# TS20-27 Urinary System (12.5dpc-P3)

Edited version of MLSupplTable2.pdf from Little et al, 2007 (PMID: 17452023). Edits were made by GUDMAP Editorial Office in May 2008 and are highlighted in yellow.

## TS20 urinary system (12.5dpc)

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urinary system (EMAP:4580)
      mesentery (EMAP:4581)
             rest of mesentery (EMAP:29610)
             urogenital mesentery (EMAP:4582)
      metanephros (EMAP:4587) (kidney)
             cap mesenchyme (syn: condensed mesenchyme) (EMAP:4589)
             pretubular aggregate (EMAP:27674)
             renal vesicle (syn: stage I nephron; syn: epithelial vesicle) (EMAP:27679)
             comma-shaped body (EMAP:27682)
                    upper limb of comma-shaped body (syn:distal limb of comma-shaped body)
                    (EMAP:27685)
                    lower limb of comma-shaped body (syn:proximal limb of comma-shaped
                    body) (EMAP:27688)
             renal interstitium (EMAP:27691)
                    nephrogenic interstitium (syn: peripheral blastema) (EMAP: 31271)
                    resident macrophages (syn: renal monocytes) (EMAP: 31274)
                    rest of renal interstitium (EMAP: 31277)
             developing vasculature (EMAP:27795)
             primitive collecting duct (syn: ureteric tree) (EMAP:4590)
                    ureteric tip (syn: ampulla) (EMAP:27695)
                    ureteric trunk (syn: ureteric stalk) (EMAP:27698)
      nephric duct, metanephric portion (syn: Wolffian duct) (EMAP:4592)
      ureter (EMAP:4591)
             epithelial layer of ureter (EMAP:27709)
             ureteral mesenchyme (EMAP:27712)
                    subepithelial layer (syn: presumptive lamina propria) (EMAP:28562)
                    ureteral mesenchyme, rest of (EMAP:29994)
             ureteral vasculature (EMAP:30851)
      allantois (EMAP:28548)
      urogenital sinus (EMAP:4594)
             primitive bladder (syn: cranial urogenital sinus) (EMAP:30871)
                    epithelial layer of primitive bladder (EMAP:30874)
                    mesenchymal layer of primitive bladder (EMAP:30877)
             rest of urogenital sinus (EMAP:30880)
                    epithelial layer of rest of urogenital sinus (EMAP:30883)
                    mesenchymal layer of rest of urogenital sinus (EMAP:30886)
      urorectal septum (EMAP:4595)
      urogenital membrane (EMAP:4593)
      urethral plate (EMAP:28556)
      urethral fold (EMAP:30889)
      early nephron (syn: early tubule) (EMAP:29339)
             renal vesicle (syn:epithelial vesicle; stage I nephron) (EMAP:27679)
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### **GROUP TERMS (TS20)**

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comma-shaped body (EMAP:27682)
      lower limb of comma-shaped body (syn:distal limb of comma-shaped body)
      (EMAP:27688)
      upper limb of comma-shaped body (syn:proximal limb of comma-shaped
      body) (EMAP:27685)
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urinary system (EMAP:5500)
      mesentery (EMAP:5502)
             rest of mesentery (EMAP:29611)
             urogenital mesentery (EMAP:5503)
      metanephros (syn: kidney) (EMAP:5504)
             renal capsule (EMAP:27715)
             nephrogenic zone (EMAP:27722)
                    nephrogenic interstitium (syn: peripheral blastema (EMAP:5512)
                    cap mesenchyme (syn: condensed mesenchyme) (EMAP:27736)
                    pretubular aggregate (EMAP:27743)
                    ureteric tip (syn: ureteric ampulla) (EMAP:27750)
                    ureteric tree terminal branch excluding tip itself (EMAP: 31046)
             renal vesicle (syn: stage I nephron, syn: epithelial vesicle) (EMAP:27680)
             comma-shaped body (EMAP:27683)
                    upper limb of comma-shaped body (syn:distal limb of comma-shaped body)
                    (EMAP:27686)
                    lower limb of comma-shaped body (syn:proximal limb of comma-shaped
                    body) (EMAP:27689)
             s-shaped body (syn: stage II nephron) (EMAP:27757)
                    renal connecting tubule (EMAP:27759)
                    distal segment of S-shaped body (syn:upper limb of S-shaped body)
                    (EMAP:27761)
                    medial segment of S-shaped body (syn: mid-portion of S-shaped body)
                    (EMAP:27763)
                    proximal segment of S-shaped body (syn: lower limb of S-shaped body)
                    (EMAP:27765)
                           visceral epithelium (EMAP:27767)
                          parietal epithelium (EMAP:27769)
             capillary loop renal corpuscle (syn: renal corpuscle of the stage III nephron)
             (EMAP:27771)
                    visceral epithelium (syn: podocyte layer) (EMAP:27773)
                    parietal epithelium (EMAP:27775)
                    associated interstitium (EMAP:27777)
                    presumptive mesangium (EMAP:27779)
                    presumptive endothelium of renal corpuscle (EMAP:27781)
             renal tubule (EMAP:27783)
                    early proximal tubule (EMAP:27785)
                    anlage of the loop of Henle (EMAP:27787)
                    early distal tubule (EMAP:27789)
                    renal connecting tubule (EMAP:27791)
             renal interstitium (EMAP:27793)
                    renal fibroblasts (EMAP: 31280)
                    resident macrophages (syn: renal monocytes) (EMAP: 31275)
                    rest of renal interstitium (EMAP: 31278)
             developing vasculature (EMAP:27796)
             ureteric trunk (syn: ureteric stalk) (EMAP:28406)
             pelvis (EMAP:5507)
      renal artery (EMAP:28379)
             endothelium of renal artery (EMAP:29996)
             smooth muscle layer of renal artery (EMAP:30004)
      renal vein (EMAP:28383)
             endothelium of renal vein (EMAP:30012)
             smooth muscle layer of renal vein (EMAP:30020)
      ureter (EMAP:5509)
             urothelium (syn:transitional epithelium) (EMAP:28585)
                    superficial cellular layer (syn umbrella cell layer) (EMAP:28589)
                    deep cellular layer (syn basal urothelium) (EMAP:30027)
             ureteral mesenchyme (EMAP:28557)
                    subepithelial layer (syn: presumptive lamina propria) (EMAP:28563)
                    middle layer (syn: presumptive ureteral smooth muscle layer)
                    (EMAP:28568)
                    outer layer (syn: presumptive adventitia) (EMAP:28571)
             ureteral vasculature (EMAP:30852)
      allantois (EMAP:28549)
      urogenital sinus (EMAP:5517)
             primitive bladder (EMAP:30872)
                    epithelium of bladder (EMAP:30875)
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mesenchyme of bladder (EMAP:30878)
                   urethra (EMAP:30892)
                          pelvic urethra (EMAP:30894)
                          caudal urethra (EMAP:30896)
                          urethral plate (EMAP:30898)
                          urethral fold (EMAP:30900)
             urorectal septum (EMAP:5521)
             urogenital membrane (EMAP:5516)
GROUP TERMS (TS21)
      primitive collecting duct (syn: ureteric tree) (GROUP) (EMAP:5508)
             ureteric tip (syn: ureteric ampulla) (EMAP:27750)
             ureteric tree terminal branch excluding tip itself (EMAP:31046)
             ureteric trunk (syn:ureteric stalk) (EMAP:28406)
      renal vasculature (GROUP) (EMAP:28458)
             renal artery (EMAP:28379)
                   endothelium of renal artery (EMAP:29996)
                   smooth muscle layer of renal artery (EMAP:30004)
             renal vein (EMAP:28383)
                   endothelium of renal vein (EMAP:30012)
                   smooth muscle layer of renal vein (EMAP:30020)
             presumptive endothelium of renal corpuscle (EMAP:27781)
             developing vasculature (EMAP:27796)
      early tubule (GROUP) (EMAP:5513)
             renal vesicle (epithelial vesicle; stage I nephron) (EMAP:27680)
             comma-shaped body (EMAP:27683)
                   proximal segment of comma-shaped body (syn:lower limb of comma-shaped
                   body) (EMAP:27689)
                   distal segment of comma-shaped body (syn:upper limb of comma-shaped body)
                   (EMAP:27686)
             S-shaped body (EMAP:27757) (stage II nephron)
                   distal segment of S-shaped body (syn:upper limb of S-shaped body)
                   (EMAP:27761)
                   medial segment of S-shaped body (syn:mid-portion of S-shaped body)
                   (EMAP:27763)
                   proximal segment of S-shaped body (syn:lower limb of S-shaped body)
                   (EMAP:27765)
                          parietal epithelium (EMAP:27769)
                          visceral epithelium (EMAP:27767)
                   renal connecting tubule (EMAP:27759)
      nephron (GROUP) (EMAP:5513)
             renal vesicle (epithelial vesicle; stage I nephron) (EMAP:27680)
             comma-shaped body (EMAP:27683)
                   proximal segment of comma-shaped body (syn:lower limb of comma-shaped
                   body) (EMAP:27689)
                   distal segment of comma-shaped body (syn:upper limb of comma-shaped body)
                   (EMAP:27686)
             S-shaped body (EMAP:27757) (stage II nephron)
                   distal segment of S-shaped body (syn:upper limb of S-shaped body)
                   (EMAP:27761)
                   medial segment of S-shaped body (syn:mid-portion of S-shaped body)
                   (EMAP:27763)
                   proximal segment of S-shaped body (syn:lower limb of S-shaped body)
                   (EMAP:27765)
                          parietal epithelium (EMAP:27769)
                          visceral epithelium (EMAP:27767)
                   renal connecting tubule (EMAP:27759)
             capillary loop renal corpuscle (syn: renal corpuscle of the stage III nephron)
             (EMAP:27771)
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associated interstitium of renal corpuscle (EMAP:27777)
parietal epithelium (EMAP:27775)
presumptive endothelium of renal corpuscle (EMAP:27781)
presumptive mesangium (EMAP:27779)
visceral epithelium (syn:podocyte layer) (EMAP:27773)
renal tubule (EMAP:27783)
anlagen of Loop of Henle (EMAP:27787)
early distal tubule (EMAP:27789)
early proximal tubule (EMAP:27785)
renal connecting tubule (EMAP:27791)
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# TS22 urinary system (14.5dpc)

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urinary system (EMAP:6667)
      mesentery (EMAP:6672)
             rest of mesentery (EMAP:29612)
             urogenital mesentery (EMAP:6673)
      metanephros (syn:kidney) (EMAP:6674)
             renal capsule (EMAP:27716)
             nephrogenic zone (EMAP:27723)
                   nephrogenic interstitium (syn: peripheral blastema) (EMAP:27730)
                    cap mesenchyme (syn: condensed mesenchyme) (EMAP:27737)
                    pretubular aggregate (syn pretubular condensate) (EMAP:27744)
                    ureteric tip (syn: ureteric ampulla) (EMAP:27751)
                   ureteric tree terminal branch (EMAP: 31047)
             renal cortex (EMAP:6681)
                   renal vesicle (syn:stage I nephron, syn: epithelial vesicle) (EMAP:27830)
                   comma-shaped body (EMAP:27836)
                          upper limb of comma-shaped body (syn:distal limb of comma-
                          shaped body) (EMAP:27842)
                          lower limb of comma-shaped body (syn:proximal limb of comma-
                          shaped body) (EMAP:27848)
                   s-shaped body (syn: stage II nephron) (EMAP:27854)
                          renal connecting tubule (EMAP:27866)
                          distal segment of S-shaped body (syn:upper limb of S-shaped body)
                          (EMAP:27872)
                          medial segment of S-shaped body (syn: mid-portion of S-shaped
                          body) (EMAP:27878)
                          proximal segment of S-shaped body (syn: lower limb of S-shaped
                          body) (EMAP:27884)
                                 visceral epithelium (EMAP:27896)
                                 parietal epithelium (EMAP:27902)
                          visceral epithelium (syn: podocyte layer) (EMAP:27914)
                          parietal epithelium (EMAP:27920)
                          associated interstitium of renal corpuscle (EMAP:27926)
                          presumptive mesangium (EMAP:27932)
                          presumptive endothelium of renal corpuscle (EMAP:27938)
                   capillary loop renal corpuscle (syn: renal corpuscle of Stage III nephron)
                    (EMAP:27908)
                          associated interstitium of renal corpuscle (EMAP:27926)
                          parietal epithelium (EMAP:27920)
                          presumptive endothelium of renal corpuscle (EMAP:27938)
                          presumptive mesangium (EMAP:27932)
                          visceral epithelium (EMAP:27914) (podocyte layer)
                    maturing renal corpuscle (syn: renal corpuscle of Stage IV nephron)
                    (EMAP:27944)
                          maturing glomerular tuft (syn: maturing glomerulus) (EMAP:27950)
                                 glomerular capillary system (EMAP:27956)
                                 glomerular mesangium (EMAP:27962)
                                 visceral epithelium (syn: podocyte layer) (EMAP:27968)
                                 glomerular basement membrane (EMAP:30966)
                          Bowman's capsule (syn: glomerular capsule) (EMAP:27974)
                                 parietal epithelium (EMAP:27980)
                                 urinary space of renal corpuscle (syn: Bowman's space)
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(EMAP:27986)

