

Investigating the Burden of Chronic Kidney Disease in UK Dogs: Preliminary Results

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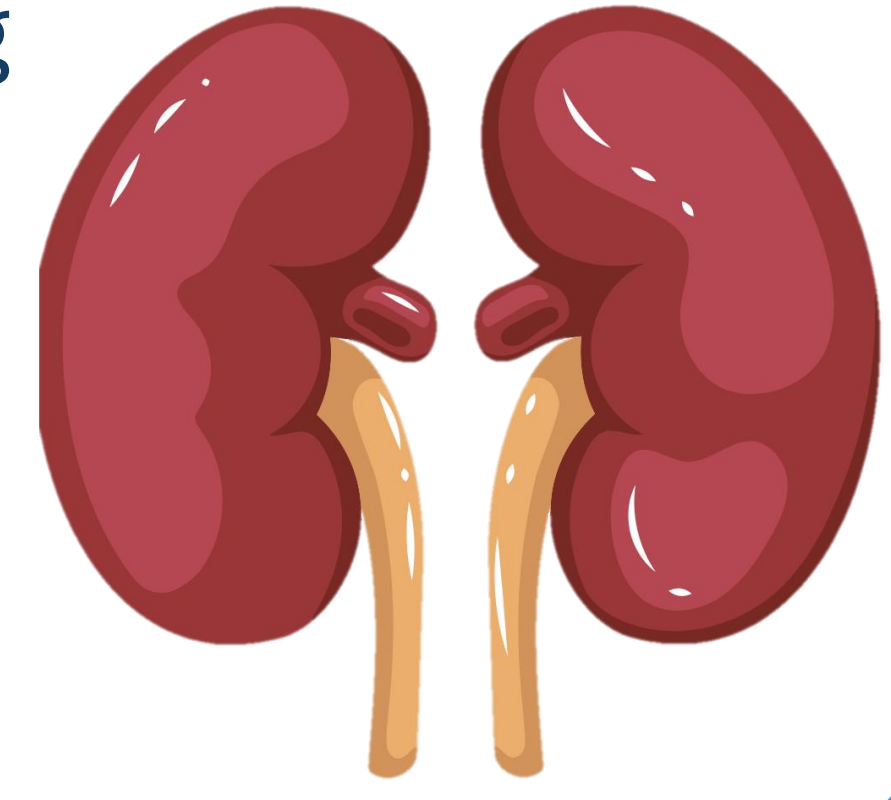
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BACKGROUND

Chronic Kidney Disease (CKD) is characterised by **persistent** structural or functional kidney abnormalities lasting at least **three months** in one or both kidneys¹.

CKD is frequently cited as the predominant renal disorder in dogs, but **prevalence varies** across study populations and case criteria¹. **Non-specific clinical signs** impede early detection and awareness².

Primary-care electronic health records (EHR) have been used to estimate CKD prevalence, evaluate factors associated with survival and perform **descriptive** analyses of **comorbidities** and **clinical signs**¹.



METHOD

Core Study

- Case finding included dogs diagnosed in 2023 with CKD (or synonym), kidney disease with documented chronicity, or persistent renal proteinuria.
- CKD cases were identified by manually reviewing EHRs containing keywords relating to CKD.
- Median survival time (MST) was calculated for all 2023 incident cases and by IRIS stage³.

