Don't just go through the motions: Should you reconsider your approach to routine deworming based on recent data?

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Chair of ESCCAP

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Parasitic worms of most concern found In UK Cats And Dogs

01

Intestinal nematodes

- ***Toxocara* spp**
- Hookworms

02

Tapeworms

- ***Echinococcus granulosus***
- ***Taenia* spp**
- ***Dipylidium caninum***

03

"Lungworms"

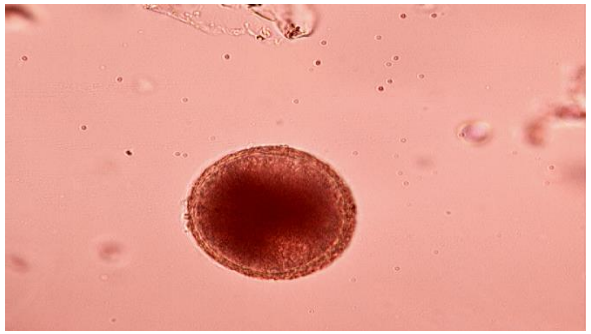
- ***Angiostrongylus vasorum***
- ***Aelurostrongylus abstrusus***

Toxocara spp

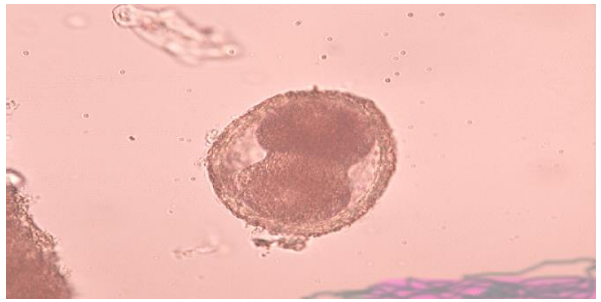
- Intestinal nematodes of dogs and cats
- Puppies and kittens most commonly affected
- Significant zoonosis – VLM, OLM, CT
- Links to epilepsy, learning difficulties dermatitis, asthma
- No routine testing for people with chronic illness in UK
- Some public awareness of zoonotic potential

How prevalent is *Toxocara* in the UK?

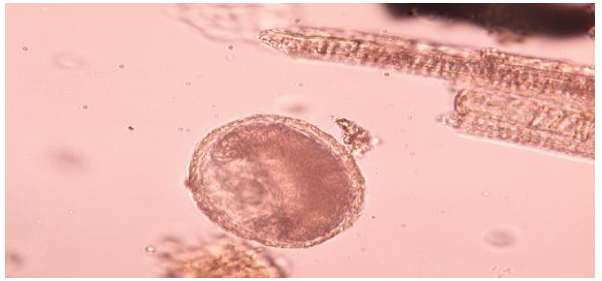
- Adult prevalence in cats and dogs highly variable variable
  - 3.5–34% in dogs
  - 8–76% in cats



- Prevalence study Preston/Wyre/Fylde 2016 in untreated pets
  - 5.3% prevalence dogs
  - 26% prevalence in domestic cats