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juxtaglomerular arteriole (EMAP:27992)
       cortical renal tubule (EMAP:27998)
             early proximal tubule (EMAP:28004)
             anlage of loop of Henle (syn: primitive loop of Henle) (EMAP:
             31282)
             early distal tubule (EMAP:28008)
             renal connecting tubule (EMAP:28012)
      cortical collecting duct (EMAP:28131)
      renal cortical interstitium (syn:cortical stroma) (EMAP:28137)
             renal cortical fibroblasts (EMAP: 31289)
             resident macrophages of the cortex (syn: renal monocytes of the
             cortex) (EMAP: 31297)
             rest of renal cortical interstitium (EMAP: 31305)
      developing vasculature of cortex (EMAP:28030)
             arterial cortical vasculature (EMAP:28036)
             venous cortical vasculature (EMAP:28038)
             cortical capillary (EMAP:28040)
renal medulla (EMAP:28042)
      immature loop of Henle (EMAP: 28050)
             bend (EMAP: 31022)
             straight limb (EMAP: 31018)
      medullary collecting duct (EMAP:28062)
      renal medullary interstitium (syn:medullary stroma) (EMAP:6685)
             renal medullary fibroblasts (EMAP: 31461)
             resident macrophages of the medulla (syn: renal monocytes of the
             medulla) (EMAP: 31462)
             rest of renal medullary interstitium (EMAP: 31463)
       developing vasculature of medulla (EMAP:28070)
             arterial medullary vasculature (EMAP:28072)
             venous medullary vasculature (EMAP:28074)
             medullary capillary (EMAP:28076)
pelvis (EMAP:6677)
      pelvic urothelial lining (syn: pelvic urothelium) (EMAP:28078)
      perihilar interstitium (EMAP:28084)
renal artery (EMAP:28380)
      endothelium of renal artery (EMAP:29997)
      smooth muscle layer of renal artery (EMAP:30005)
renal vein (EMAP:28384)
      endothelium of renal vein (EMAP:30013)
      smooth muscle layer of renal vein (EMAP:30021)
ureter (syn: primitive ureter) (EMAP:6679)
       urothelium (syn:transitional epithelium) (EMAP:28090)
             superficial cellular layer (syn: umbrella cell) (EMAP:28590)
             deep cellular layer (syn:basal urothelium) (EMAP:28102)
       ureteral mesenchyme (EMAP:28558)
             subepithelial layer (syn: presumptive lamina propria) (EMAP:28564)
             middle layer (syn: presumptive ureteral smooth muscle layer)
             (EMAP:28569)
             outer layer (syn: presumptive adventitia) (EMAP:28572)
      ureteral vasculature (EMAP:30853)
urachus (EMAP:6670)
bladder (EMAP:6668)
      epithelium of the bladder (syn:urothelium) (EMAP:28602)
             epithelium of fundus (EMAP:28608)
             epithelium of trigone (EMAP:28614)
             epithelium of neck (EMAP:30082)
      lamina propria of the bladder (EMAP:30089)
             lamina propria of the fundus (EMAP:30103)
             lamina propria of the trigone (EMAP:30110)
             lamina propria of the neck (EMAP:30117)
      muscularis mucosa of bladder (EMAP:28620)
             muscularis mucosa of fundus (EMAP:28626)
             muscularis mucosa of trigone (EMAP:28632)
             muscularis mucosa of neck (EMAP:30138)
      detrusor muscle of bladder (EMAP:28638)
             detrusor muscle of fundus (EMAP:28644)
             detrusor muscle of trigone (EMAP:28650)
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detrusor muscle of neck (EMAP:30124)
             serosa of bladder (EMAP:28662)
                    serosa of fundus (EMAP:28668)
                    serosa of trigone (EMAP:28674)
                    serosa of neck (EMAP:30131)
             blood vessels of bladder (EMAP:28680)
      urethra (EMAP:30902)
             pelvic urethra (EMAP:30904)
                    epithelial layer of pelvic urethra (EMAP:30906)
                    mesenchymal layer of pelvic urethra (EMAP:30908)
                    muscle layer of pelvic urethra (EMAP:30910)
             phallic urethra (EMAP:30912)
                    urethral plate of phallic urethra (EMAP:30914)
                    urethral fold of phallic urethra (EMAP:30916)
      urorectal septum (EMAP:6692)
      urogenital membrane (EMAP:6688)
GROUP TERMS (TS22)
developing capillary loop stage nephron (syn:stage III nephron) (GROUP)
(EMAP:28507)
      capillary loop renal corpuscle (syn: renal corpuscle of Stage III nephron)
      (EMAP:27908)
             associated interstitium of renal corpuscle (EMAP:27926)
             parietal epithelium (EMAP:27920)
             presumptive endothelium of renal corpuscle (EMAP:27938)
             presumptive mesangium (EMAP:27932)
             visceral epithelium (syn:podocyte layer) (EMAP:27914)
      cortical renal tubule (syn:tubular portion of nephron) (EMAP:27998) GROUP
             early distal tubule (EMAP:28008)
             anlage of loop of Henle (syn: primitive loop of Henle) (EMAP: 31282)
             early proximal tubule (EMAP:28004)
             renal connecting tubule (EMAP:28012)
maturing nephron (syn: Stage IV nephron )GROUP (EMAP:28446)
      maturing renal corpuscle (syn: renal corpuscle of stage IV nephron )
      (EMAP:27944)
             Bowman's capsule (syn:glomerular capsule) (EMAP:27974)
                    parietal epithelium (EMAP:27980)
                    urinary space of renal corpuscle (syn:Bowman's space)
                    (EMAP:27986)
             juxtaglomerular arteriole (EMAP:27992)
             maturing glomerular tuft (syn:maturing glomerulus) (EMAP:27950)
                    glomerular capillary system (EMAP:27956)
                    glomerular mesangium (EMAP:27962)
                    visceral epithelium (syn:podocyte layer) (EMAP:27968)
      cortical renal tubule (EMAP:27998) GROUP
             early distal tubule (EMAP:28008)
             early proximal tubule (EMAP:28004)
             renal connecting tubule (EMAP:28012)
      medullary renal tubule (EMAP:31415) GROUP
             immature loop of Henle (EMAP:28050)
                    straight limb (EMAP:28056)
                    bend (syn: U-turn) (EMAP:28058)
             rest of medullary tubule (EMAP:28060)
renal vasculature (GROUP) (EMAP:28459)
      developing vasculature of cortex (EMAP:28030)
             arterial cortical vasculature (EMAP:28036)
             cortical capillary (EMAP:28040)
             venous cortical vasculature (EMAP:28038)
      developing vasculature of medulla (EMAP:28070)
             arterial medullary vasculature (EMAP:28072)
             medullary capillary (EMAP:28076)
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venous medullary vasculature (EMAP:28074)
      glomerular capillary system (EMAP:27956)
      juxtaglomerular arteriole (EMAP:27992)
      presumptive endothelium (EMAP:27938)
      renal artery (EMAP:28380)
             endothelium of renal artery (EMAP:29997)
             smooth muscle layer of renal artery (EMAP:30005)
      renal vein (EMAP:28384)
             endothelium of renal vein (EMAP:30013)
             smooth muscle layer of renal vein (EMAP:30021)
collecting duct (GROUP) (EMAP:6678)
      ureteric tip (EMAP:27751) (syn:ureteric ampulla)
      ureteric tree terminal branch (syn:collecting duct terminal branch) (EMAP:31047)
      ureteric trunk (EMAP:28495)
             medullary collecting duct (EMAP:28062)
             renal cortical collecting duct (EMAP:28131)
renal interstitium (GROUP) (EMAP:28519)
      associated interstitium (EMAP:27926)
      glomerular mesangium (EMAP:27962)
      perihilar interstitium (EMAP:28084)
      nephrogenic interstitium (syn: peripheral blastema) (EMAP:27730)
      presumptive mesangium (EMAP:27932)
      renal cortical interstitium (syn:cortical stroma) (EMAP:28137)
             renal cortical fibroblast (EMAP: 31289)
             resident macrophages of the cortex (syn: renal monocytes of the cortex)
             (EMAP: 31297)
             rest of renal cortical interstitium (EMAP: 31305)
      renal medullary interstitium (syn:medullary stroma) (EMAP:28066)
             renal medullary fibroblast (EMAP 31461)
             resident macrophages of the medulla (syn: renal monocytes of the
             medulla) (EMAP 31462)
             rest of medullary interstitium (EMAP 31463)
early tubule (GROUP) (EMAP:28501)
      renal vesicle (EMAP:27830) (epithelial vesicle; stage I nephron)
      comma-shaped body (EMAP: 27836)
             distal segment of comma-shaped body (syn:upper limb of comma-shaped
             body) (EMAP:27842)
             proximal segment of comma-shaped body (syn:lower limb of comma-
             shaped body) (EMAP:27848)
      S-shaped body (EMAP:27854) (stage II nephron)
             distal segment of S-shaped body (syn:upper limb of S-shaped body)
             (EMAP:27872)
             medial segment of S-shaped body (syn:mid-portion of S-shaped body)
             (EMAP:27878)
             proximal segment of S-shaped body (syn:lower limb of S-shaped body)
             (EMAP:27884)
                    parietal epithelium (EMAP:27902)
                    visceral epithelium (EMAP:27896)
             renal connecting tubule (EMAP:27866)
Late tubule (GROUP) (EMAP:28528)
      capillary loop renal corpuscle (syn: renal corpuscle of Stage III nephron)
      (EMAP:27908)
             associated interstitium of renal corpuscle (EMAP:27926)
             parietal epithelium (EMAP:27920)
             presumptive endothelium (EMAP:27938)
             presumptive mesangium (EMAP:27932)
             visceral epithelium (syn:podocyte layer) (EMAP:27914)
      maturing renal corpuscle (syn: renal corpuscle of stage IV nephron)
      (EMAP:27944)
             Bowman's capsule (syn:glomerular capsule) (EMAP:27974)
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parietal epithelium (EMAP:27980)
                    urinary space of renal corpuscle (syn:Bowman's space)
                    (EMAP:27986)
             iuxtaglomerular arteriole (EMAP:27992)
             maturing glomerular tuft (syn:maturing glomerulus) (EMAP:27950)
                    glomerular capillary system (EMAP:27956)
                    glomerular mesangium (EMAP:27962)
                    visceral epithelium (syn:podocyte layer) (EMAP:27968)
             cortical renal tubule (EMAP:27998)
                    early distal tubule (EMAP:28008)
                    early proximal tubule (EMAP:28004)
                    renal connecting tubule (EMAP:28012)
             medullary renal tubule (EMAP:31415) GROUP
                   immature loop of Henle (EMAP:28050)
                          straight limb (EMAP:28056)
                          bend (syn: U-turn) (EMAP:28058)
                    rest of medullary tubule (EMAP:28060)
nephron (GROUP) (EMAP:29341)
      renal vesicle (EMAP:27830) (epithelial vesicle; stage I nephron)
      comma-shaped body (EMAP:27836)
             proximal segment of comma-shaped body (syn:lower limb of comma-
             shaped body) (EMAP:27848)
             distal segment of comma-shaped body (syn:upper limb of comma-shaped
             body) (EMAP:27842)
      S-shaped body (EMAP:27854) (stage II nephron)
             distal segment of S-shaped body (syn:upper limb of S-shaped body)
             (EMAP:27872)
             medial segment of S-shaped body (syn:mid-portion of S-shaped body)
             (EMAP:27878)
             proximal segment of S-shaped body (syn:lower limb of S-shaped body)
             (EMAP:27884)
                    parietal epithelium (EMAP:27902)
                    visceral epithelium (EMAP:27896)
             renal connecting tubule (EMAP:27866)
      capillary loop renal corpuscle (syn: renal corpuscle of stage III nephron)
      (EMAP:27908)
             associated interstitium of renal corpuscle (EMAP:27926)
             parietal epithelium (EMAP:27920)
             presumptive endothelium of renal corpuscle (EMAP:27938)
             presumptive mesangium (EMAP:27932)
             visceral epithelium (EMAP:27914) (podocyte layer)
      maturing renal corpuscle (syn: renal corpuscle of stage IV nephron)(EMAP:27944)
             Bowman's capsule (syn:glomerular capsule) (EMAP:27974)
             parietal epithelium (EMAP:27980)
             urinary space of renal corpuscle (syn:Bowman's space) (EMAP:27986)
      juxtaglomerular arteriole (EMAP:27992)
      maturing glomerular tuft (syn:maturing glomerulus) (EMAP:27950)
             glomerular capillary system (EMAP:27956)
             glomerular mesangium (EMAP:27962)
             visceral epithelium (syn:podocyte layer) (EMAP:27968)
      cortical renal tubule (EMAP:27998)
             early distal tubule (EMAP:28008)
             anlage of loop of Henle (syn: primitive loop of Henle) (EMAP: 31282)
             early proximal tubule (EMAP:28004)
             renal connecting tubule (EMAP:28012)
      medullary renal tubule (EMAP:31415) GROUP
             immature loop of Henle (EMAP:28050)
                    straight limb (EMAP:28056)
                    bend (syn: U-turn) (EMAP:28058)
             rest of medullary tubule (EMAP:28060)
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urinary system (EMAP:8217)
      metanephros (syn: kidney) (EMAP:8226)
             renal capsule (EMAP:8237)
             nephrogenic zone (EMAP:27724)
                    nephrogenic interstitium (syn: peripheral blastema) (EMAP:27731)
                    cap mesenchyme (syn: condensed mesenchyme) (EMAP:27738)
                    pretubular aggregate (syn: pretubular condensate) (EMAP:27745)
                    ureteric tip (syn: ureteric ampulla) (EMAP:27752)
                    ureteric tree terminal branch excluding tip itself (EMAP:31048)
             renal cortex (EMAP:8236)
                    renal vesicle (syn: epithelial vesicle; syn: Stage I nephron) (EMAP:27831)
                    comma-shaped body (EMAP:27837)
                           upper limb of comma-shaped body (syn: distal limb of comma-
                           shaped body) (EMAP:27843)
                           lower limb of comma-shaped body (syn: proximal limb of comma-
                           shaped body) (EMAP:27849)
                    S-shaped body (syn: stage II nephron) (EMAP:27855)
                           renal connecting tubule (EMAP:27867)
                           distal segment of S-shaped body (syn: upper limb of S-shaped
                           body) (EMAP:27873)
                           medial segment of S-shaped body (syn: mid-portion of S-shaped
                           body) (EMAP:27879)
                           proximal segment of S-shaped body (syn: lower limb of S-shaped
                           body) (EMAP:27885)
                                 visceral epithelium (EMAP:27897)
                                 parietal epithelium (EMAP:27903)
                    capillary loop renal corpuscle (syn: renal corpuscle of the stage III nephron)
                    (EMAP:27909)
                           visceral epithelium (syn: podocyte layer) (EMAP:27915)
                           parietal epithelium (EMAP:27921)
                           presumptive mesangium (EMAP:27933)
                           presumptive endothelium of renal corpuscle (EMAP:27939)
                           associated interstitium of renal corpuscle (EMAP:27927)
                    maturing renal corpuscle (syn: renal corpuscle of stage IV nephron)
                    (EMAP:27945)
                          maturing glomerular tuft (syn: maturing glomerulus) (EMAP:27951)
                                 glomerular capillary system (EMAP:27957)
                                 glomeruluar basement membrane (EMAP: 30967)
                                 glomerular mesangium (EMAP:27963)
                                 visceral epithelium (syn: podocyte layer) (EMAP:27969)
                           Bowman's capsule (syn: glomerular capsule) (EMAP:27975)
                                 parietal epithelium (EMAP:27981)
                                 urinary space of renal corpuscle (syn: Bowman's space)
                                 (EMAP:27987)
                                 glomerular mesangium of Bowman's capsule (EMAP:30033)
                          juxtaglomerular arteriole (EMAP:27993)
                    cortical renal tubule (EMAP:27999)
                           early proximal tubule (EMAP:28005)
                           anlage of loop of Henle (syn: primitive loop of Henle) (EMAP:31283)
                           early distal tubule (EMAP:28009)
                           renal connecting tubule (EMAP:28013)
                    cortical collecting duct (EMAP:28132)
                    renal cortical interstitium (syn:cortical stroma) (EMAP:28138)
                           renal cortical fibroblasts (EMAP: 31290)
                           resident macrophages of the cortex (syn: renal monocytes of the
                           cortex) (EMAP: 31298)
                           rest of renal cortical interstitium (EMAP: 31306)
                    renal cortical lymphatics (EMAP: 31313)
                    renal cortical nerves (EMAP: 31320)
                    renal cortical vasculature (EMAP:28143)
                           renal cortical arterial system (EMAP:28148)
                           renal cortical venous system (EMAP:28153)
                           renal cortical capillary (EMAP:30038)
             renal medulla (EMAP:28043)
                    immature loop of Henle (EMAP:30864)
                           straight limb (EMAP: 31019)
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bend (syn: U-turn) (EMAP: 31023)

```
renal medullary interstitium (syn: medullary stroma) (EMAP:8241)
                    renal medullary fibroblasts (EMAP: 31327)
                    resident macrophages of the medulla (syn: renal monocytes of the
                    medulla) (EMAP: 31334)
                    rest of renal medullary interstitium (EMAP: 31341)
             renal medullary lymphatics (EMAP: 31348)
             renal medullary nerves (EMAP: 31355)
             renal medullary vasculature (EMAP:28158)
                    renal medullary arterial system (EMAP:28163)
                    renal medullary venous system (EMAP:28168)
                    renal medullary capillary (syn vasa recta) (EMAP:30044)
             medullary collecting duct (EMAP:28063)
      calyx (EMAP:8229)
      pelvis (EMAP:8232)
             pelvic urothelial lining (syn: pelvic urothelium) (EMAP:28079)
             pelvic smooth muscle (EMAP:28121)
             perihilar interstititum (EMAP:28085)
renal artery (EMAP:28381)
      smooth muscle layer of renal artery (EMAP:30006)
      endothelial layer of renal artery (EMAP:29977)
renal vein (EMAP:28385)
      smooth muscle layer of renal vein (EMAP:30022)
      endothelial layer of renal vein (EMAP:29965)
ureter (syn: primitive ureter) (EMAP:8234)
      urothelium (syn: transitional epithelium) (EMAP:28091)
              superficial cellular layer (syn: umbrella cell) (EMAP:28591)
              deep cellular layer (syn: basal urothelium) (EMAP:28103)
                    intermediate cell layer (EMAP:28802)
                    basal cell layer (EMAP:28807)
      ureteral mesenchyme (EMAP:28559)
             subepithelial layer (syn: presumptive lamina propria) (EMAP:28565)
             ureteral smooth muscle layer (syn: presumptive ureteral smooth muscle
             layer) (EMAP:28812)
                    smooth muscle component (EMAP:28815)
                    interstitium (syn: Cajal cell) (EMAP:30151)
             outer layer (syn: presumptive adventitia) (EMAP:28573)
      ureteral vasculature (EMAP:30854)
urachus (EMAP:8223)
bladder (EMAP:8219)
      epithelium of bladder (syn: urothelium) (EMAP:28603)
             epithelium of fundus (EMAP:28609)
             epithelium of trigone (EMAP:28615)
             epithelium of neck (EMAP:30083)
      lamina propria of the bladder (EMAP:30090)
             lamina propria of the fundus (EMAP:30104)
             lamina propria of the trigone (EMAP:30111)
             lamina propria of the neck (EMAP:30118)
      muscularis mucosa of bladder (EMAP:28621)
             muscularis mucosa of fundus (EMAP:28627)
             muscularis mucosa of trigone (EMAP:28633)
             muscularis mucosa of neck (EMAP:30139)
      detrusor muscle of bladder (EMAP:28639)
             detrusor muscle of fundus (EMAP:28645)
             detrusor muscle of trigone (EMAP:28651)
             detrusor muscle of neck (EMAP:30125)
      serosa of bladder (EMAP:28663)
             serosa of fundus (EMAP:28669)
             serosa of trigone (EMAP:28675)
             serosa of neck (EMAP:30132)
      adventitia of bladder (EMAP:28827)
             adventitia of fundus (EMAP:28832)
             adventitia of trigone (EMAP:28837)
             adventitia of neck (EMAP:30145)
      blood vessels of bladder (EMAP:28681)
urethra of male (EMAP:8274)
      pelvic urethra of male (EMAP:28693)
             epithelial layer of pelvic urethra of male (EMAP:28699)
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mesenchymal layer of pelvic urethra of male (EMAP:28705)
                    muscle layer of pelvic urethra of male (EMAP:28711)
             phallic urethra of male (syn: external urethra of male) (EMAP:28717)
                    urethral plate of male (EMAP:28723)
                    urethral fold of male (EMAP:8275)
      urethra of female (EMAP:28749)
             pelvic urethra of female (EMAP:28755)
                    epithelial layer (EMAP:28761)
                    muscle layer (EMAP:28773)
                    mesenchymal layer (EMAP:28767)
             phallic urethra of female (syn: external urethra of female) (EMAP:30918)
                    urethral plate of female (EMAP:30925)
                    urethral fold of female (EMAP:30928)
      mesentery (EMAP:8224)
             rest of mesentery (EMAP:29613)
             urogenital mesentery (EMAP:8225)
      urorectal septum (EMAP:8243)
GROUP TERMS (TS23):
developing capillary loop nephron (syn; stage III nephron) (GROUP) (EMAP:28508)
      capillary loop stage renal corpuscle (syn: renal corpuscle of Stage III nephron)
      (EMAP:27909)
             associated interstitium of renal corpuscle (EMAP:27927)
             parietal epithelium of renal corpuscle (EMAP:27921)
             presumptive endothelium (EMAP:27939)
             presumptive mesangium (EMAP:27933)
             visceral epithelium (syn:podocyte layer) (EMAP:27915)
      cortical renal tubule (syn:tubular portion of nephron) (EMAP:27999)
             early distal tubule (EMAP:28009)
             anlage of loop of Henle (syn: primitive loop of Henle) (EMAP:31283)
             early proximal tubule (EMAP:28005)
             renal connecting tubule (EMAP:28013)
maturing nephron (syn: stage IV nephron) (GROUP) (EMAP:28487)
      maturing renal corpsucle (syn: renal corpuscle of stage IV nephron)(EMAP:27945)
             Bowman's capsule (syn:glomerular capsule) (EMAP:27975)
                    parietal epithelium (EMAP:27981)
                    urinary space of renal corpuscle (syn:Bowman's space) (EMAP:27987)
             juxtaglomerular arteriole (EMAP:27993)
             maturing glomerular tuft (syn:maturing glomerulus) (EMAP:27951)
                    glomerular capillary system (EMAP:27957)
                    glomerular mesangium (EMAP:27963)
                    visceral epithelium (syn:podocyte layer) (EMAP:27969)
      cortical renal tubule (syn:tubular portion of nephron) (EMAP:27999)
             early distal tubule (EMAP:28009)
             early proximal tubule (EMAP:28005)
             renal connecting tubule (EMAP:28013)
      medullary renal tubule (EMAP: 31416) GROUP
             immature loop of Henle (EMAP:30864)
                    straight limb (EMAP:28176)
                    bend (syn: U-turn) (EMAP:28179)
      collecting duct (GROUP) (EMAP:8233)
             ureteric tip (syn:ureteric ampulla) (EMAP:27752)
             ureteric tree terminal branch excluding tip itself (syn:collecting duct terminal
             branch) (EMAP 31048)
             ureteric trunk (EMAP: 28496)
                    medullary collecting duct (EMAP:28063)
                    renal cortical collecting duct (EMAP:28132)
```