Descriptive Study

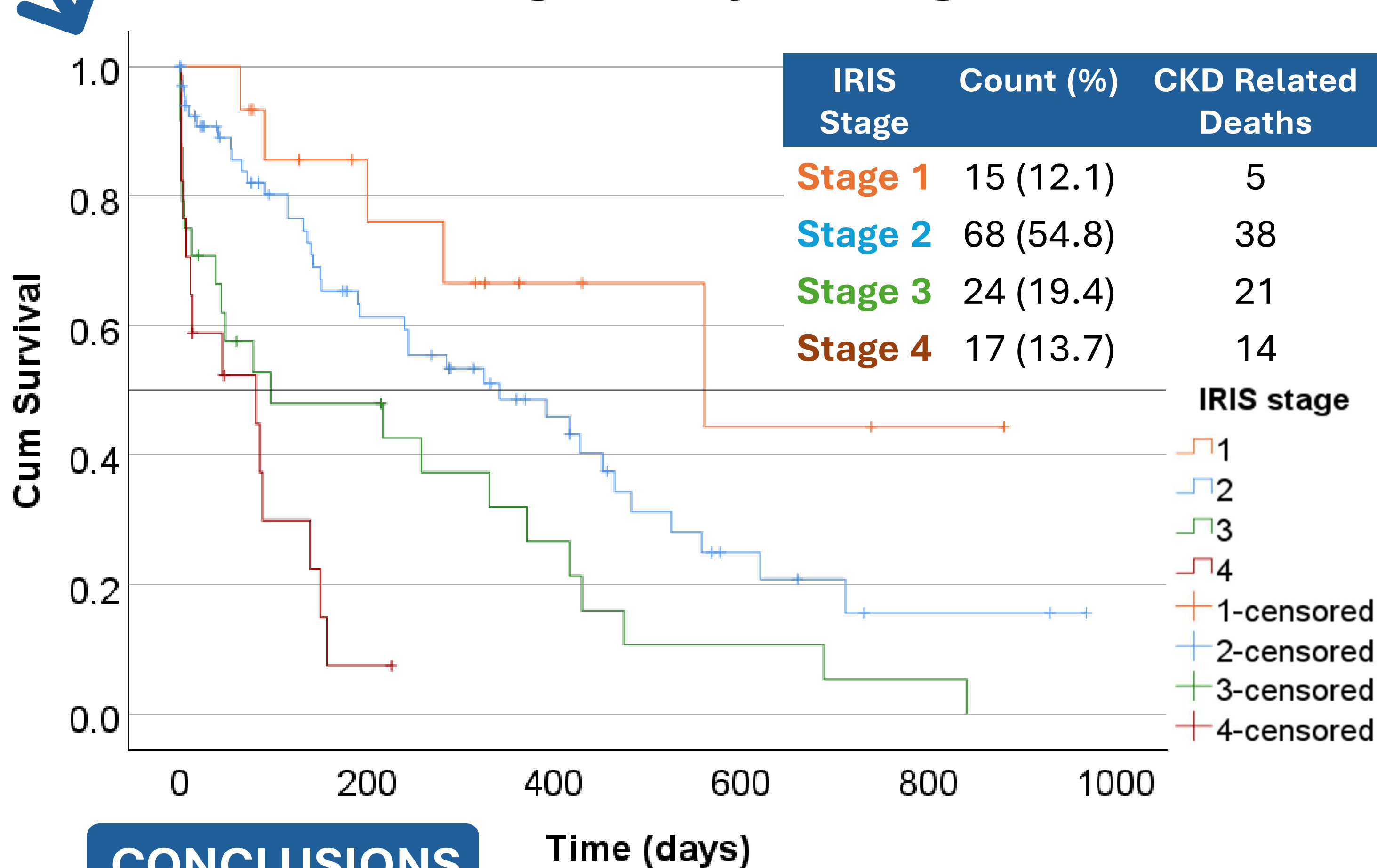
- Comorbidities and clinical signs extracted using VeNom⁴ diagnostic terms from the twelve months preceding CKD diagnosis to the final EHR entry.
- IRIS staging confirmed in EHR by veterinarian or by researcher following IRIS criteria³.
- Collate clinical signs recorded within ± two months of the dated IRIS stage.

PRELIMINARY RESULTS

Core Study

- incident CKD cases, 268 deaths
- 217 (81%) deaths at least partly attributable to CKD
- MST 192 days (95% CI: 145 - 239) from CKD diagnosis until death (all-cause)
- MST 275 days (95% CI: 195 - 254) from CKD diagnosis until death related to CKD
- Rising IRIS stage was associated with all-cause mortality and death related to CKD (P<0.001)

