídrico e salino  
Regulação do equilíbrio ácido-básico  
Excreção de compostos nitrogenados  
Endócrina – Produção de eritropoietina  
Participação no metabolismo ósseo  
Controle da pressão arterial

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## Alterações Congênitas

Agenesia Renal  
Hipoplasia Renal  
Persistência das lobulações fetais  
Rins ectópicos/fundidos  
Cistos Renais  
⇒ Solitários  
⇒ Policístico

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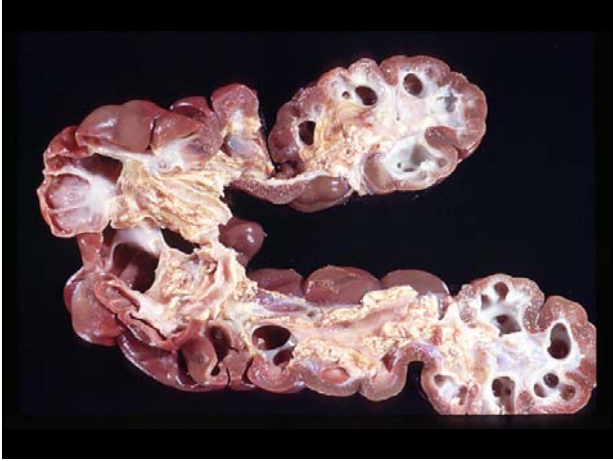
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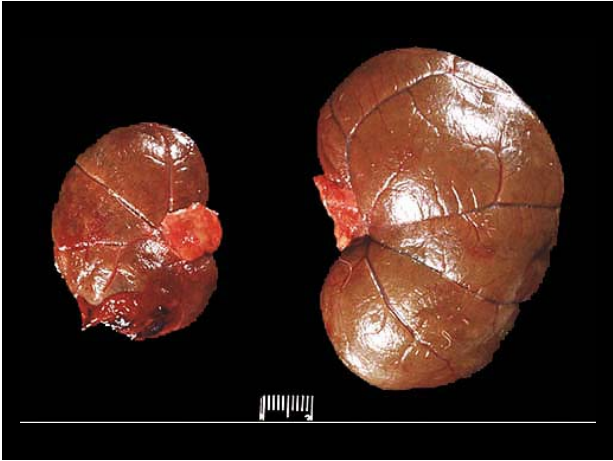
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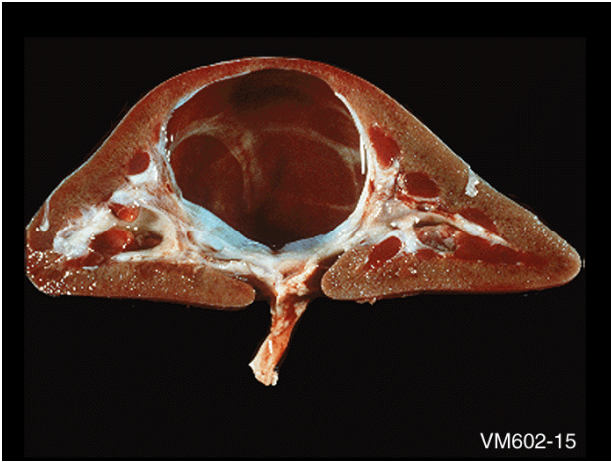
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<b>Alterações Circulatórias</b>	
<b>Hiperemia e Congestão</b> <i>Rins com coloração acentuadamente vermelha</i>	
<b>Causas Sistêmicas</b>	<i>Insuficiência cardíaca</i> <i>Doença crônica pulmonar</i>
<b>Causas Locais</b>	<i>Lesões compressivas</i> <i>Trombose</i> <i>Intoxicações</i>