# renal interstitium group (GROUP) (EMAP:28520)

associated interstitium (EMAP:27927)

```
glomerular mesangium (EMAP:27963)
             perihilar interstitium (EMAP:28085)
             nephrogenic interstitium (syn: peripheral blastema) (EMAP:27731)
             presumptive mesangium (EMAP:27933)
             renal cortical interstitium (syn:cortical stroma) (EMAP:28138)
                    renal cortical fibroblast (EMAP: 31290)
                    resident macrophage of the cortex (syn: renal moncytes of the cortex)
                    (EMAP: 31298)
                    rest of renal cortical interstitium (EMAP: 31306)
             renal medullary interstitium (syn:medullary stroma) (EMAP:8241)
                    renal medullary fibroblast (EMAP: 31327)
                    resident macrophage of the medulla (syn: renal moncytes of the medulla)
                    (EMAP: 31334)
                    rest of renal medullary interstitium (EMAP: 31341)
renal vasculature (GROUP) (EMAP:28460)
      glomerular capillary system (EMAP:27957)
      juxtaglomerular arteriole (EMAP:27993)
      presumptive endothelium of renal corpuscle (EMAP:27939)
      renal artery (EMAP:28381)
             endothelial layer (EMAP:29977)
             smooth muscle layer (EMAP:29971)
      renal vein (EMAP:28385)
             endothelial layer (EMAP:29965)
             smooth muscle layer (EMAP:29959)
      renal cortical vasculature (EMAP:28143)
             renal cortical arterial system (EMAP:28148)
             renal cortical venous system (EMAP:28153)
             renal cortical capillaries - (EMAP: 30038)
      renal medullary vasculature (EMAP:28158)
             renal medullary arterial system (EMAP:28163)
             renal medullary venous system (EMAP:28168)
             renal medullary capillaries (EMAP: 30044)
early tubule (GROUP) (EMAP:8239)
      renal vesicle (syn: epithelial vesicle; syn: Stage I nephron) EMAP: 27831
      comma-shaped body (EMAP:27837)
             upper limb of comma-shaped body (syn: distal limb of comma-shaped body)
             (EMAP:27843)
             lower limb of comma-shaped body (syn: proximal limb of comma-shaped body)
             (EMAP:27849)
      S-shaped body (syn: Stage II nephron) (EMAP: 27855)
             renal connecting tubule (EMAP: 27867)
             distal segment of S-shaped body (syn:upper limb of S-shaped body) (EMAP:
             medial segment of S-shaped body (syn: mid-portion of S-shaped body) (EMAP:
             27879)
             proximal segment of S-shaped body (syn: lower limb of S-shaped body) (EMAP:
             27885)
                    visceral epithelium (EMAP: 27987)
                    parietal epithelium (EMAP: 27903)
late tubule (GROUP) (EMAP:28529)
      capillary loop renal corpuscle (syn: renal corpuscle of Stage III nephron) (EMAP:27909)
             visceral epithelium (syn: podocyte layer) (EMAP: 29815)
             parietal epithelium (EMAP: 27921)
             presumptive mesangium (EMAP: 27933)
             presumptive endothelium of renal corpuscle (EMAP: 27939)
             associated interstitium of renal corpuscle (EMAP: 27927)
      maturing renal corpuscle (syn: renal corpuscle of Stage IV nephron) (EMAP: 27945)
             maturing glomerular tuft (syn: maturing glomerulus) (EMAP: 27951)
                    glomerular capillary system (EMAP: 27957)
                    glomerular mesangium (EMAP: 27963)
                    visceral epithelium (syn: podocyte layer) (EMAP: 27969)
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glomerular basement membrane (EMAP: 30967)
Bowman's capsule (syn: glomerular capsule) (EMAP: 27975)
parietal epithelium (EMAP: 27981)
urinary space of renal corpuscle (syn: Bowman's space) (EMAP:27987)
juxtaglomerular arterioles (EMAP: 27993)
cortical renal tubule (syn:tubular portion of nephron) (EMAP:27999) GROUP
early distal tubule (EMAP:28009)
anlage of loop of Henle (syn: primitive loop of Henle) (EMAP:31283)
early proximal tubule (EMAP:28005)
renal connecting tubule (EMAP:38013)
medullary renal tubule (EMAP: 31416)
immature loop of Henle (EMAP:30864)
straight limb (EMAP:28176)
bend (syn: U-turn) (EMAP:28179)
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## TS24 urinary system (16.5dpc)

