Neurological signs, MRI findings, and outcome in dogs with multiple myeloma

Sophie Wyatt¹, Luisa De Risio², Colin Driver³, Roberto Jose-Lopez⁴, Elsa Beltran¹
¹ Royal Veterinary College, London, United Kingdom
² Animal Health Trust, Newmarket, United Kingdom
³ Fitzpatrick Referrals, Eashing, United Kingdom
⁴ University of Glasgow, Glasgow, United Kingdom

OBJECTIVES
The study objective was to retrospectively evaluate clinical, neurological and MRI findings in dogs diagnosed multiple myeloma when presented for spinal pain and/or other neurological signs.

METHODS
The study is based on a retrospective case series design. Electronic records of four UK referral hospitals were reviewed. Dogs were included on the basis they had a confirmed diagnosis of multiple myeloma, had presented for spinal pain with or without other neurological signs, and had undergone MR imaging of the vertebral column. Short term follow-up information was obtained from medical records at participating referral institutions two weeks after initial presentation. Long term follow-up information was obtained through access to patient medical records held at referral institutions and referring veterinary practices. The study was granted ethical approval by the regulatory bodies at the study institution.

RESULTS
Twelve dogs were included in the final study; the majority had a chronic progressive history, and spinal pain was a feature in all dogs, along with varying degrees of ataxia and paresis. MR imaging revealed polyostotic vertebral lesions with areas of bone lysis and new bone formation causing a variable degree of spinal cord compression. In one dog, vertebral lesions were associated with pathological fracture. Three dogs were euthanised at the time of diagnosis. Remaining dogs (n=9) were treated with a melphalan and prednisolone chemotherapeutic protocol, and all survived to short-term follow-up. Median survival time with treatment was 184 days (range 14–701).

STATEMENT (CONCLUSIONS)
Despite significant bone lesions and spinal cord compression, multiple myeloma is associated with a reasonable outcome.