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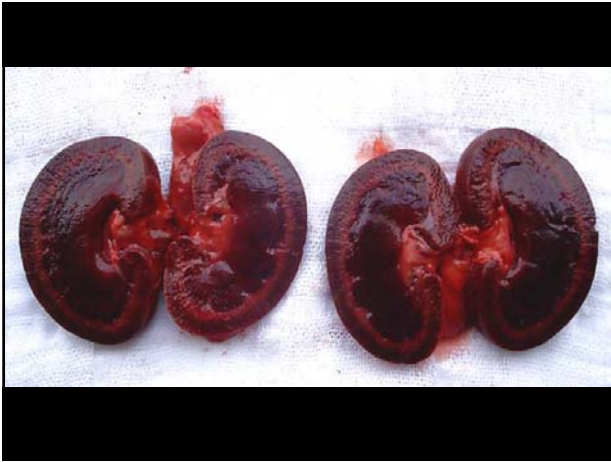
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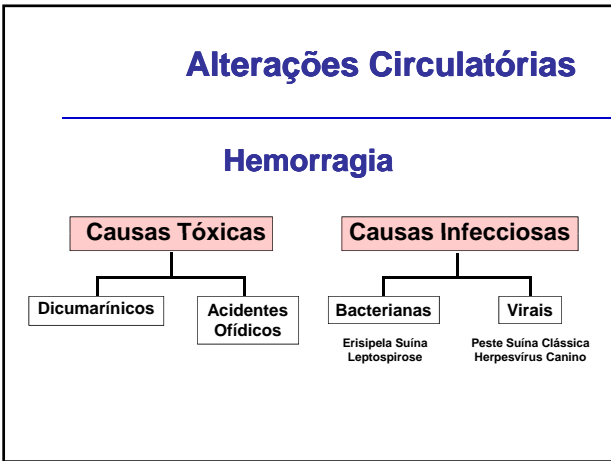
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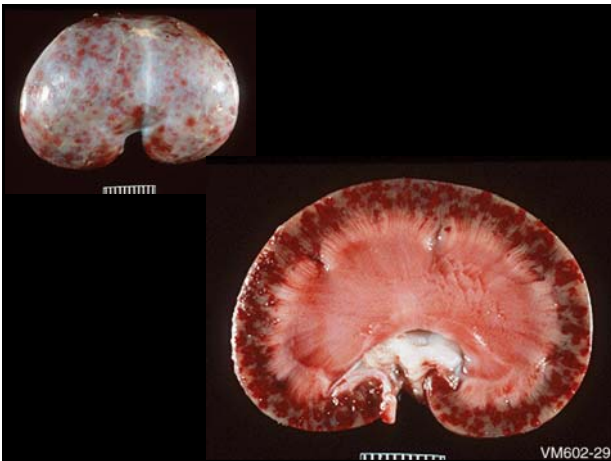
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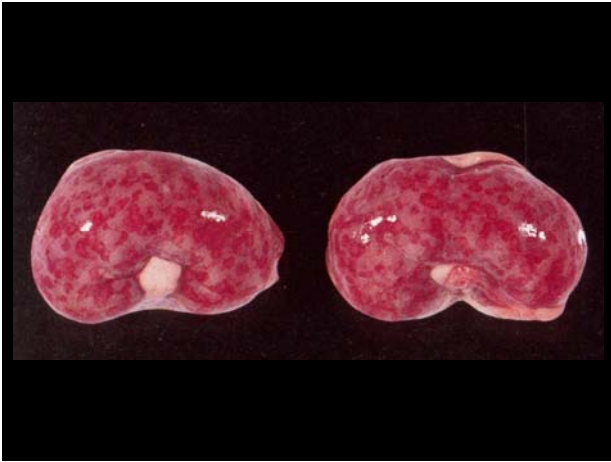
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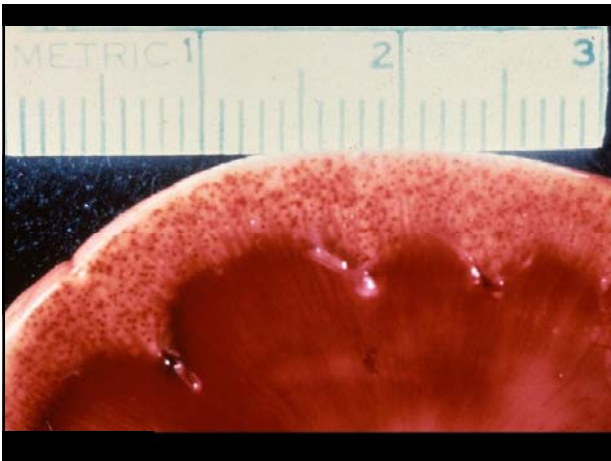
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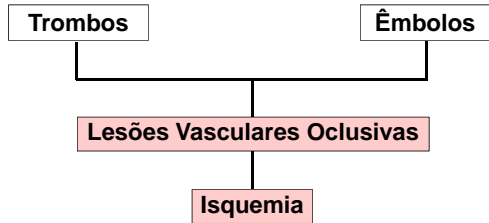
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## Alterações Circulatórias

### Infartos Renais



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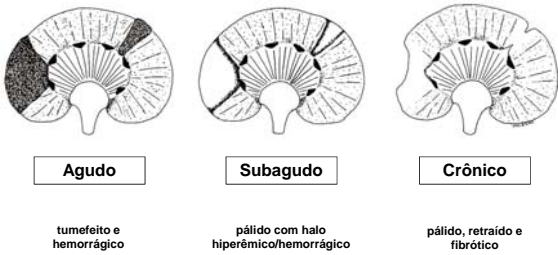
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## Alterações Circulatórias