```
urinary system (EMAP:9526)
      metanephros (syn: kidney) (EMAP:9536)
             renal capsule (EMAP:9547)
             nephrogenic zone (EMAP:27725)
                    nephrogenic interstitium (syn: peripheral blastema) (EMAP:27732)
                    cap mesenchyme (syn: condensed mesenchyme) (EMAP:27739)
                    pretubular aggregate (syn: pretubular condensate) (EMAP:27746)
                    ureteric tip (syn: ureteric ampulla) (EMAP:27753)
                    ureteric tree terminal branch (EMAP:31049)
             renal cortex (EMAP:9546)
                    renal vesicle (syn: stage I nephron, syn: epithelial vesicle) (EMAP:27832)
                    comma-shaped body (EMAP:27838)
                          upper limb of comma-shaped body (syn: distal limb of comma-
                          shaped body) (EMAP:27844)
                          lower limb of comma-shaped body (syn: proximal limb of comma-
                          shaped body) ( (EMAP:27850)
                    S-shaped body (syn: stage II nephron) (EMAP:27856)
                          renal connecting tubule (EMAP:27868)
                          distal segment of S-shaped body (syn: upper limb of S-shaped
                          body) (EMAP:27874)
                          medial segment of S-shaped body (syn: mid-portion of S-shaped
                          body) (EMAP:27880)
                          proximal segment of S-shaped body (syn: lower limb of S-shaped
                          body) (EMAP:27886)
                                 visceral epithelium (EMAP:27898)
                                 parietal epithelium (EMAP:27904)
                    capillary loop renal corpuscle (syn: renal corpuscle of the stage III nephron)
                    (EMAP:27910)
                          visceral epithelium (syn: podocyte layer) (EMAP:27916)
                          parietal epithelium (EMAP:27922)
                          presumptive mesangium (EMAP:27934)
                          presumptive endothelium of renal corpuscle (EMAP:27940)
                          associated interstitium of renal corpuscle (EMAP:27928)
                    maturing renal corpuscle (syn: renal corpuscle of Stage IV nephron)
                    (EMAP:27946)
                          maturing glomerular tuft (syn: maturing glomerulus) (EMAP:27952)
                                 glomerular capillary system (EMAP:27958)
                                 glomerular mesangium (EMAP:27964)
                                 visceral epithelium (syn: podocyte layer) (EMAP:27970)
                                 glomerular basement membrane (EMAP:30968)
                          Bowman's capsule (syn: glomerular capsule) (EMAP:27976)
                                 parietal epithelium (EMAP:27982)
                                 urinary space of renal corpuscle (syn: Bowman's space)
                                 (EMAP:27988)
                          juxtaglomerular arteriole (EMAP:27994)
                    cortical renal tubule (EMAP:9556)
                          early proximal tubule (EMAP:28006)
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anlage of loop of Henle (syn: primitive loop of Henle) (EMAP:
              31284)
              early distal tubule (EMAP:28010)
              renal connecting tubule (EMAP:28014)
       cortical collecting duct (EMAP:28133)
       renal cortical interstitium (syn:cortical stroma) (EMAP:28139)
              renal cortical fibroblast (EMAP: 31291)
              resident macrophage of the cortex (syn: renal moncytes of the
              cortex) (EMAP: 31299)
              rest of renal cortical interstitium (EMAP: 31307)
       renal cortical lymphatics (EMAP: 31314)
      renal cortical nerves (EMAP: 31321)
      renal cortical vasculature (EMAP:28144)
              renal cortical arterial system (EMAP:28149)
              renal cortical venous system (EMAP:28154)
              renal cortical capillary (EMAP:30039)
renal medulla (EMAP:28044)
       immature loop of Henle (EMAP: 30865)
              straight limb (EMAP: 31020)
              bend (svn: U-turn) (EMAP: 31024)
       renal medullary interstitium (syn: medullary stroma) (EMAP:9551)
              renal medullary fibroblast (EMAP: 31328)
              resident macrophage of the medulla (syn: renal monocytes of the
              medulla) (EMAP:31335)
              rest of renal medullary interstitium (EMAP: 31342)
       renal medullary lymphatics (EMAP: 31349)
       renal medullary nerves (EMAP: 31356)
       renal medullary vasculature (EMAP:28159)
              renal medullary arterial system (EMAP:28164)
              renal medullary venous system (EMAP:28169)
              renal medullary capillary (EMAP:30045)
       medullary collecting duct (EMAP:28064)
calyx (EMAP:9539)
pelvis (EMAP:9542)
       pelvic urothelial lining (syn: pelvic urothelium) (EMAP:28080)
       pelvic smooth muscle (EMAP:28122)
       perihilar interstititum (EMAP:28086)
              perihilar fibroblast (EMAP: 31362)
              resident macrophage of the perihilar interstitium (syn: renal
              monocytes of the perihilar interstitium) (EMAP: 31368)
              rest of perihilar interstitium (EMAP:31374)
renal artery (EMAP:28382)
       endothelial layer of renal artery (EMAP:29978)
       smooth muscle layer of renal artery (EMAP:30007)
renal vein (EMAP:28386)
       endothelial layer of renal vein (EMAP:29966)
       smooth muscle layer of renal vein (EMAP:30023)
ureter (syn: primitive ureter) (EMAP:9544)
       urothelium (syn: transitional epithelium) (EMAP:28092)
              superficial cellular layer (syn: umbrella cell) (EMAP:28592)
              deep cellular layer (syn: basal urothelium) (EMAP:28104)
                     intermediate cell layer (EMAP:28803)
                     basal cell layer (EMAP:28808)
       ureteral mesenchyme (EMAP:28560)
              subepithelial layer (syn: presumptive lamina propria) (EMAP:28566)
              ureteral smooth muscle layer (syn: presumptive ureteral smooth
              muscle layer) (EMAP:28813)
                     smooth muscle component (EMAP:28816)
                     interstitium (syn: Cajal cell) (EMAP:30152)
              outer layer (syn: presumptive adventitia) (EMAP:28574)
      ureteral vasculature (EMAP:30855)
urachus (EMAP:9531)
bladder (EMAP:9528)
      epithelium of bladder (syn: urothelium) (EMAP:28604)
              epithelium of fundus (EMAP:28610)
              epithelium of trigone (EMAP:28616)
              epithelium of neck (EMAP:30084)
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lamina propria of the bladder (EMAP:30091)
                                 lamina propria of the fundus (EMAP:30105)
                                 lamina propria of the trigone (EMAP:30112)
                                 lamina propria of the neck (EMAP:30119)
                          muscularis mucosa of bladder (EMAP:28622)
                                 muscularis mucosa of fundus (EMAP:28628)
                                 muscularis mucosa of trigone (EMAP:28634)
                                 muscularis mucosa of neck (EMAP:30140)
                          detrusor muscle of bladder (EMAP:28640)
                                 detrusor muscle of fundus (EMAP:28646)
                                 detrusor muscle of trigone (EMAP:28652)
                                 detrusor muscle of neck (EMAP:30126)
                          serosa of bladder (EMAP:28664)
                                 serosa of fundus (EMAP:28670)
                                 serosa of trigone (EMAP:28676)
                                 serosa of neck (EMAP:30133)
                          adventitia of bladder (EMAP:28828)
                                 adventitia of fundus (EMAP:28833)
                                 adventitia of trigone (EMAP:28838)
                                 adventitia of neck (EMAP:30146)
                          blood vessels of bladder (EMAP:28682)
                    urethra of male (EMAP:9589)
                          pelvic urethra of male (EMAP:9590)
                                 epithelial layer (EMAP:28700)
                                 mesenchymal layer (EMAP:28706)
                                 muscle layer (EMAP:28712)
                          phallic urethra of male (syn: external urethra of male) (EMAP:28718)
                                 urethral plate of male (EMAP:9593)
                                 urethral fold of male (EMAP:28738)
                    urethra of female (EMAP:28750)
                          pelvic urethra (EMAP:28756)
                                 epithelial layer of urethra of female (EMAP:28762)
                                 muscle layer of urethra of female (EMAP:28774)
                                 mesenchymal layer of urethra of female (EMAP:28768)
                          phallic urethra of female (syn: external urethra of female) (EMAP:30919)
                                 urethral plate of female (EMAP:30926)
                                 urethral fold of female (EMAP:30929)
                    mesentery (EMAP:9534)
                          urogenital mesentery (EMAP:9535)
                          rest of mesentery (EMAP:29614)
                    urorectal septum (EMAP:9553)
GROUP TERMS (TS24)
      developing capillary loop stage nephron (syn: stage III nephron) (GROUP) (EMAP:28509)
             capillary loop renal corpuscle (syn:renal corpuscle of the stage III nephron)
             (EMAP:27910)
                    associated interstitium of renal corpuscle (EMAP:27928)
                    parietal epithelium (EMAP:27922)
                    presumptive endothelium of renal corpuscle (EMAP:27940)
                    presumptive mesangium (EMAP:27934)
                   visceral epithelium (syn:podocyte layer) (EMAP:27916)
             cortical renal tubule (syn:tubular portion of nephron) (EMAP:9556)
                    early distal tubule (EMAP:28010)
                    anlage of loop of Henle (syn:primitive loop of Henle) (EMAP: 31284)
                    early proximal tubule (EMAP:28006)
                    renal connecting tubule (EMAP:28014)
      maturing nephron (syn: stage IV nephron) (GROUP) (EMAP:28488)
             maturing renal corpuscle (EMAP:27946)
                   Bowman's capsule (syn:glomerular capsule) (EMAP:27976)
                          parietal epithelium (EMAP:27982)
                          urinary space of renal corpuscle (syn:Bowman's space) (EMAP:27988)
                   juxtaglomerular arteriole (EMAP:27994)
                    maturing glomerular tuft (syn:maturing glomerulus) (EMAP:27952)
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glomerular capillary system (EMAP:27958)
glomerular mesangium (EMAP:27964)
visceral epithelium (syn:podocyte layer) (EMAP:27970)
```

### cortical renal tubule (EMAP:9556)

early distal tubule (EMAP:28010)
early proximal tubule (EMAP:28006)
renal connecting tubule (EMAP:28014)
medullary renal tubule (EMAP: 31417) **GROUP**immature loop of Henle (EMAP:28174)
straight limb (EMAP:28177)
bend (U-turn) (EMAP:28180)
rest of medullary renal tubule (EMAP: 31419)

#### collecting duct (syn:ureteric tree) (GROUP) (EMAP:28410)

ureteric tip (EMAP:27753) (ureteric ampulla) ureteric tree terminal branch (EMAP:31049) ureteric trunk (EMAP: 28497) medullary collecting duct (EMAP:28064) renal cortical collecting duct (EMAP:28133)

## renal interstitium group (GROUP) (EMAP:28521)

associated interstitium (EMAP:27928) glomerular mesangium (EMAP:27964) perihilar interstitium (EMAP:28086) nephrogenic interstitium (syn: peripheral blastema) (EMAP:27732) presumptive mesangium (EMAP:27934) renal cortical interstitium (syn:cortical stroma) (EMAP:28139) renal cortical fibroblasts (EMAP: 31291) resident macrophages of the cortical interstitium (syn: renal monocytes of the cortex) (EMAP: 31299) rest of renal cortical interstititum (EMAP: 31307) renal medullary interstitium (EMAP:28068) (medullary stroma) renal medullary fibroblasts (EMAP: 31328) resident macrophages of the medulla (syn: renal macrophages of the medulla) (EMAP:31335) rest of renal medullary interstititum (EMAP: 31342) perihilar interstitium (EMAP:28068) perihilar fibroblasts (EMAP: 31362) resident macrophages of the perihilar interstitium (syn: renal macrophages of the perihilar interstitium) (EMAP: 31368) rest of renal perihilar interstititum (EMAP:31374)

### renal vasculature (GROUP) (EMAP:28461)

glomerular capillary system (EMAP:27958) juxtaglomerular arteriole (EMAP:27994) presumptive endothelium (EMAP:27940) renal artery (EMAP:28382) endothelial layer (EMAP:29978) smooth muscle layer (EMAP:29972) renal vein (EMAP:28386) endothelial layer (EMAP:29966) smooth muscle layer (EMAP:29960) renal cortical vasculature (EMAP:28144) renal cortical arterial system (EMAP:28149) renal cortical venous system (EMAP:28154) renal cortical capillaries (EMAP:30038) renal medullary vasculature (EMAP:28159) renal medullary arterial system (EMAP:28164) renal medullary venous system (EMAP:28169) renal medullary capillaries (EMAP:30044)

## TS25 urinary system (17.5dpc)

