Fig. 1. Topography of the urinary organs of the dog in situ.

1. Right lateral lobe of liver
2. Right medial lobe of liver
3. Gallbladder
4. Left medial lobe of liver
5. Left lateral lobe of liver
6. Right kidney
7. Left ureter
8. Bladder
9. Ductus deferens
10. Left adrenal gland
11. Left renal artery and vein
12. Aorta
13. Vena cava
14. External iliac artery and vein
15. Psoas muscle
16. Prostate gland

Fig. 2. Urinary organs of the male dog

The urinary system consists of paired kidneys which form urine that is carried by the ureter into the bladder for storage and discharged to the exterior by the urethra. The system maintains plasma homeostasis by the processes of filtration, secretion, and selective reabsorption. The kidneys are retroperitoneal. In the dog the kidneys lie in the dorsal abdominal region on either side of the vertebral column (fig. 1). They are higher at T12-L1-2). The right kidney is located at T13-L3. The ureter emerges from the medial hilus and runs caudally into the bladder in the pelvic cavity. The neck of the bladder continues as the urethra and in the male this part is surrounded by the prostate gland (fig. 2). The kidneys are supplied by the right and left renal arteries, a direct branch of the aorta (fig. 1). The RA arises dorsal to the caudal vena cava en route to the right kidney. The left artery is caudal to the right (fig. 2). The renal veins drain into the vena cava. The left gonadal vein drains into the left renal vein (fig. 2). The kidneys are fixed by the surrounding fascia and the sublumbar muscles.