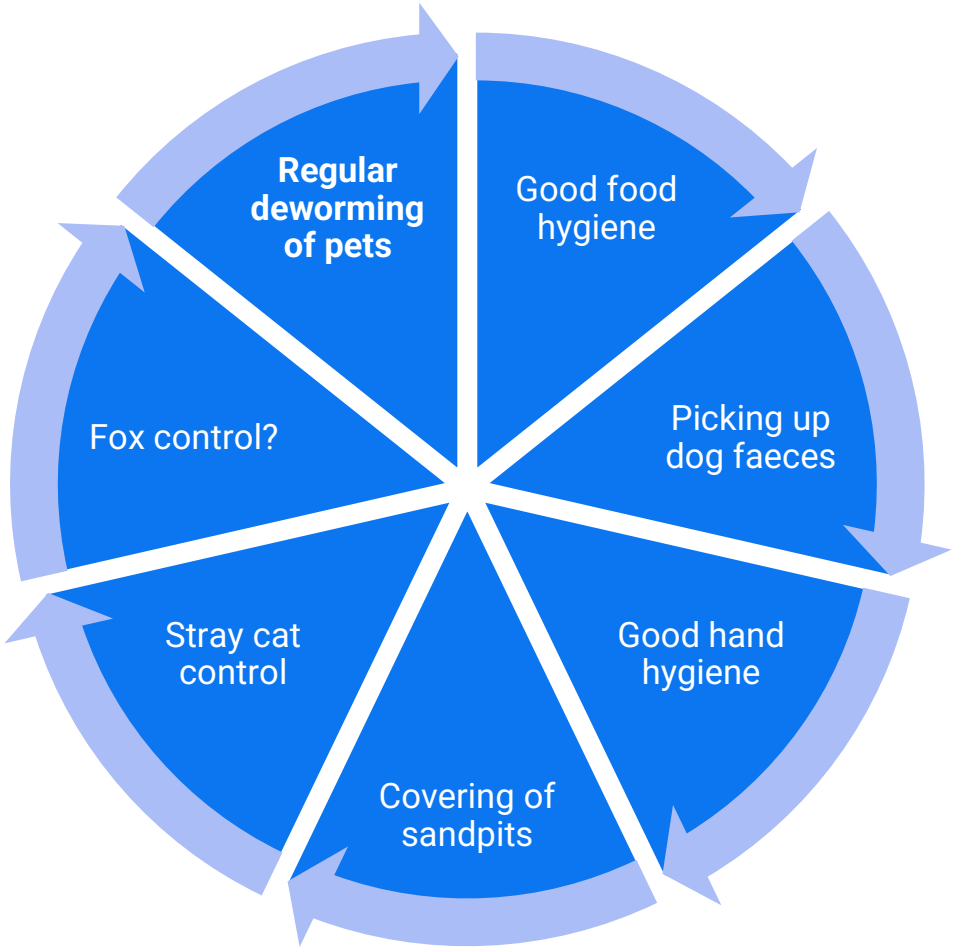


- Eggs long lived in the environment
  - Point prevalence studies do not tell whole story



- Recent study (Airs et al, 2022) found 86.6% of parks in UK parks found to be contaminated, with an average of 2.1 eggs per 50g of topsoil
- Irish study by Keegan et al (2025) showed egg concentrations around park entrances

Control of human Toxocarosis requires an integrated approach



Role of routine treatment in reducing zoonotic risk

- Reduction of egg shedding

- 4 times a year current ESCCAP recommendation for pets with outdoor access
  - Or as alternative testing at same frequency

- Monthly for high-risk pets
  - Less than 6 months old
  - Predation/carcass access
  - Regular contact with young children or the immune suppressed
  - Raw diets that have not been adequately pre frozen

Arguments against routine Intestinal Worm Treatment for *Toxocara*

Will lead to over treatment

Limits environmental contamination with anthelmintic?

Reduces risk of anthelmintic resistance?

Testing as an alternative?

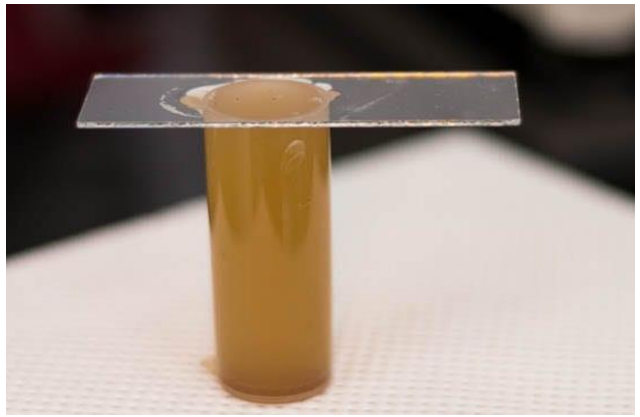
Testing as a replacement for routine treatment

- Viable option but needs to be done frequently with high sensitivity

- Expense and owner compliance can be a barrier
  - Routine diagnostics will be more expensive than routine treatment
  - Owners need to perceive value to go to effort of bringing in sample
  - Many owners do not like handling faeces

- Shedding can occur between tests

- Testing option in practice health plans
  - Gives an alternative for owners
  - Cost can be spread



Role of testing alongside Routine Treatment

- Now recommended as part of ESCCAP guideline 1
- Demonstrates good compliance
- Contributes to parasite prevalence data
- Shedding can occur between tests
- Early detection of resistance

Frequency of screening

At least once or twice a year testing alongside treatment

Coincide with “wellness checks”

At least 4 times a year if testing instead of treatment

Aim to become a normal part of routine checks

Hookworms

- *Ancylostoma* spp have zoonotic potential – cutaneous larval migrans
- *Uncinaria stenocephala* most common hookworm of UK dogs
- Zoonotic risk in UK negligible
- As little as 5 days to reach infective l3 stage
- Larvae can survive in environment for 1-2 months
- Can build up in kennels very rapidly
- Potential for drug resistance if deworming in kennelled situations
- Care with faecal flotation false positives

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Tapeworm - *Echinococcus granulosus*