### Infarto



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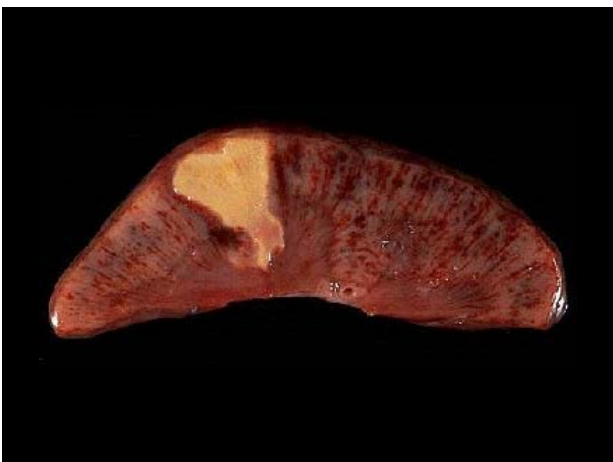
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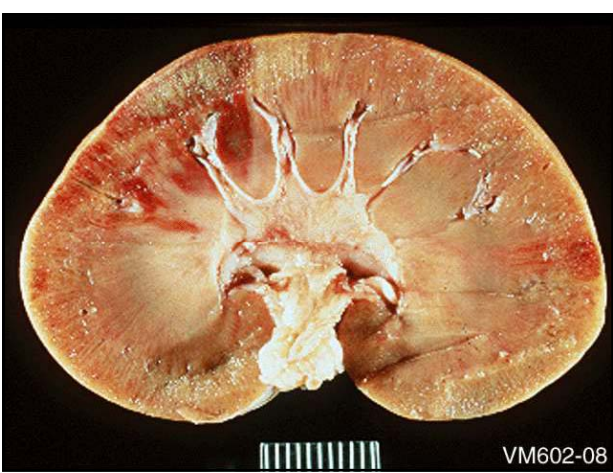
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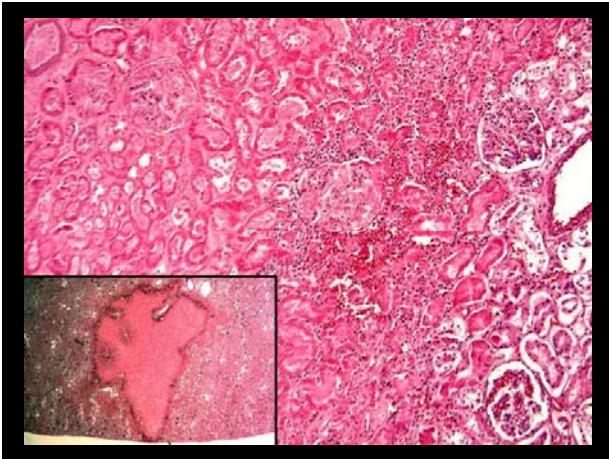
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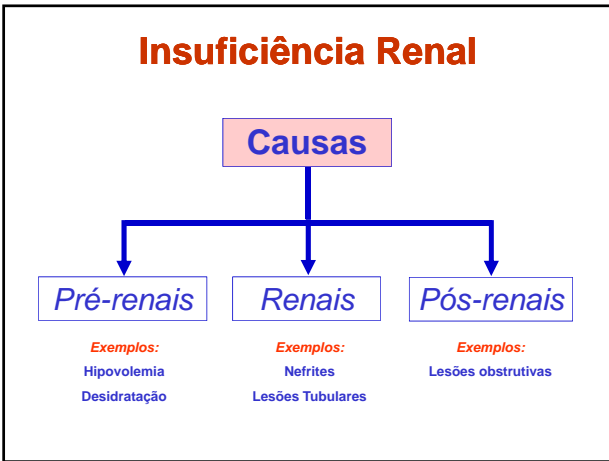
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### Insuficiência Renal

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#### Consequências

Acúmulo intravascular de resíduos:  
*Uréia, Creatinina, Ác fenólicos, Alcoóis ↑P.M*

pH do sangue (acidose metabólica)