```
urinary system (EMAP:10886)
      metanephros (syn: kidney) (EMAP:10896)
             renal capsule (EMAP:10907)
             nephrogenic zone (EMAP:27726)
                    nephrogenic interstitium (syn: peripheral blastema) (EMAP:27733)
                    cap mesenchyme (syn: condensed mesenchme) (EMAP:27740)
                    pretubular aggregate (syn: pretubular condensate) (EMAP:27747)
                    ureteric tip (svn: ureteric ampulla) (EMAP:27754)
                    ureteric tree terminal branch (EMAP: 31050)
             renal cortex (EMAP:10906)
                    renal vesicle (syn: stage I nephron, syn: epithelial vesicle) (EMAP:27833)
                    comma-shaped body (EMAP:27839)
                          upper limb of comma-shaped body (syn: distal limb of comma-
                          shaped body) (EMAP:27845)
                          lower limb of comma-shaped body (syn: proximal limb of comma-
                          shaped body) (EMAP:27851)
                    S-shaped body (syn: stage II nephron) (EMAP:27857)
                          renal connecting tubule (EMAP:27869)
                          distal segment of S-shaped body (syn: upper limb of S-shaped
                          body) (EMAP:27875)
                          medial segment of S-shaped body (syn: mid-portion of S-shaped
                          body) (EMAP:27881)
                          proximal segment of S-shaped body (syn: lower limb of S-shaped
                          body) (EMAP:27887)
                                 visceral epithelium (EMAP:27899)
                                 parietal epithelium (EMAP:27905)
                    capillary loop renal corpuscle (syn: renal corpuscle of the stage III nephron)
                    (EMAP:27911)
                          visceral epithelium (syn: podocyte layer) (EMAP:27917)
                          parietal epithelium (EMAP:27923)
                           associated interstitium of renal vesicle (EMAP:27929)
                          presumptive mesangium (EMAP:27935)
                          presumptive endothelium of renal corpuscle (EMAP:27941)
                    maturing renal corpuscle (syn: renal corpuscle of Stage IV nephron)
                    (EMAP:27947)
                          maturing glomerular tuft (syn: maturing glomerulus) (EMAP:27953)
                                 glomerular capillary system (EMAP:27959)
                                 glomerular mesangium (EMAP:27965)
                                 visceral epithelium (syn: podocyte layer) (EMAP:27971)
                                 glomerular basement membrane (EMAP:30969)
                          Bowman's capsule (syn: glomerular capsule) (EMAP:27977)
                                 parietal epithelium (EMAP:27983)
                                 urinary space of renal corpuscle (syn: Bowman's space)
                                 (EMAP:27989)
                                 glomerular mesangium of Bowman's capsule (EMAP: 30035)
                          juxtaglomerular arteriole (EMAP:27995)
                                 afferent arteriole (EMAP:28231)
                                 efferent arteriole (EMAP:28234)
                    mature renal corpuscle (syn: Malpighian corpuscle) (EMAP:28237)
                          glomerular tuft (syn: glomerulus) (EMAP:28240)
                                 glomerular capillary system (EMAP:28246)
                                 glomerular mesangium (EMAP:28249)
                                 glomerular basement membrane (EMAP:28252)
                                 visceral epithelium (syn: podocyte layer) (EMAP:28255)
                          Bowman's capsule (syn: glomerular capsule) (EMAP:28258)
                                 parietal epithelium (EMAP:28261)
                                 urinary space of renal corpuscle (syn: Bowman's space)
                                 (EMAP:28264)
                          afferent arteriole (EMAP:28267)
                                 part of afferent arteriole forming the juxtaglomerular complex
                                 (syn: renin-producing cell) (EMAP:28270)
                                 rest of afferent arteriole (EMAP:28273)
                          efferent arteriole (EMAP:28276)
                          extraglomerular mesangium (EMAP:28279)
                    cortical renal tubule (EMAP:10916)
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renal proximal tubule (EMAP:28282)
                     early proximal tubule (EMAP:28285)
                     renal proximal convoluted tubule (syn: first convoluted
                     tubule) (EMAP:28288)
              anlage of loop of Henle (syn: primitive loop of Henle) (EMAP:
              31285)
              renal distal tubule (EMAP:28388)
                     early distal tubule (EMAP:28391)
                     distal convoluted tubule (syn: second convoluted tubule)
                     (EMAP:28394)
                     distal straight tubule (syn: thick ascending limb)
                    (EMAP:28397)
                           macula densa (EMAP:28400)
                            postmacula segment of distal straight tubule
                            (EMAP:28403)
                            premacula segment of distal straight tubule (EMAP
                            31380)
              renal connecting tubule (EMAP:28015)
       renal cortical interstitium (syn:cortical stroma) (EMAP:28140)
              renal cortical fibroblast (EMAP: 31292)
              resident macrophage of the cortex (syn: renal moncytes of the
              cortex) (EMAP: 31300)
              rest of renal cortical interstitium (EMAP: 31308)
       renal cortical lymphatics (EMAP: 31315)
       renal cortical nerves (EMAP: 31322)
       renal cortical vasculature (EMAP:28145)
              renal cortical arterial system (EMAP:28150)
                     interlobular artery (EMAP:28213)
                     arcuate artery (EMAP:28216)
              renal cortical venous system (EMAP:28155)
                     interlobular vein (EMAP:28219)
                    arcuate vein (EMAP:28222)
              renal cortical capillary (EMAP:30040)
       cortical collecting duct (EMAP:28134)
renal medulla (EMAP:28045)
       outer medulla (EMAP:28311)
              loop of Henle, outer medullary portion (EMAP:28323)
                     thin descending limb (EMAP:28326)
                     thin ascending limb (syn: ascending thin limb) (EMAP:28329)
                     proximal straight tubule (syn: segment 3 of proximal tubule;
                     syn: pars recta) (EMAP:28863)
                     premacula segment of distal straight tubule (syn: thick
                     ascending limb) (EMAP:28332)
              outer medullary interstitium (EMAP:28338)
                    outer medullary fibroblast (EMAP: 31385)
                    resident macrophage of the outer medulla (syn: renal
                    monocytes of the outer medulla) (EMAP: 31390)
                    rest of outer medullary interstitium (EMAP: 31395)
              outer medullary collecting duct (EMAP:28347)
      inner medulla (syn: papilla) (EMAP:28350)
              loop of Henle, inner medullary portion (EMAP:28353)
                     thin descending limb (EMAP:28356)
                     bend (syn: U-turn) (EMAP:28359)
                     thin ascending limb (syn: ascending thin limb) (EMAP:28362)
              inner medullary interstitium (syn: papillary interstitium)
              (EMAP:28365)
                     inner medullary fibroblast (EMAP: 31400)
                    resident macrophage of the inner medulla (syn: renal
                    monocytes of the inner medulla) (EMAP: 31405)
                    rest of inner medullary interstitium (EMAP: 31410)
              inner medullary collecting duct (syn: papillary collecting duct)
              (EMAP:28371)
       renal medullary vasculature (EMAP:28160)
              renal medullary arterial system (EMAP:28165)
              renal medullary venous system (EMAP:28170)
              renal medullary capillary (syn: vasa recta) (EMAP:30046)
calyx (EMAP:10899)
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major (EMAP:10901)
             minor (EMAP:10900)
      pelvis (EMAP:10902)
             pelvic urothelial lining (syn: pelvic urothelium) (EMAP:28081)
             pelvic smooth muscle (EMAP:28123)
             perihilar interstitum (EMAP:28087)
                           perihilar fibroblast (EMAP: 31363)
                           resident macrophage of perihilar interstitium (syn: renal
                           moncytes of the perihilar interstitium) (EMAP: 31369)
                           rest of perihilar interstitium (EMAP: 31375)
      renal artery (EMAP:28374)
             endothelial layer of renal artery (EMAP:29979)
             smooth muscle layer of renal artery (EMAP:30008)
      renal vein (EMAP:28377)
             endothelial layer of renal vein (EMAP:29967)
             smooth muscle layer of renal vein (EMAP:30024)
ureter (syn: primitive ureter) (EMAP:10904)
      urothelium (syn: transitional epithelium) (EMAP:28093)
             superficial cellular layer (syn: umbrella cell) (EMAP:28593)
             deep cellular layer (syn: basal urothelium) (EMAP:28105)
                    intermediate cell layer (EMAP:28804)
                    basal cell layer (EMAP:28809)
      lamina propria (EMAP:28842)
      ureteral smooth muscle layer (EMAP:28845)
             smooth muscle component (EMAP:28848)
             interstitium (syn: Cajal cell) (EMAP:28851)
      adventitia of ureter (EMAP:28118)
      ureteral vasculature (EMAP:30856)
urachus (EMAP:10891)
bladder (EMAP:10888)
      epithelium of bladder (syn: urothelium) (EMAP:28605)
             epithelium of fundus (EMAP:28611)
             epithelium of trigone (EMAP:28617)
             epithelium of neck (EMAP:30085)
      lamina propria of the bladder (EMAP:30092)
             lamina propria of the fundus (EMAP:30106)
             lamina propria of the trigone (EMAP:30113)
             lamina propria of the neck (EMAP:30120)
      muscularis mucosa of bladder (EMAP:28623)
             muscularis mucosa of fundus (EMAP:28629)
             muscularis mucosa of trigone (EMAP:28635)
             muscularis mucosa of neck (EMAP:30141)
      detrusor muscle of bladder (EMAP:28641)
             detrusor muscle of fundus (EMAP:28647)
             detrusor muscle of trigone (EMAP:28653)
             detrusor muscle of neck (EMAP:30127)
      serosa of bladder (EMAP:28665)
             serosa of fundus (EMAP:28671)
             serosa of trigone (EMAP:28677)
             serosa of neck (EMAP:30134)
      adventitia of bladder (EMAP:28829)
             adventitia of fundus (EMAP:28834)
             adventitia of trigone (EMAP:28839)
             adventitia of neck (EMAP:30147)
      blood vessels of bladder (EMAP:28683)
urethra of male (EMAP:10949)
      pelvic urethra of male (EMAP:10950)
             epithelial layer of pelvic urethra of male (EMAP:28701)
             mesenchymal layer of pelvic urethra of male (EMAP:28707)
             muscle layer of pelvic urethra of male (EMAP:28713)
      phallic urethra of male (syn: penile urethra of male) (EMAP:28719)
             epithelial layer of phallic urethra of male (EMAP:28854)
             mesenchymal layer of phallic urethra of male (EMAP:28857)
             muscle layer of phallic urethra of male (EMAP:28860)
urethra of female (EMAP:28751)
      pelvic urethra of female (EMAP:28757)
             epithelial layer (EMAP:28763)
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mesenchymal layer (EMAP:28769)
                           muscle layer (EMAP:28775)
                    phallic urethra of female (syn: external urethra of female) (EMAP:30920)
                           epithelial laver (EMAP:30931)
                           mesenchymal layer (EMAP:30935)
                           muscle layer (EMAP:30939)
             mesentery (EMAP:10894)
                    urogenital mesentery (EMAP:10895)
                    rest of mesentery (EMAP:29615)
             urorectal septum (EMAP:10913)
GROUP TERMS (TS25)
       developing capillary loop stage nephron (syn: stage III nephron) (GROUP) (EMAP:28510)
             capillary loop renal corpuscle (syn:renal corpuscle of the stage III nephron)
             (EMAP:27911)
                    associated interstitium (EMAP:27929)
                    parietal epithelium (EMAP:27923)
                    presumptive endothelium (EMAP:27941)
                    presumptive mesangium (EMAP:27935)
                    visceral epithelium (syn:podocyte layer) (EMAP:27917)
             cortical renal tubule (syn:tubular portion of nephron) (EMAP:10916) renal connecting tubule (EMAP:28015)
                    early distal tubule (EMAP:28391)
                    anlage of loop of Henle (syn: primitive loop of Henle) (EMAP:31285)
                    early proximal tubule (EMAP:28285)
       maturing nephron (syn: stage IV nephron) (GROUP) (EMAP:28489)
             maturing renal corpuscle (syn:renal corpuscle of the stage IV nephron) (EMAP:27947)
                    Bowman's capsule (syn: glomerular capsule) (EMAP:27977)
                           parietal epithelium (EMAP:27983)
                           urinary space of renal corpuscle (syn:Bowman's space) (EMAP:27989)
                    juxtaglomerular arteriole (EMAP:27995)
                           afferent arteriole (EMAP:28231) efferent arteriole (EMAP:28234)
                    maturing glomerular tuft (syn: maturing glomerulus) (EMAP:27953)
                           glomerular capillary system (EMAP:27959)
                           glomerular mesangium (EMAP:27965)
                           visceral epithelium (syn: podocyte layer) (EMAP:27971)
             cortical renal tubule (syn:tubular portion of nephron) (EMAP:10916)
                    renal connecting tubule (EMAP:28015)
                    early distal tubule (EMAP:28391)
                    anlage of loop of Henle (syn: primitive loop of Henle) (EMAP:31285)
                    early proximal tubule (EMAP:28285)
       mature nephron (GROUP) (EMAP:28492)
             mature renal corpuscle (syn:Malpighian corpuscle) (EMAP:28237)
                    afferent arteriole (EMAP:28267)
                           part of afferent arteriole forming the juxtaglomerular complex
                           (EMAP:28270)
                           rest of afferent arteriole (EMAP:28273)
                    Bowman's capsule (syn:glomerular capsule) (EMAP:28258)
                           parietal epithelium (EMAP:28261)
                           urinary space of renal corpuscle (syn:Bowman's space) (EMAP:28264)
                    efferent arteriole (EMAP:28276)
                    extraglomerular mesangium (EMAP:28279)
                    glomerular tuft (syn:glomerulus) (EMAP:28240)
                           glomerular basement membrane (EMAP:28252)
                           glomerular capillary system (EMAP:28246)
                           glomerular mesangium (EMAP:28249)
                           visceral epithelium (syn:podocyte layer) (EMAP:28255)
             cortical renal tubule (syn:tubular portion of nephron) (EMAP:10916)
                    renal connecting tubule (EMAP:28015)
                    early distal tubule (EMAP:28391)
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anlage of loop of Henle (syn: primitive loop of Henle) (EMAP:31285)
             early proximal tubule (EMAP:28285)
      loop of Henle (EMAP:31496) GROUP
             loop of Henle, outer medullary portion (EMAP:28323)
                    thin descending limb (EMAP:28326)
                    thin ascending limb (syn: ascending thin limb) (EMAP:28329)
                    proximal straight tubule (syn: segment 3 of proximal tubule; syn: pars recta)
                    (EMAP:28863)
                    premacula segment of distal straight tubule within medulla (syn: thick
                    ascending limb) (EMAP:28332)
             loop of Henle, inner medullary portion (EMAP:28353)
                    thin descending limb (EMAP:28356)
                    bend (syn: U-turn) (EMAP:28359)
                    thin ascending limb (syn: ascending thin limb) (EMAP:28362)
juxtaglomerular complex (GROUP) (EMAP:30450)
             extraglomerular mesangium (EMAP: 28279)
             macula densa (EMAP: 28400)
             part of the afferent arteriole forming the juxtaglomerular complex (EMAP: 28270)
      collecting duct (syn:ureteric tree)(GROUP) (EMAP:28411)
          ureteric tip (syn:ureteric ampulla) (EMAP:27754)
          ureteric tree terminal branch (collecting duct terminal branch) (EMAP:31050)
          renal cortical collecting duct (EMAP:28134)
          outer medullary collecting duct (EMAP:28347)
          inner medullary collecting duct (syn: papillary collecting duct) (EMAP:28371)
      renal interstitium group (GROUP) (EMAP:28522)
             associated interstitium (EMAP:27929)
             extraglomerular mesangium (EMAP:28279)
             glomerular mesangium (EMAP:27965)
             renal cortical interstitium (syn:cortical stroma) (EMAP:28140)
                    renal cortical fibroblasts (EMAP: 31292)
                    resident macrophages of the cortex (EMAP: 31300)
                    rest of cortical interstitium (EMAP: 31308)
             outer medullary interstitium (EMAP:28338)
                    outer medullary fibroblast (EMAP: 31385)
                    resident macrophage of the outer medulla (EMAP: 31390)
                    rest of outer medullary interstitium (EMAP: 31395)
             inner medullary interstitium (syn: papillary interstitium) (EMAP:28365)
                    inner medullary fibroblast (EMAP: 31400)
                    resident macrophages of the inner medulla (EMAP: 31405)
                    rest of inner medullary interstitium (EMAP: 31410)
             perihilar interstitium (EMAP:28087)
                    perihilar fibroblast (EMAP: 31363)
                    resident macropage of the perihilar interstitium (EMAP: 31369)
                    rest of perihilar interstitium (EMAP: 31375)
             nephrogenic interstitium (syn: peripheral blastema) (EMAP:27733)
             presumptive mesangium (EMAP:27935)
renal vasculature (GROUP) (EMAP:28462)
       glomerular capillary system (EMAP:27959)
      juxtaglomerular arteriole (EMAP:27995)
             afferent arteriole (EMAP:28231)
             efferent arteriole (EMAP:28234)
      presumptive endothelium (EMAP:27941)
      renal artery (EMAP:28374)
             endothelial layer (EMAP:29979)
             smooth muscle layer (EMAP:29973)
      renal vein (EMAP:28377)
             endothelial layer (EMAP:29967)
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smooth muscle layer (EMAP:29961)

renal cortical vasculature (EMAP:28145)