- Non pathogenic in canids definitive hosts
- Significant zoonosis – cause of hydatid cysts
  - Cysts in liver CNS, bone, heart
- UK endemic foci in Wales and the Western Isles of Scotland
- Strong evidence presented at BSAVA congress this year suggesting *E.granulosus* is present in other parts of Britain.
- Would be at least 7-10 years before any current increase in incidence of human exposure seen
- Similar time lag trends have been seen in Eastern European countries
  - "Orphan disease"
  - Largely neglected while uncommon
  - Leads to later spike in cases
  - Balkan Peninsula remain areas of high prevalence in Europe

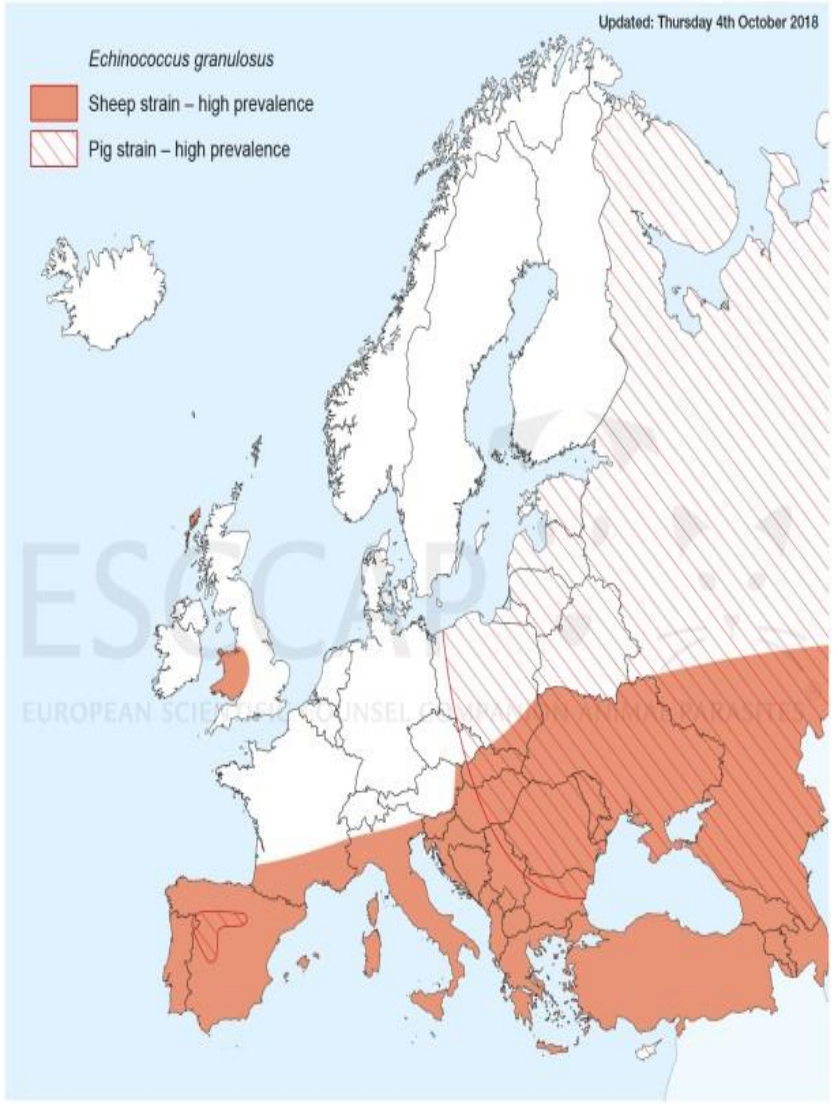


Fig. 9: Approximate summary of distribution of *Echinococcus granulosus* and related species in Europe (© ESCCAP)

Taenia spp

- Offal and carcass condemnation data would suggest widely distributed in UK
- Considerable economic loss from liver and carcass rejections in ruminant intermediate hosts
- Owner revulsion and reduction of human-animal bond
- Loss of body condition in heavy worm burdens

Dipylidium caninum

- Zoonotic
- Prevention dependent on flea control
- Segments reduce human-animal bond
- Heavy burdens suggest loss of flea control
- Anecdotal reports of drug resistance to praziquantel

Control of tapeworm transmission requires an integrated approach

Role of routine treatment in tapeworm control

- Prevent egg shedding in high-risk dogs.

- 4 times a year reduces zoonotic risk over time
  - Pilot study in South Powys, Eradication programs in Far East.
- Every 4-6 weeks will eliminate egg shedding
- Treat every 4-6 weeks with praziquantel
  - All dogs with outdoor off lead access to pasture in known endemic areas
  - Dogs with access to fallen carcasses, shedding segments, unprocessed raw diets/offal
- All other dogs with off lead pasture access – at least 4 times a year.