Alteração na concentração iônica do plasma  
*K, Ca, PO<sub>4</sub>*

Hipertensão

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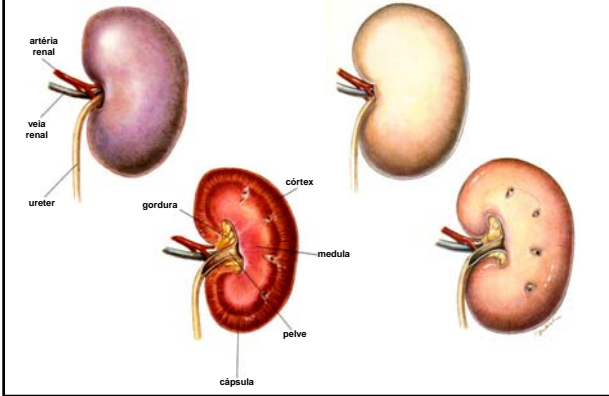


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### INSUFICIÊNCIA RENAL AGUDA



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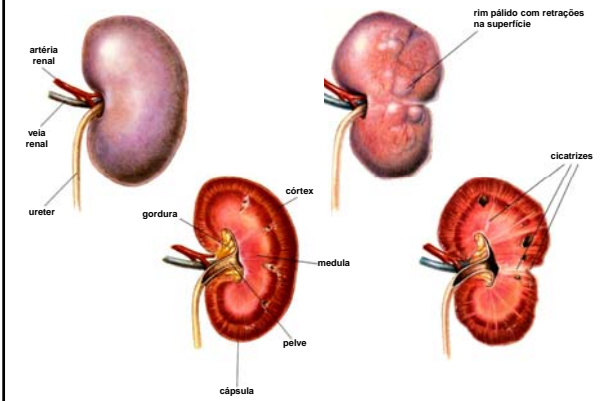
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### INSUFICIÊNCIA RENAL CRÔNICA



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### Lesões Extra-Renais de Uremia

Lesão	Mecanismo
Edema pulmonar	↑ Permeabilidade vascular
Gastrite ulcerativa e hemorrágica	Secreção de amônia e necrose vascular
Estomatite ulcerativa e necrótica	Secreção de amônia na saliva
Glossite ulcerativa e necrótica	Secreção de amônia na saliva
Anemia hipoplásica	↓ eritropoietina/fragilidade eritrocítica
Mineralização de partes moles	Desregulação Ca:P
Osteodistrofia fibrosa	Desregulação Ca:P
Hiperplasia da paratireóide	Desregulação Ca:P

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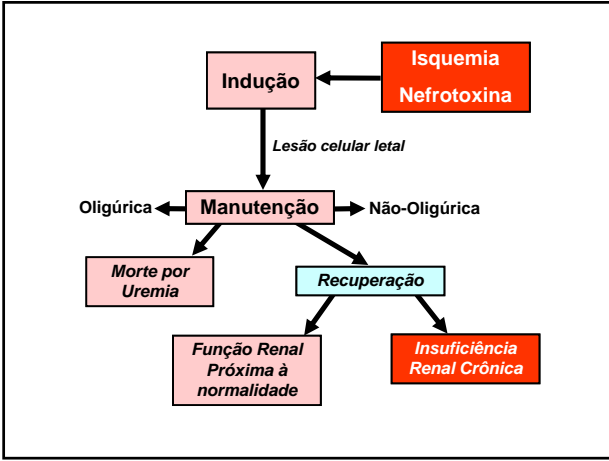
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## Doença Glomerular

### Alterações Histológicas nas GN

- ⇒ Hiper celularidade glomerular
- ⇒ Espessamento e irregularidade da memb. basal
  - ⇒ Proliferação mesangial
  - ⇒ Infiltração inflamatória
  - ⇒ Fibrose e atrofia glomerular

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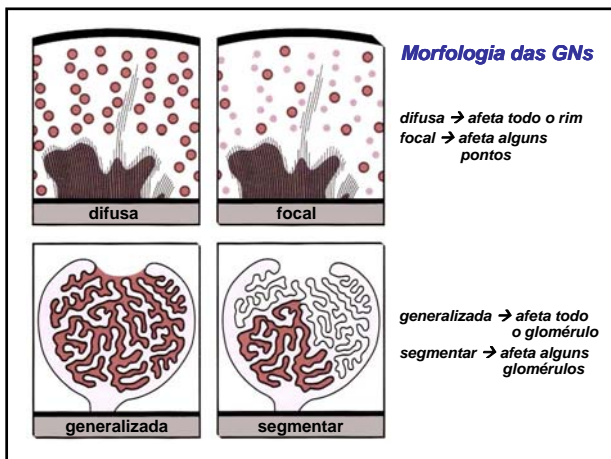
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## Doença Glomerular

