Dear Dr. Hines,

if the same thing as in humans, rats, and mice happens in dogs and cats, then high salt

- would increase the burden of the kidneys to concentrate the salt into the urine,
- requires the already failing kidneys to accumulate more urea in the renal medulla so that water could be reabsorbed,
- would lead to a catabolic state with high glucocorticoid levels and urea production in liver and in skeletal muscle,
- would increase the pets food intake to prevent catabolic muscle mass loss (muscle wasting) for urea production,

Blood and urine work:

BUN will not tell much - because the increased urea levels could come from the liver, or from kidney.

Water consumption - will increase if the kidneys fail (because they cannot concentrate), and increase as long as the kidneys can concentrate.

Creatinine levels will go with GFR and not with the (lost) concentration mechanism. Creatinine levels thus may decrease when the animals drink more, however, this decrease does not necessarily mean that renal function (the concentration mechanism) is improved.

Specific gravity of the urine would go down in case that the animals have a concentration deficit and compensate by drinking more (water diuresis; more likely), or may go up when the extra-salt osmolytes are excreted without changes in fluid intake.

Best,

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