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renal cortical arterial system (EMAP:28150)
interlobular artery (EMAP:28213)
arcuate artery (EMAP:28216)
renal cortical venous system (EMAP:28155)
interlobular vein (EMAP:28219)
arcuate vein (EMAP:28222)
renal cortical capillaries (EMAP: 30040)
renal medullary vasculature (EMAP:28160)
renal medullary arterial system (EMAP:28165)
renal medullary venous system (EMAP:28170)
renal medullary capillary (syn:vasa recta) (EMAP: 30046)
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#### large blood vessels (EMAP:31465)

renal artery (EMAP: 10108) renal vein (EMAP: 13092) arcuate vein (EMAP:28222) interlobular artery (EMAP:28213) interlobular vein (EMAP:28219) arcuate artery (EMAP: 28216)

#### small blood vessels (EMAP: 31472)

renal cortical capillary (EMAP:30040)
efferent arteriole (EMAP:28276)
renal medullary arterial system (EMAP:28165)
afferent arteriole (EMAP: 28267)
glomerular capillary system (EMAP: 28246)
renal medullary venous system (EMAP: 28170)
renal medullary capillary (syn:vasa recta) (EMAP:30046)
glomerular capillary system (EMAP: 27959)

## TS26 renal/urinary system (18.5dpc)

```
urinary system (EMAP:12246)
         metanephros (syn:kidney) (EMAP:12256)
                renal capsule (EMAP:12267)
                nephrogenic zone (EMAP:27727)
                       nephrogenic interstitium (syn: peripheral blastema) (EMAP:27734)
                       cap mesenchyme (syn: condensed mesenchyme) (EMAP:27741)
                       pretubular aggregate (syn: pretubular condensate) (EMAP:27748)
                       ureteric tip (syn: ureteric ampulla) (EMAP:27755)
                       ureteric tree terminal branch (EMAP: 31051)
                renal cortex (EMAP:12266)
                       renal vesicle (syn: stage I nephron, syn:epithelial vesicle,) (EMAP:27834)
                       comma-shaped body (EMAP:27840)
                              upper limb of comma-shaped body (syn: distal limb of comma-
                              shaped body) (EMAP:27846)
                              lower limb of comma-shaped body (syn: proximal limb of comma-
                              shaped body) (EMAP:27852)
                       S-shaped body (syn: stage II nephron) (EMAP:27858)
                              renal connecting tubule (EMAP:27870)
                              distal segment of S-shaped body (syn:upper limb of S-shaped body)
                              (EMAP:27876)
                              medial segment of S-shaped body (syn: mid-portion of S-shaped
                              body) (EMAP:27882)
                              proximal segment of S-shaped body (syn: lower limb of S-shaped
                              body) (EMAP:27888)
                                    visceral epithelium (EMAP:27900)
                                    parietal epithelium (EMAP:27906)
                       capillary loop renal corpuscle (syn: renal corpuscle of the stage III nephron)
                       (EMAP:27912)
                              visceral epithelium (syn: podocyte layer) (EMAP:27918)
                              parietal epithelium (EMAP:27924)
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associated interstitium of renal corpuscle (EMAP:27930)

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presumptive mesangium (EMAP:27936)
      presumptive endothelium of renal corpuscle (EMAP:27942)
maturing renal corpuscle (syn: renal corpuscle of Stage IV nephron)
(EMAP:27948)
      maturing glomerular tuft (syn: maturing glomerulus) (EMAP:27954)
             glomerular capillary system (EMAP:27960)
             glomerular mesangium (EMAP:27966)
             visceral epithelium (syn: podocyte layer) (EMAP:27972)
             glomerular basement membrane (EMAP: 30970)
      Bowman's capsule (syn: glomerular capsule) (EMAP:27978)
             parietal epithelium (EMAP:27984)
             urinary space of renal corpuscle (syn: Bowman's space)
             (EMAP:27990)
      juxtaglomerular arteriole (EMAP:27996)
             afferent arteriole (EMAP:28232)
             efferent arteriole (EMAP:28235)
mature renal corpuscle (syn: Malpighian corpuscle) (EMAP:28238)
      glomerular tuft (syn: glomerulus) (EMAP:28241)
             glomerular capillary system (EMAP:28247)
             glomerular mesangium (EMAP:28250)
             glomerular basement membrane (EMAP:28253)
             visceral epithelium (syn: podocyte layer) (EMAP:28256)
      Bowman's capsule (syn: glomerular capsule) (EMAP:28259)
             parietal epithelium (EMAP:28262)
             urinary space of renal corpuscle (syn: Bowman's space)
             (EMAP:28265)
      afferent arteriole (EMAP:28268)
             part of the afferent arteriole forming the juxtaglomerular
             complex (syn: renin-producing cells) (EMAP:28271)
             rest of afferent arteriole (EMAP:28274)
      efferent arteriole (EMAP:28277)
      extraglomerular mesangium (EMAP:28280)
cortical renal tubule (syn: tubular portion of nephron) (EMAP:12276)
      renal proximal tubule (EMAP:28283)
             early proximal tubule (EMAP:28286)
             renal proximal convoluted tubule (syn: first convoluted
             tubule) (EMAP:28289)
      anlage of loop of Henle (syn: primitive loop of Henle) (EMAP:
      renal distal tubule (EMAP:28389)
             early distal tubule (EMAP:28392)
             distal convoluted tubule (syn: second convoluted tubule)
             (EMAP:28395)
             distal straight tubule (syn: thick ascending limb)
             (EMAP:28398)
                    macula densa (EMAP:28401)
                    postmacula segment of distal straight tubule
                    (EMAP:28404)
                    premacula segment of distal straight tubule
                    (EMAP:31381)
      renal connecting tubule (EMAP:28016)
renal cortical interstitium (syn:cortical stroma) (EMAP:28141)
      renal cortical fibroblasts (EMAP: 31293)
      resident macrophages of the cortex (syn: renal monocytes of the
      cortex) (EMAP: 31301)
      rest of renal cortical interstitium (EMAP: 31309)
renal cortical lymphatics (EMAP: 31316)
renal cortical nerves (EMAP: 31323)
renal cortical vasculature (EMAP:28146)
      renal cortical arterial system (EMAP:28151)
             interlobular artery (EMAP:28214)
             arcuate artery (EMAP:28217)
      renal cortical venous system (EMAP:28156)
             interlobular vein (EMAP:28220)
             arcuate vein (EMAP:28223)
      renal cortical capillary (EMAP:30041)
cortical collecting duct (EMAP:28135)
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```
renal medulla (EMAP:13155)
             outer medulla (EMAP:28312)
                    loop of Henle, outer medullary portion (EMAP:28324)
                           thin descending limb (EMAP:28327)
                           thin ascending limb (syn: ascending thin limb) (EMAP:28330)
                           proximal straight tubule (syn: segment 3 of proximal tubule;
                           pars recta) (EMAP:28864)
                           premacula segment of distal straight tubule (syn: thick
                           ascending limb) (EMAP:31381)
                    outer medullary interstitium (EMAP:28339)
                           outer medullary fibroblast (EMAP: 31386)
                           resident macrophage of the outer medulla (syn: renal
                           monocytes of the outer medulla) (EMAP: 31391)
                           rest of outer medullary interstitium (EMAP: 31396)
                    outer medullary collecting duct (EMAP:28348)
             inner medulla (syn: papilla) (EMAP:28351)
                    loop of Henle, inner medullary portion (EMAP:28354)
                           thin descending limb (EMAP:28357)
                           bend (syn: U-turn) (EMAP:28360)
                           thin ascending limb (syn: ascending thin limb) (EMAP:28330)
                    inner medullary interstitium (syn: papillary interstitium)
                    (EMAP:28366)
                           inner medullary fibroblast (EMAP: 31401)
                           resident macrophage of the inner medulla (syn: renal
                           moncytes of the inner medulla) (EMAP: 31406)
                           rest of inner medullary interstitium (EMAP: 31411)
                    inner medullary collecting duct (syn: papillary collecting duct)
                    (EMAP:28372)
             renal medullary lymphatics (EMAP: 31351)
             renal medullary nerves (EMAP: 31358)
             renal medullary vasculature (EMAP:28161)
                    renal medullary arterial system (EMAP:28166)
                    renal medullary venous system (EMAP:28171)
                    renal medullary capillary (syn: vasa recta) (EMAP:30047)
      calyx (EMAP:12259)
             major (EMAP:12261)
             minor (EMAP:12260)
      pelvis (EMAP:12262)
             pelvic urothelial lining (syn: pelvic urothelium) (EMAP:28082)
             pelvic smooth muscle (EMAP:28124)
             perihilar interstitum (EMAP:28088)
                           perihilar fibroblast (EMAP: 31364)
                           resident macrophage of perihilar interstitium (syn: renal
                           monocytes of the perihilar interstitium) (EMAP 31370)
                           rest of perihilar interstitium (EMAP: 31376)
      renal artery (EMAP:28375)
             endothelial layer of renal artery (EMAP:29980)
             smooth muscle layer of renal artery (EMAP:30009)
      renal vein (EMAP:28378)
             endothelial layer of renal vein (EMAP:29968)
             smooth muscle layer of renal vein (EMAP:30025)
ureter (syn: primitive ureter) (EMAP:12264)
      urothelium (syn: transitional epithelium) (EMAP:28094)
              superficial cellular layer (syn: umbrella cell) (EMAP:28594)
             deep cellular layer (syn: basal epithelium) (EMAP:28106)
                    intermediate cell layer (EMAP:28805)
                    basal cell layer (EMAP:28810)
      lamina propria (EMAP:28843)
      ureteral smooth muscle layer (EMAP:28846)
             smooth muscle component (EMAP:28849)
             interstitium (syn: Cajal cell) (EMAP:28852)
      adventitia of ureter (EMAP:28119)
      ureteral vasculature (EMAP:30857)
urachus (EMAP:12251)
bladder (EMAP:12248)
      epithelium of the bladder (syn: urothelium) (EMAP:28606)
             epithelium of fundus (EMAP:28612)
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epithelium of trigone (EMAP:28618)
             epithelium of neck (EMAP:30086)
      lamina propria of the bladder (EMAP:30093)
             lamina propria of the fundus (EMAP:30107)
             lamina propria of the trigone (EMAP:30114)
             lamina propria of the neck (EMAP:30121)
      muscularis mucosa of bladder (EMAP:28624)
             muscularis mucosa of fundus (EMAP:28630)
             muscularis mucosa of trigone (EMAP:28636)
             muscularis mucosa of neck (EMAP:30142)
      detrusor muscle of bladder (EMAP:28642)
             detrusor muscle of fundus (EMAP:28648)
             detrusor muscle of trigone (EMAP:28654)
             detrusor muscle of neck (EMAP:30128)
      serosa of bladder (EMAP:28666)
             serosa of fundus (EMAP:28672)
             serosa of trigone (EMAP:28678)
             serosa of neck (EMAP:30135)
      adventitia of bladder (EMAP:28830)
             adventitia of fundus (EMAP:28835)
             adventitia of trigone (EMAP:28840)
             adventitia of neck (EMAP:30148)
      blood vessels of bladder (EMAP:28684)
urethra of male (EMAP:12309)
      pelvic urethra of male (EMAP:12310)
             epithelial layer of pelvic urethra of male (EMAP:28702)
             mesenchymal layer of pelvic urethra of male (EMAP:28708)
             muscle layer of pelvic urethra of male (EMAP:28714)
      phallic urethra of male (syn: penile urethra) (EMAP:28720)
             epithelial layer of phallic urethra of male (EMAP:28855)
             mesenchymal layer of phallic urethra of male (EMAP:28858)
             muscle layer of phallic urethra of male (EMAP:28861)
urethra of female (EMAP:28752)
      pelvic urethra of female (EMAP:28758)
             epithelial layer (EMAP:28764)
             mesenchymal layer (EMAP:28770)
             muscle layer (EMAP:28776)
      phallic urethra of female (syn: external urethra of female) (EMAP:30921)
             epithelial layer (EMAP:30932)
             mesenchymal layer (EMAP:30936)
             muscle layer (EMAP:30940)
mesentery (EMAP:12254)
      urogenital mesentery (EMAP:12255)
      rest of mesentery (EMAP:29616)
urorectal septum (EMAP:12273)
GROUP TERMS (TS26)
developing capillary loop stage nephron (syn: stage III nephron) (GROUP)
(EMAP:28511)
      capillary loop renal vesicle (syn:renal vesicle of the stage III nephron)
      (EMAP:27912)
             associated interstitium (EMAP:27930)
             parietal epithelium (EMAP:27924)
             presumptive endothelium (EMAP:27942)
             presumptive mesangium (EMAP:27936)
             visceral epithelium (syn:podocyte layer) (EMAP:27918)
      cortical renal tubule (syn:tubular portion of nephron) (EMAP:12276)
             renal connecting tubule (EMAP:28016)
             early distal tubule (EMAP:28392)
             anlage of loop of Henle (syn:primitive loop of Henle) (EMAP: 31286)
             early proximal tubule (EMAP:28286)
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maturing renal corpuscle (syn:renal corpuscle of the stage IV nephron)
      (FMAP:27948)
             Bowman's capsule (syn:glomerular capsule) (EMAP:27978)
                    parietal epithelium (EMAP:27984)
                    urinary space of renal corpuscle (syn:Bowman's space)
                    (EMAP:27990)
             juxtaglomerular arteriole (EMAP:27996)
                    afferent arteriole (EMAP:28232)
                    efferent arteriole (EMAP:28235)
             maturing glomerular tuft (syn:maturing glomerulus) (EMAP:27954)
                    glomerular capillary system (EMAP:27960)
                    glomerular mesangium (EMAP:27966)
                    visceral epithelium (syn:podocyte layer) (EMAP:27972)
      cortical renal tubule (syn:tubular portion of nephron) (EMAP:12276)
             renal connecting tubule (EMAP:28016)
             renal distal tubule (EMAP:28389)
                    distal convoluted tubule (syn:second convoluted tubule)
                    (EMAP:28395)
                    distal straight tubule (syn:thick ascending limb) (EMAP:28398)
                           macula densa (EMAP:28401)
                           postmacula segment of distal straight tubule (EMAP:28404)
                           premacula segment of distal straight tubule (EMAP:31381)
                    early distal tubule (EMAP:28392)
             renal proximal tubule (EMAP:28283)
                    early proximal tubule (EMAP:28286)
                    renal proximal convoluted tubule (syn:first convoluted tubule)
                    (EMAP:28289)
mature nephron (GROUP) (EMAP:28493)
      mature renal corpuscle (syn:Malpighian corpuscle) (EMAP:28238)
             afferent arteriole (EMAP:28268)
                    part of afferent arteriole forming the juxtaglomerular complex
                    (EMAP:28271)
                    rest of afferent arteriole (EMAP:28274)
             Bowman's capsule (syn:glomerular capsule) (EMAP:28259)
                    parietal epithelium (EMAP:28262)
                    urinary space of renal corpuscle (syn:Bowman's space)
                    (EMAP:28265)
             efferent arteriole (EMAP:28277)
             extraglomerular mesangium (EMAP:28280)
             glomerular tuft (syn:glomerulus) (EMAP:28241)
                    glomerular basement membrane (EMAP:28253)
                    glomerular capillary system (EMAP:28247)
                    glomerular mesangium (EMAP:28250)
                    visceral epithelium (syn:podocyte layer) (EMAP:28256)
      cortical renal tubule (syn:tubular portion of nephron) (EMAP:12276)
             renal connecting tubule (EMAP:28016)
             renal distal tubule (EMAP:28389)
                    distal convoluted tubule (syn:second convoluted tubule)
                    (EMAP:28395)
                    distal straight tubule (syn:thick ascending limb) (EMAP:28398)
                           macula densa (EMAP:28401)
                           postmacula segment of distal straight tubule (EMAP:28404)
                           premacula segment of distal straight tubule (EMAP 31381)
             renal proximal tubule (EMAP:28283)
                    renal proximal convoluted tubule (syn:first convoluted tubule)
                    (EMAP:28289)
      loop of Henle (EMAP: 31497) GROUP
             loop of Henle, outer medullary portion (EMAP:28324)
                    thin descending limb (EMAP:28327)
                    thin ascending limb (syn: ascending thin limb) (EMAP:28330)
                    proximal straight tubule (syn: segment 3 of proximal tubule; pars
                    recta) (EMAP:28864)
                    premacula segment of distal straight tubule (syn: thick ascending
                    limb) (EMAP:31381)
             loop of Henle, inner medullary portion (EMAP:28354)
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thin descending limb (EMAP:28357) bend (syn: U-turn) (EMAP:28360) thin ascending limb (syn: ascending thin limb) (EMAP:28330)

# juxtaglomerular complex (GROUP) (EMAP:30451)

extraglomerular mesangium (EMAP: 28280) macula densa (EMAP: 28401) part of the afferent arteriole forming the juxtaglomerular complex (EMAP: 28271)

### collecting duct (GROUP) (EMAP:28412)

ureteric tip (syn:ureteric ampulla) (EMAP:27755) collecting duct terminal branch (syn:ureteric tree terminal branch) (EMAP:31051) cortical collecting duct (EMAP:28135) outer medullary collecting duct (EMAP:28348) inner medullary collecting duct (syn: papillary collecting duct) (EMAP: 28372)

## renal interstitium group (GROUP) (EMAP:28523)

associated interstitium (EMAP:27930) extraglomerular mesangium (EMAP:28280) glomerular mesangium (EMAP:27966) glomerular mesangium (EMAP:28250) nephrogenic interstitium (syn: peripheral blastema) (EMAP:27734) presumptive mesangium (EMAP:27936) renal cortical interstitium (syn:cortical stroma) (EMAP:28141) renal cortical fibroblasts (EMAP: 31293) resident macrophage of the cortex (EMAP: 31301) rest of cortical interstitium (EMAP:31309) outer medullary interstitium (EMAP:28339) outer medullary fibroblast (EMAP:31386) resident macrophage of the outer medulla (EMAP:31391) rest of outer medullary interstitium (EMAP:31396 inner medullary interstitium (syn:papillary interstitium) (EMAP:28366) inner medullary fibroblast (EMAP: 31401) resident macrophages of the inner medulla (EMAP:31406) rest of inner medullary interstitium (EMAP: 31411) perihilar interstitium (EMAP:28088) perihilar fibroblast (EMAP: 31364)

resident macrophage of the perihilar interstitium (EMAP 31370)

rest of perihilar interstitium (EMAP: 31376)

### renal vasculature (GROUP) (EMAP:28463)

glomerular capillary system (EMAP:27960) juxtaglomerular arteriole (EMAP:27996) afferent arteriole (EMAP:28232) efferent arteriole (EMAP:28235) presumptive endothelium (EMAP:27942) renal artery (EMAP:28375) endothelial layer of renal artery (EMAP:29980) smooth muscle layer of renal artery (EMAP:29974) renal vein (EMAP:28378) endothelial layer of renal vein (EMAP:29968) smooth muscle layer of renal vein (EMAP:30025) renal cortical vasculature (EMAP:28146) renal cortical arterial system (EMAP:28151) interlobular artery (EMAP:28214) arcuate artery (EMAP:28217) renal cortical venous system (EMAP:28156) interlobular vein (EMAP:28220) arcuate vein (EMAP:28223) renal cortical capillaries (EMAP:30041) renal medullary vasculature (EMAP:28161) renal medullary arterial system (EMAP:28166) renal medullary venous system (EMAP:28171) renal medullary capillary (syn:vasa recta) (EMAP:30047)

#### large blood vessels (EMAP 31466)

renal artery (EMAP: 11468) renal vein (EMAP: 13093) arcuate vein (EMAP: 28223) interlobular artery (EMAP: 28214) interlobular vein (EMAP: 28220) arcuate artery (EMAP: 28217)

### small blood vessels (EMAP: 31473)

renal cortical capillary (EMAP: 30041)
efferent arteriole (EMAP: 28277)
renal medullary arterial system (EMAP: 28166)
afferent arteriole (EMAP: 28268)
glomerular capillary system (EMAP:28247)
renal medullary venous system (EMAP: 28171)
renal medullary capillary (syn:vasa recta) (EMAP: 30047)
glomerular capillary system (EMAP: 27960)

## TS27 renal/urinary system (19.5dpc - P3)