### Patogênese da GN focal

Processos septicêmicos  
Êmbolos sépticos

**Sinônimos:**  
Nefrite embólica  
GN supurativa

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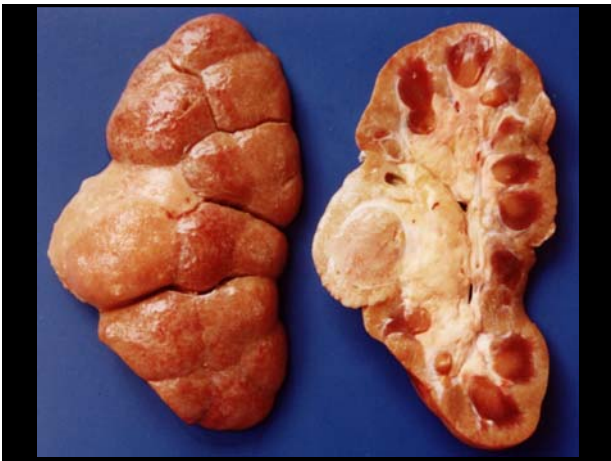
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## Doença Glomerular

### Patogênese da GN generalizada

Deposição de imunocomplexos  
Doença Auto-Imune  
Anticorpos Anti-Memb. Basal Glomerular

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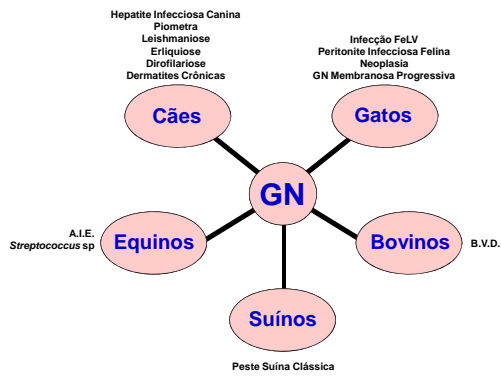
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### Algumas doenças nas quais pode ocorrer Glomerulonefrite por Imunocomplexos



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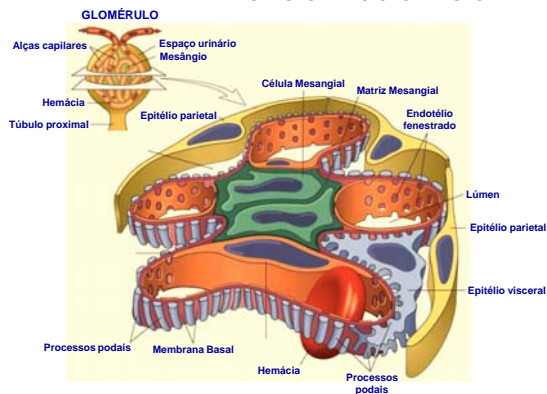
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### ESTRUTURA DO GLOMÉRULO RENAL