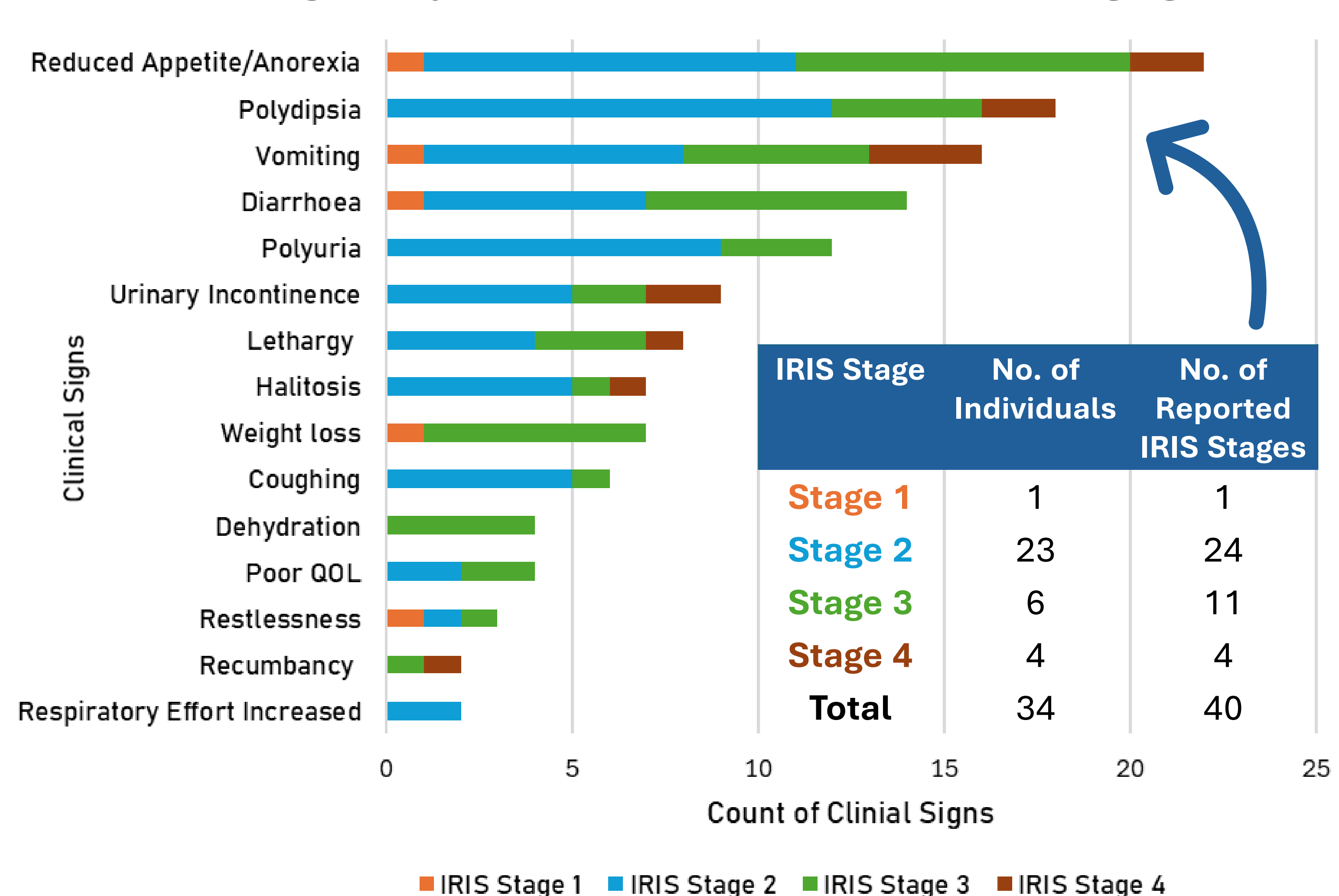
Kaplan-Meier survival curve for dogs diagnosed with CKD categorised by IRIS stage



Descriptive Study

Summary Statistics	Count (%)
Total Individuals	34
IRIS Stage (vet confirmed)	25 (73.5)
IRIS Stage (researcher coded)	8 (23.5)
Individuals with multiple IRIS Stages	5 (14.7)

Clinical Signs Reported +/- 2 Months of CKD IRIS Staging



CONCLUSIONS

Core Study: Median survival time from CKD diagnosis until death was <1 year in primary care practice and was associated with IRIS stage.

Descriptive Study: Across all CKD IRIS Stages, reduced appetite/anorexia, polydipsia and vomiting were the most frequent clinical signs.

NEXT STEPS

Core Study: Cox proportional hazard models will evaluate associations between demographic and clinical explanatory variables and survival.

Descriptive Study: Further descriptive analysis integrating demographic data extracted from VetCompass EHRs.

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