```
urinary system (EMAP:30243)
         metanephros (syn:kidney) (EMAP:30247)
                renal capsule (EMAP:30249)
                nephrogenic zone (EMAP:30282)
                       nephrogenic interstitium (syn: peripheral blastema)
                       (EMAP:30283)
                       cap mesenchyme (syn: condensed mesenchyme) (EMAP:30284)
                       pretubular aggregate (syn: pretubular condensate) (EMAP:30285)
                       ureteric tip (syn: ureteric ampulla) (EMAP:30248)
                       ureteric tree terminal branch (EMAP:31052)
                renal cortex (EMAP:30287)
                       renal vesicle (syn: stage I nephron, syn:epithelial vesicle,) (EMAP:30316)
                       comma-shaped body (EMAP:30303)
                             upper limb of comma-shaped body (syn: distal limb of comma-
                             shaped body) (EMAP:30304)
                             lower limb of comma-shaped body (syn: proximal limb of comma-
                             shaped body) (EMAP:30305)
                       S-shaped body (syn: stage II nephron) (EMAP:30319)
                             renal connecting tubule (EMAP:30324)
                             distal segment of S-shaped body (syn:upper limb of S-shaped body)
                             (EMAP:30320)
                             medial segment of S-shaped body (syn: mid-portion of S-shaped
                             body) (EMAP:30325)
                             proximal segment of S-shaped body (syn: lower limb of S-shaped
                             body) (EMAP:30321)
                                    visceral epithelium (EMAP:30322)
                                    parietal epithelium (EMAP:30323)
                       capillary loop renal corpuscle (syn: renal corpuscle of the stage III nephron)
                       (EMAP:30307)
                             visceral epithelium (syn: podocyte layer) (EMAP:30308)
                             parietal epithelium (EMAP:30312)
                             associated interstitium (EMAP:30311)
                             presumptive mesangium (EMAP:30309)
                             presumptive endothelium (EMAP:30310)
                       maturing renal corpuscle (syn: renal corpuscle of Stage IV nephron)
                       (EMAP:30264)
                             maturing glomerular tuft (syn: maturing glomerulus) (EMAP:30268)
                                    glomerular capillary system (EMAP:30271)
                                    glomerular mesangium (EMAP:30270)
                                    visceral epithelium (syn: podocyte layer) (EMAP:30269)
                                    glomerular basement membrane (EMAP: 30971)
                             Bowman's capsule (syn: glomerular capsule) (EMAP:30272)
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parietal epithelium (EMAP:30274)
                    urinary space of renal corpuscle (syn: Bowman's space)
                    (EMAP:30273)
             iuxtaglomerular arteriole (EMAP:30265)
                    afferent arteriole (EMAP:30266)
                    efferent arteriole (EMAP:30267)
      mature renal corpuscle (syn: Malpighian corpuscle) (EMAP:30289)
             glomerular tuft (syn: glomerulus) (EMAP:30291)
                    glomerular capillary system (EMAP:30294)
                    glomerular mesangium (EMAP:30295)
                    glomerular basement membrane (EMAP:30293)
                    visceral epithelium (syn: podocyte layer) (EMAP:30292)
             Bowman's capsule (syn: glomerular capsule) (EMAP:30300)
                    parietal epithelium (EMAP:30301)
                    urinary space of renal corpuscle (syn: Bowman's space)
                    (EMAP:30302)
             afferent arteriole (EMAP:30296)
                    part of the afferent arteriole forming the juxtaglomerular
                    complex (syn: renin-producing cells) (EMAP:30297)
                    rest of afferent arteriole (EMAP:30298)
             efferent arteriole (EMAP:30290)
             extraglomerular mesangium (EMAP:30299)
      cortical renal tubule (syn: tubular portion of nephron) (EMAP:30253)
             renal proximal tubule (EMAP:30254)
                    early proximal tubule (EMAP:30255)
                    renal proximal convoluted tubule (syn: first convoluted
                    tubule) (EMAP:30256)
             renal distal tubule (EMAP:30257)
                    early distal tubule (EMAP:30261)
                    distal convoluted tubule (syn: second convoluted tubule)
                    (EMAP:30262)
                    distal straight tubule (syn: thick ascending limb)
                    (EMAP:30258)
                           macula densa (EMAP:30260)
                           postmacula segment of distal straight tubule
                           (EMAP:30259)
                           premacula segment of distal straight tubule (EMAP
                           31382)
             anlage of loop of Henle (syn:primitive loop of Henle) (EMAP: 31287)
             renal connecting tubule (EMAP:30263)
      renal cortical interstitium (syn:cortical stroma) (EMAP:30315)
                    renal cortical fibroblast (EMAP: 31294)
                    resident macrophage of the cortex (syn: renal moncytes of
                    the cortex) (EMAP: 31302)
                    rest of renal cortical interstitium (EMAP: 31310)
      renal cortical lymphatics (EMAP: 31317)
      renal cortical nerves (EMAP: 31324)
      renal cortical vasculature (EMAP:30326)
             renal cortical arterial system (EMAP:30328)
                    interlobular artery (EMAP:30330)
                    arcuate artery (EMAP:30329)
             renal cortical venous system (EMAP:30331)
                    interlobular vein (EMAP:30333)
                    arcuate vein (EMAP:30332)
             renal cortical capillary (EMAP:30327)
       cortical collecting duct (EMAP:30281)
renal medulla (EMAP:30334)
      outer medulla (EMAP:30343)
             loop of Henle, outer medullary portion (EMAP:30351)
                           thin descending limb (EMAP:30353)
                           thin ascending limb (syn: ascending thin limb)
                           (EMAP:30352)
                           proximal straight tubule (syn: segment 3 of proximal
                           tubule; pars recta) (EMAP:30356)
                           premacula segment of distal straight tubule (syn: thick
                           ascending limb) (EMAP:30354)
             outer medullary interstitium (EMAP:30350)
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outer medullary fibroblast (EMAP: 31387)
                           resident macrophage of the outer medulla (syn: renal
                           moncytes of the outer medulla) (EMAP: 31392)
                           rest of outer medullary interstitium (EMAP: 31397)
                    outer medullary collecting duct (EMAP:30349)
             inner medulla (syn: papilla) (EMAP:30335)
                    loop of Henle, inner medullary portion (EMAP:30339)
                           thin descending limb (EMAP:30341)
                           bend (syn: U-turn) (EMAP:30340)
                           thin ascending limb (syn: ascending thin limb)
                           (EMAP:30342)
                    inner medullary interstitium (syn: papillary interstitium)
                    (EMAP:30337)
                           inner medullary fibroblast (EMAP: 31402)
                           resident macrophage of the inner medulla (syn: renal
                           moncytes of the inner medulla) (EMAP: 31407)
                    inner medullary collecting duct (syn: papillary collecting duct)
                    (EMAP:30336)
             renal medullary lymphatics (EMAP: 31352)
             renal medullary nerves (EMAP: 31359)
             renal medullary vasculature (EMAP:30357)
                    renal medullary arterial system (EMAP:30358)
                    renal medullary venous system (EMAP:30360)
                    renal medullary capillary (syn:vasa recta) (EMAP:30359)
      calyx (EMAP:30250)
             major (EMAP:30251)
             minor (EMAP:30252)
      pelvis (EMAP:30276)
             pelvic urothelial lining (syn: pelvic urothelium) (EMAP:30278)
             pelvic smooth muscle (EMAP:30277)
             perihilar interstitum (EMAP:30279)
                           perihilar fibroblast (EMAP: 31365)
                           resident macrophage of perihilar interstitium (syn: renal
                           moncytes of the perihilar interstitium) (EMAP: 31371)
                           rest of perihilar interstitium (EMAP: 31377)
      renal artery (EMAP:30244)
             endothelial layer of renal artery (EMAP:30245)
             smooth muscle layer of renal artery (EMAP:30246)
      renal vein (EMAP:30404)
             endothelial layer of renal vein (EMAP:30405)
             smooth muscle layer of renal vein (EMAP:30406)
ureter (syn: primitive ureter) (EMAP:30363)
             urothelium (syn: transitional epithelium) (EMAP:30369)
                    superficial cellular layer (syn: umbrella cell) (EMAP:30373)
                    deep cellular layer (syn: basal urothelium) (EMAP:30370)
                           intermediate cell layer (EMAP:30371)
                           basal cell layer (EMAP:30372)
      lamina propria (EMAP:30367)
      ureteral smooth muscle layer (EMAP:30364)
             smooth muscle component (EMAP:30365)
             interstitium (syn: Cajal cell) (EMAP:30366)
      adventitia of ureter (EMAP 30368)
      ureteral vasculature (EMAP:30858)
urachus (EMAP:30403)
bladder (EMAP:30374)
      epithelium of the bladder (syn: urothelium) (EMAP:30380)
             epithelium of fundus (EMAP:30382)
             epithelium of trigone (EMAP:30381)
             epithelium of neck (EMAP:30383)
      lamina propria of the bladder (EMAP:30396)
             lamina propria of the fundus (EMAP:30397)
             lamina propria of the trigone (EMAP:30398)
             lamina propria of the neck (EMAP:30399)
      muscularis mucosa of bladder (EMAP:30388)
             muscularis mucosa of fundus (EMAP:30390)
             muscularis mucosa of trigone (EMAP:30389)
             muscularis mucosa of neck (EMAP:30391)
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detrusor muscle of bladder (EMAP:30376)
             detrusor muscle of fundus (EMAP:30378)
             detrusor muscle of trigone (EMAP:30377)
             detrusor muscle of neck (EMAP:30379)
      serosa of bladder (EMAP:30392)
             serosa of fundus (EMAP:30395)
             serosa of trigone (EMAP:30393)
             serosa of neck (EMAP:30394)
      adventitia of bladder (EMAP:30384)
             adventitia of fundus (EMAP:30385)
             adventitia of trigone (EMAP:30387)
             adventitia of neck (EMAP:30386)
      blood vessels of bladder (EMAP:30375)
urethra of male (EMAP:30407)
      pelvic urethra of male (EMAP:30412)
             epithelial layer of pelvic urethra of male (EMAP:30415)
             mesenchymal layer of pelvic urethra of male (EMAP:30414)
             muscle layer of pelvic urethra of male (EMAP:30413)
      phallic urethra of male (EMAP:30408)
             epithelial layer of phallic urethra of male (EMAP:30409)
             mesenchymal layer of phallic urethra of male (EMAP:30411)
             muscle layer of phallic urethra of male (EMAP:30410)
urethra of female (EMAP:30418)
      pelvic urethra (syn; membranous urethra of female) (EMAP:30419)
             epithelial layer of pelvic urethra of female (EMAP:30421)
             mesenchymal layer pelvic urethra of female (EMAP:30422)
             muscle layer pelvic urethra of female (EMAP:30420)
      phallic urethra of female (syn: external urethra of female) (EMAP:30922)
             epithelial layer phallic urethra of female (EMAP:30933)
             mesenchymal layer phallic urethra of female (EMAP:30937)
             muscle layer phallic urethra of female (EMAP:30941)
mesentery (EMAP:30400)
      urogenital mesentery (EMAP:30402)
      rest of mesentery (EMAP:30401)
urorectal septum (EMAP:30416)
GROUP TERMS (TS27)
developing capillary loop stage nephron (syn: stage III nephron) (GROUP) (EMAP
30317)
      capillary loop renal vesicle (renal vesicle of the stage III nephron) (EMAP:30307)
             associated interstitium (EMAP:30311)
             parietal epithelium (EMAP:30312)
             presumptive endothelium (EMAP:30310)
             presumptive mesangium (EMAP30309)
             visceral epithelium (syn: podocyte layer) (EMAP:30308)
      renal tubule (tubular portion of nephron) (EMAP:30253)
             renal connecting tubule (EMAP:30263)
             early distal tubule (EMAP:30261)
             anlage of loop of Henle (syn:primitive loop of Henle) (EMAP: 31287)
             early proximal tubule (EMAP30255)
maturing nephron (syn: stage IV nephron (GROUP) (EMAP: 30306)
      maturing renal corpuscle (renal corpuscle of the stage IV nephron) (EMAP:30264)
             Bowman's capsule (glomerular capsule) (EMAP:30272)
                    parietal epithelium (EMAP:30274)
                    urinary space of renal corpuscle (Bowman's space) (EMAP:30273)
      juxtaglomerular arteriole (EMAP:30265)
             afferent arteriole (EMAP:30266)
             efferent arteriole (EMAP:30267)
      maturing glomerular tuft (maturing glomerulus) (EMAP:30268)
             glomerular capillary system (EMAP:30271)
             glomerular mesangium (EMAP:30270)
             visceral epithelium (podocyte layer) (EMAP:30269)
      renal tubule (tubular portion of nephron) (EMAP:30253)
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renal connecting tubule (EMAP:30263)
             renal distal tubule (EMAP:30257)
                    distal convoluted tubule (second convoluted tubule) (EMAP:30262)
                    distal straight tubule (thick ascending limb) (EMAP:30258)
                           macula densa (EMAP:30260)
                          postmacula segment of distal straight tubule (EMAP:30259)
                          premacula segment of distal straight tubule (EMAP 31382)
                    early distal tubule (EMAP30261)
             renal proximal tubule (EMAP:30254)
                    early proximal tubule (EMAP:30255)
                    renal proximal convoluted tubule (syn:first convoluted tubule)
                    (EMAP:30256)
mature nephron (GROUP) (EMAP:30288)
      mature renal corpuscle (Malpighian corpuscle) (EMAP:30289)
             afferent arteriole (EMAP:30269)
                    part of afferent arteriole forming the juxtaglomerular complex
                    (EMAP:30297)
                    rest of afferent arteriole (EMAP:30298)
             Bowman's capsule (syn:glomerular capsule) (EMAP:30300)
                    parietal epithelium (EMAP:30301)
                    urinary space of renal corpuscle (syn:Bowman's space)
                    (EMAP:30302)
             efferent arteriole (EMAP:30296)
             extraglomerular mesangium (EMAP:30299)
             glomerular tuft (syn:glomerulus) (EMAP:30291)
                    glomerular basement membrane (EMAP:30293)
                    glomerular capillary system (EMAP:30294)
                    glomerular mesangium (EMAP:30295)
                    visceral epithelium (syn:podocyte layer) (EMAP:30292)
      renal tubule (syn:tubular portion of nephron) (EMAP:30253)
             renal connecting tubule (EMAP:30263)
             renal distal tubule (EMAP:30257)
                    distal convoluted tubule (syn:second convoluted tubule)
                    (EMAP:30262)
                    distal straight tubule (syn:thick ascending limb) (EMAP:30258)
                           macula densa (EMAP:30260)
                          postmacula segment of distal straight tubule (EMAP:30259)
                           premacula segment of distal straight tubule (EMAP 31382)
             renal proximal tubule (EMAP:30254)
                    renal proximal convoluted tubule (syn:first convoluted tubule)
                    (EMAP:30256)
      loop of Henle (EMAP: 31498) GROUP
             loop of Henle, outer medullary portion (EMAP:30351)
                    thin descending limb (EMAP:30353)
                    thin ascending limb (syn: ascending thin limb) (EMAP:30352)
                    proximal straight tubule (syn: segment 3 of proximal tubule; pars
                    recta) (EMAP:30356)
                    premacula segment of distal straight tubule (syn: thick ascending
                    limb) (EMAP:30354)
             loop of Henle, inner medullary portion (EMAP:30339)
                    thin descending limb (EMAP:30341)
                    bend (syn: U-turn) (EMAP:30340)
                    thin ascending limb (syn: ascending thin limb) (EMAP:30342)
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#### iuxtaglomerular complex (GROUP) (EMAP:30452)