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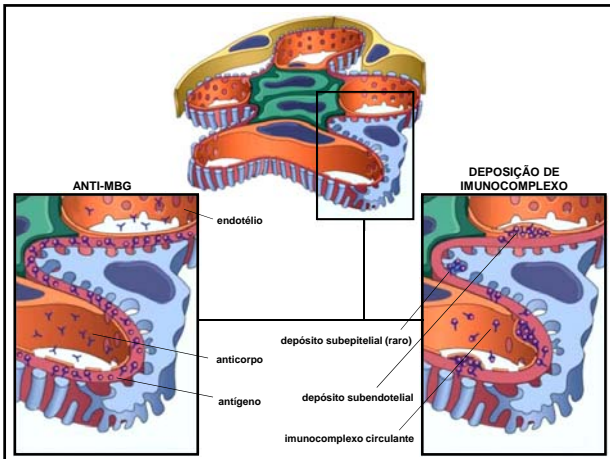
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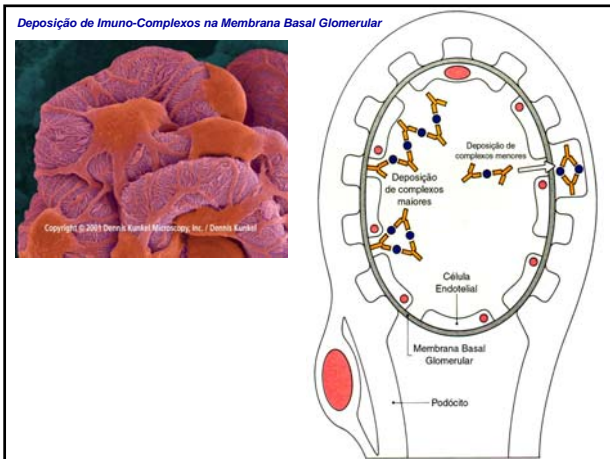
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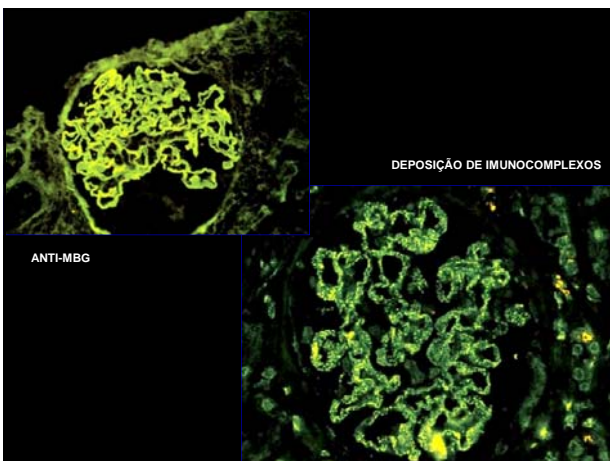
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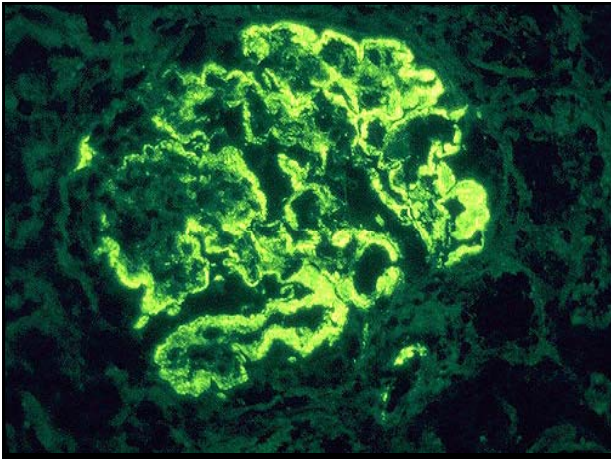
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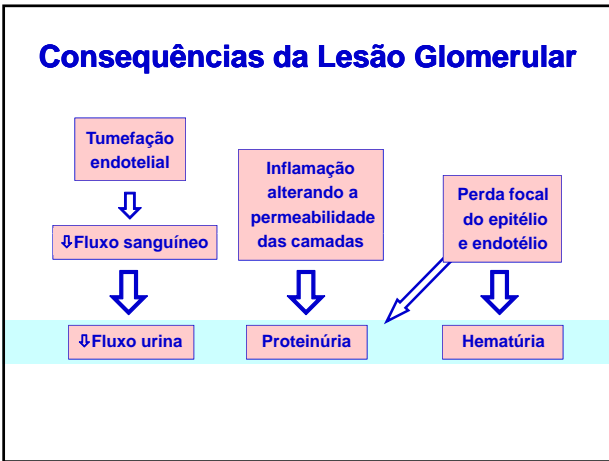
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## Doença Glomerular

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### Síndrome Nefrítica

*Aguda, Rapidamente progressiva, Crônica*

**Manifestações:**  
Hematúria  
Proteinúria variável  
Função renal prejudicada  
Edema

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**Doença Glomerular**

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**Síndrome Nefrótica**

*Início insidioso*

**Manifestações:**

- Proteinúria*
- Hipoalbuminemia*
- Edema*
- Hiperlipidemia*
- Lipidúria*

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**Classificação Simplicada das Glomerulonefrites**

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**Proliferativa**

*proliferação das células glomerulares*  
*influxo de leucócitos*  
*proliferam as alças e as células mesangiais*

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**Classificação Simplicada das Glomerulonefrites**

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**Membranosa**

*espessamento difuso da membrana basal dos capilares*

*Forma mais comum da GN por imunocomplexos em gatos*

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## Classificação Simplificada das Glomerulonefrites