Role of testing in tapeworm control

- Not a replacement for risk-based treatment in dogs
  - At point of positive *E.granulosus* diagnosis, zoonotic egg shedding already occurring
  - Potential pasture contamination at point of diagnosis
- Useful to demonstrate exposure and geographic distribution
- Faecal flotation/sedimentation low sensitivity
- Coproantigen test for *Dipylidium caninum*
- PCR and antigen tests for *Echinococcus*

Angiostrongylus vasorum

- Present in geographic foci across country.
- Foxes reservoir host with slugs and snails acting as intermediate hosts
- Amphibians and possibly birds can act as paratenic hosts
- Prevalence in foxes increased significantly in all endemic areas in the past eight years – from 7.3 to 18.3% overall
- Prevalence not uniform but fluid
- Prevention necessary in high-risk dogs through monthly treatment

Role of treatment in prevention of angiostrongylosis

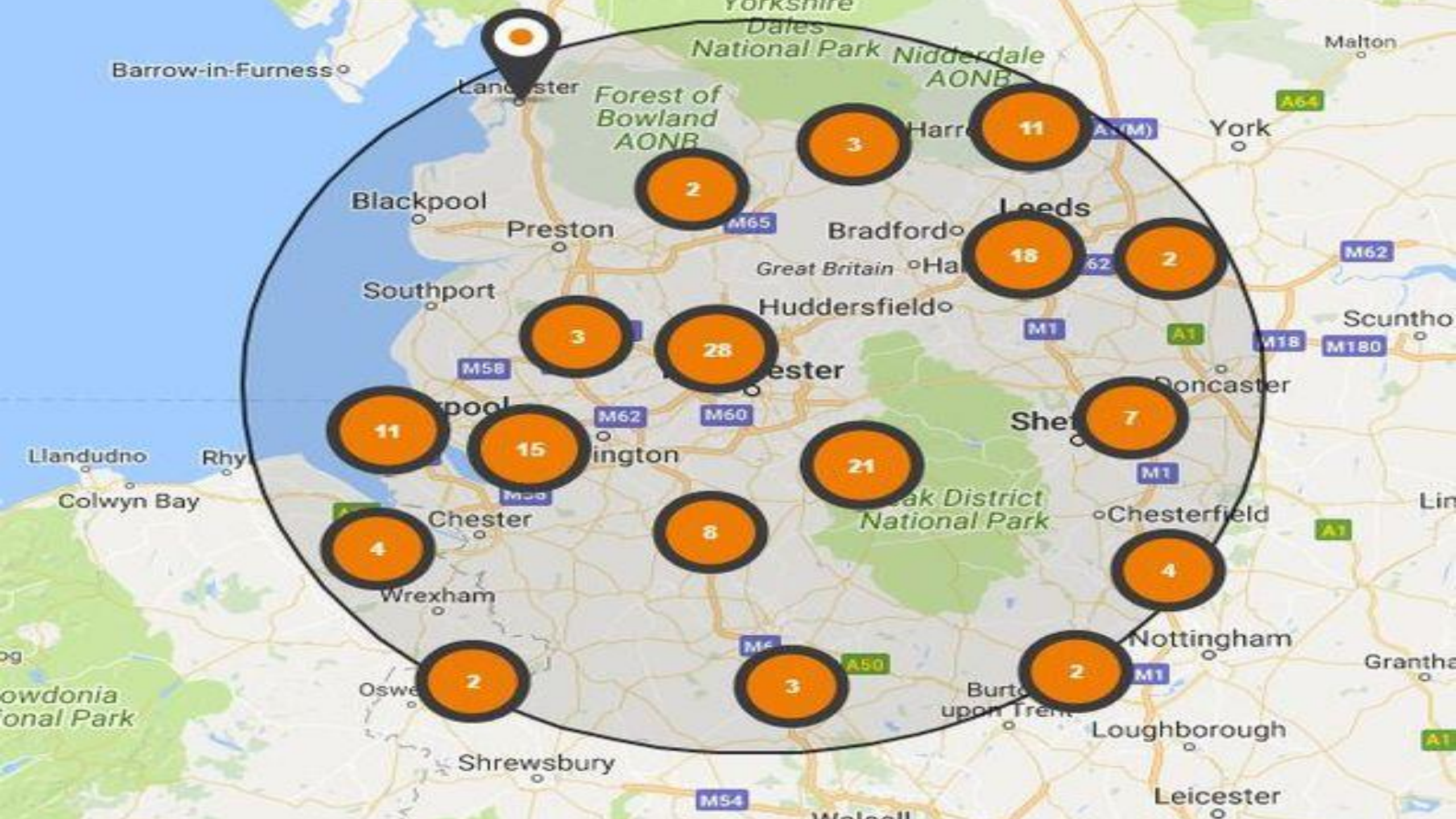
- Difficult to achieve due to ubiquitous nature of intermediate host
  - Removal of dog bowls and toys from garden when not in use
  - Not walking dogs immediately after cessation of rain