extraglomerular mesangium (EMAP:30299) macula densa (EMAP:30260) part of the afferent arteriole forming the juxtaglomerular complex (EMAP:30297)

### collecting duct (GROUP) (EMAP: 30280)

ureteric tip (syn:ureteric ampulla) (EMAP:30248) collecting duct terminal branch (ureteric tree terminal branch) (EMAP:31052) cortical collecting duct (EMAP:30281)

outer medullary collecting duct (EMAP:30349) inner medullary collecting duct (syn: papillary collecting duct) (EMAP:30336)

### renal interstitium group (GROUP) (EMAP: 30362)

associated interstitium (EMAP:30311) extraglomerular mesangium (EMAP:30299) glomerular mesangium of maturing renal corpuscle (EMAP:30270) glomerular mesangium of mature renal corpuscle (EMAP:30295) nephrogenic interstitium (syn: peripheral blastema) (EMAP:30283) presumptive mesangium (EMAP:30309) renal cortical interstitium (syn:cortical stroma) (EMAP:30315) renal cortical fibroblasts (EMAP: 31294) resident macrophage of the cortex (EMAP:31302) rest of cortical interstitium (EMAP:31310) outer medullary interstitium (EMAP:30350) outer medullary fibroblast (EMAP: 31387) resident macrophage of the outer medulla (EMAP: 31392) rest of outer medullary interstitium (EMAP: 31397) inner medullary interstitium (syn:papillary interstitium) (EMAP:30337) inner medullary fibroblast (EMAP: 31402) resident macrophages of the inner medulla (EMAP: 31407) rest of inner medullary interstitium (EMAP: 31412) perihilar interstitium (EMAP:30279) perihilar fibroblast (EMAP: 31365) resident macropage of the perihilar interstitium (EMAP: 31371) rest of perihilar interstitium (EMAP: 31377)

## renal vasculature (GROUP) (EMAP: 30417)

glomerular capillary system (EMAP:30294) juxtaglomerular arteriole (EMAP:30265) afferent arteriole (EMAP:30266) efferent arteriole (EMAP:30267) presumptive endothelium (EMAP:30310) renal artery (EMAP:30244) endothelial layer (EMAP:30245) smooth muscle layer (EMAP:30246) renal vein (EMAP:30404) endothelium of renal vein (EMAP:30405) smooth muscle layer (EMAP:30406) renal cortical vasculature (EMAP:30326) (GROUP) renal cortical arterial system (EMAP:30328) interlobular artery (EMAP:30330) arcuate artery (EMAP:30329) renal cortical venous system (EMAP:30331) interlobular vein (EMAP:30333) arcuate vein (EMAP:30332) renal cortical capillaries (EMAP:30327) renal medullary vasculature (EMAP:30357) (GROUP) renal medullary arterial system (EMAP:30358) renal medullary venous system (EMAP:30360) renal medullary capillary (syn: vasa recta) (EMAP:30359)

### large blood vessels (EMAP:31467)

renal artery (EMAP: 10110) renal vein (EMAP: 13094) arcuate vein (EMAP: 28224) interlobular artery (EMAP: 28215) interlobular vein (EMAP: 28221) arcuate artery (EMAP: 28218)

# small blood vessels (EMAP: 31474)

renal cortical capillary (EMAP: 30042) efferent arteriole (EMAP: 28278)

renal medullary arterial system (EMAP: 28167) afferent arteriole (EMAP: 28269) glomerular capillary system (EMAP: 28248) renal medullary venous system (EMAP: 28172) renal medullary capillary (syn:vasa recta) (EMAP: 30048) glomerular capillary system (EMAP: 28961)