### Membranoproliferativa

*espessamento difuso da membrana basal dos capilares*

*Forma mais comum da GN por imunocomplexos em cães*

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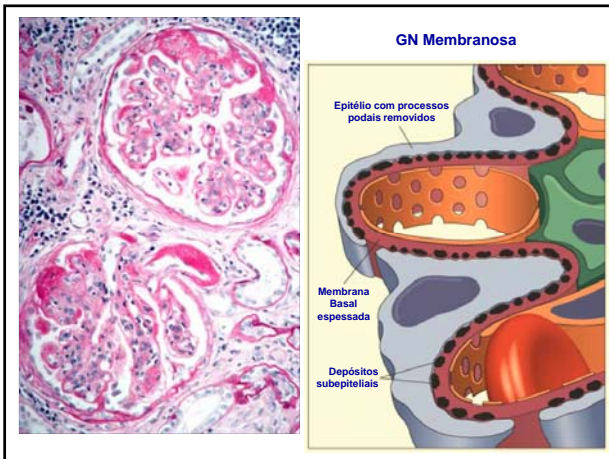
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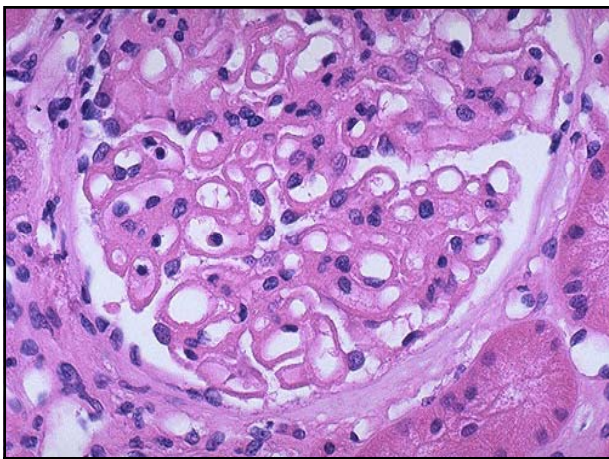
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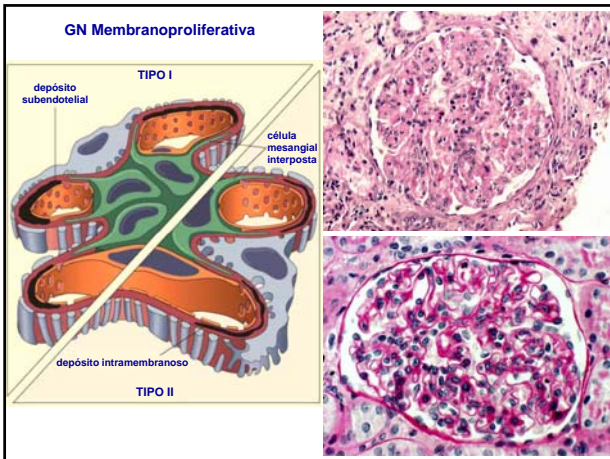
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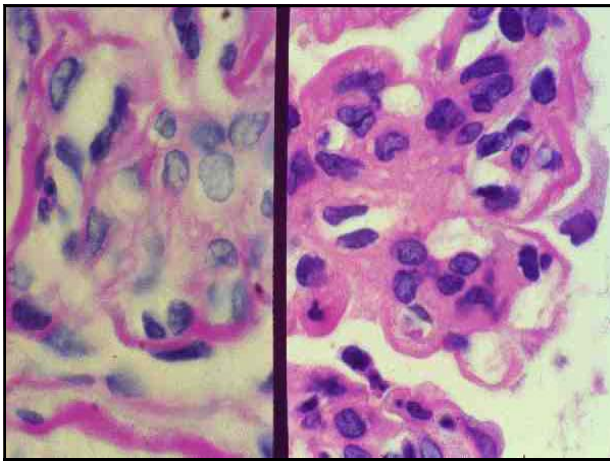
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## Nefrite Intersticial

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Geralmente é resultado de infecções septicêmicas bacterianas e virais

A **Leptospirose** é o exemplo clássico de Nefrite Intersticial

O infiltrado inflamatório é composto de linfócitos, plasmócitos e neutrófilos.

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# Nefrite Intersticial

## Causas de Nefrite Intersticial

- Cães** *Leptospira interrogans* serovar *canicola*  
*Leptospira interrogans* serovar *icterohemorrhagiae*  
(e outros serovares)
- Bovinos** *Escherichia coli* "rim manchado de branco"  
Febre Catarral Maligna
- Suínos** *Leptospira interrogans* serovar *pomona*

