# SEASONALITY AND RISK FACTORS FOR GRASS SEED FOREIGN BODIES IN DOGS

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Grass seed foreign bodies (GSFB) are a familiar presentation, especially in dogs, associated with a variety of clinical signs depending on site of penetration and extent of migration. In simple cases, diagnosis is through identification on physical examination which allows for subsequent removal. However, in some patients, especially those where seed migration has occurred, more intense investigations may be required.

## STUDY

Seasonality and risk factors for GSFB occurrence were investigated using electronic health records from a sentinel voluntary network of 245 veterinary practices in the United Kingdom between 17th March 2014 and 18th September 2020. Clinical narrative text mining of 4,580,503 canine consultations produced a final case dataset of 1,037 consultations where GSFB had been recorded in individual dogs.

## SEASONALITY

Cases of GSFBs were recorded in all months, with 940 (90.6%) recorded between June and September.
In particular, the odds of GSFBs in **July** was almost 176 times more than that of January (OR 175.6, CI 43.5-707.7, P<0.001).



Grass Seeds by Month and Year
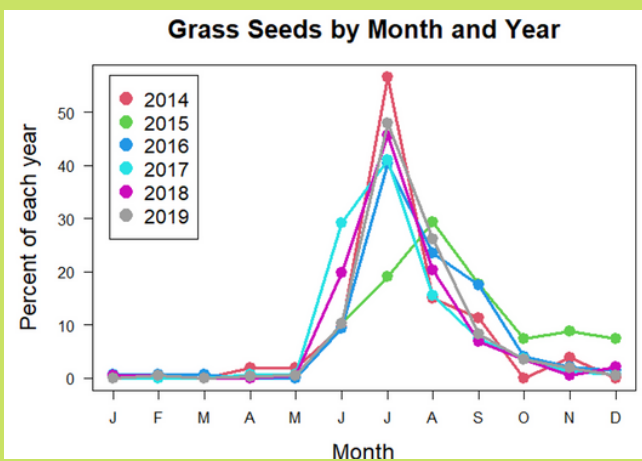
## BREED TYPE

Compared to the retriever breed type, **spaniel** breed types were **7.7** times more likely to present with a reported GSFB (OR 7.7, CI 5.4 – 11.0, P<0.001).

## SEX

**Male** dogs were **1.4** times more likely to present with a reported GSFB (OR, 1.4, CI 1.2-1.6, P<0.001)

## LOCATION

When compared to the South East of England, risk of a GSFB being reported was **lowest in Wales** (OR 0.1, CI 0.0-0.3, P<0.001), and **highest in the East of England** (OR 1.9, CI 1.2 – 2.9, P=0.003), and overall risk in **urban** areas was **reduced** (OR=0.8, CI 0.7-1.0, P=0.024).

> *Whilst the majority of grass seed foreign bodies tend to be relatively straightforward to identify and remove, some cases are difficult and come with a risk of complications. These observed sex and breed differences may represent a combination of anatomical and pet behaviour factors, as well as owner behaviour too.*
> *This work is only possible thanks to the participation of those veterinary practices submitting data and supporting our research.*

**Beth Brant, SAVSNET Project Coordinator and lead author**

## TARGETED HEALTH MESSAGES

This is the first study using large scale UK electronic health record data to explore risk factors associated with GSFB in dogs. Identification of a number of risk factors allows practices to raise awareness of GSFB amongst dog owners, especially during the summer months when risk is increased.

# THANK YOU TO ALL PARTICIPATING VETERINARY PRACTICES FOR SUPPORTING SAVSNET