aguda

crônica

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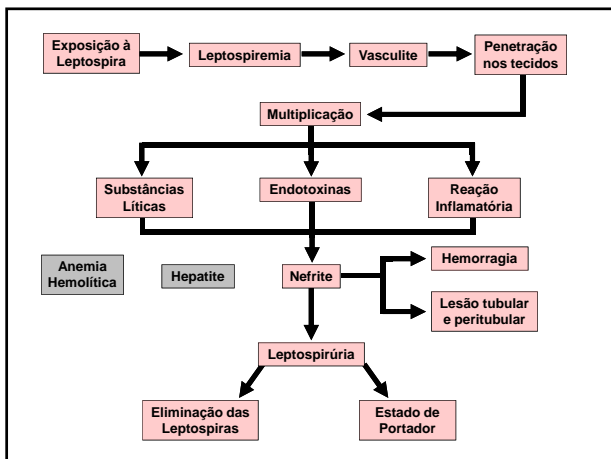
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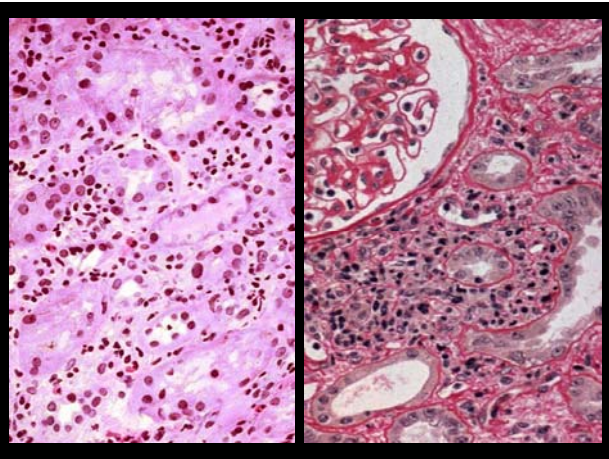
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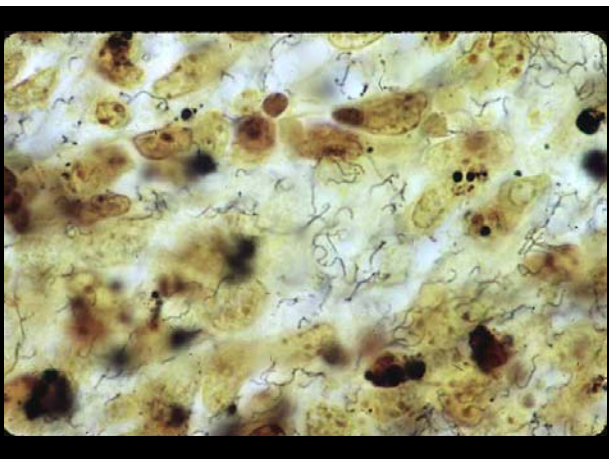
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# Amiloidose Renal

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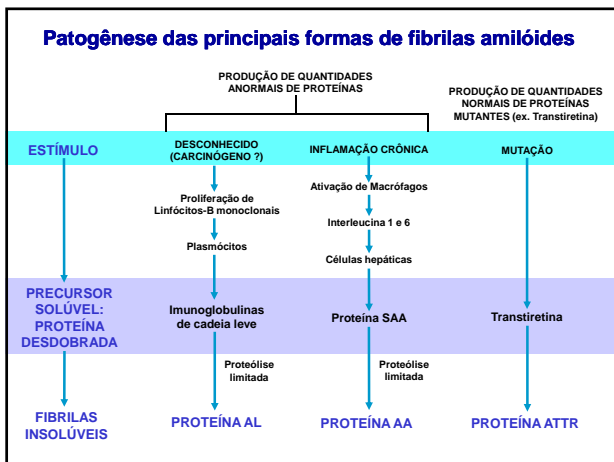
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## Patogênese das principais formas de fibrilas amilóides




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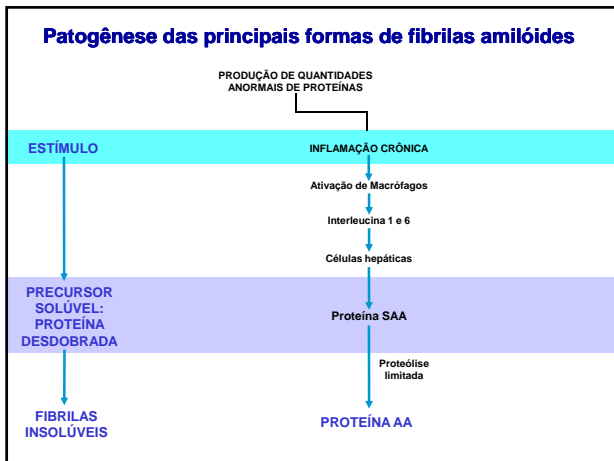
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## Patogênese das principais formas de fibrilas amilóides




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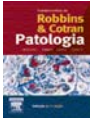
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Os esquemas usados para ilustrar esta aula são de:



Robbins & Cotran - Patologia, Bases Patológicas das Doenças 7ª ed., Mitchell, R; Kumar, V; Abbas, A; Fausto, N. Elsevier, São Paulo, 2006, 848 pp.



Patologia: Bases Clínicopatológicas da Medicina 4a ed., Rubin, E., Guanabara-Koogan, São Paulo, 2006, 1648 pp.



Hill's Atlas of Veterinary Clinical Anatomy®

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