- Picking up of dog faeces – Minimal impact due to wildlife reservoir

- **Preventative treatments vital on basis of risk assessment**
  - **Lifestyle risk**
  - **Regional risk**

A.vasorum distribution in foxes

Region	2006	2014
North	0	7.4%
Midlands	4.8%	17.4%
East	1.6%	12.9%
South	6.9%	18.75%
South-east	23.2%	50.8%
Total	**7.3%**	**18.3%**


Barrow-in-Furness
Lancaster
Yorkshire Dales National Park
Nidderdale AONB
Forest of Bowland AONB
Malton
York
Blackpool
Preston
Leeds
Bradford
Great Britain
Southport
Huddersfield
Scunthorpe
Doncaster
Sheffield
Llandudno
Colwyn Bay
Chester
Peak District National Park
Chesterfield
Wrexham
Nottingham
Loughborough
Leicester
Shrewsbury
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Role of testing in *Angiostrongylus vasorum* prevention

- Not an effective substitute for routine treatment of high risk dogs
  - Potential pathogenicity in pre patent period
  - Increased risk to pet at point of detection

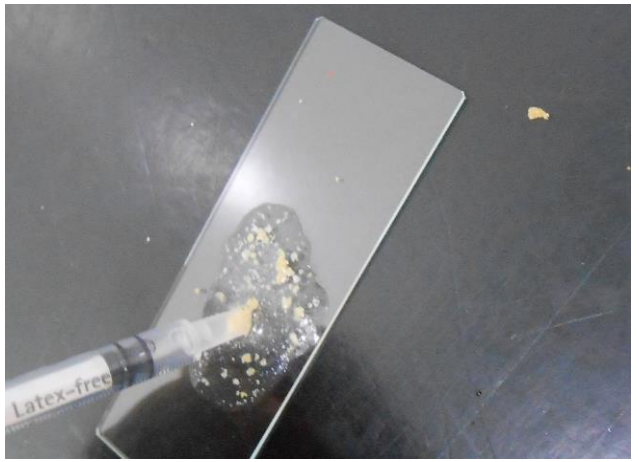
- Testing essential to establish regional risk and efficacy of treatment
  - Relevant clinical signs
  - Pre surgery
  - Young dogs
  - Incorporation into routine testing panels

- Direct smear useful initial screen

- Baermann apparatus

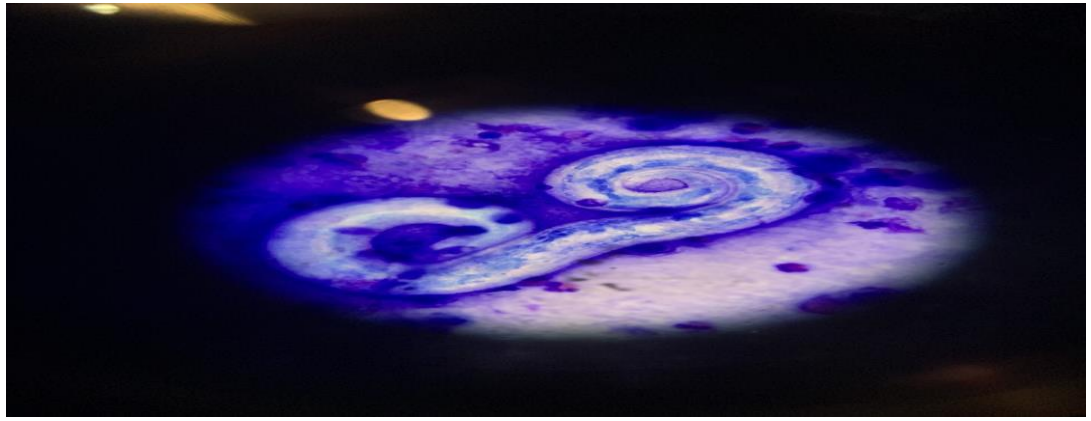
- Blood antigen

- PCR



Aelurostrongylus abstrusus

- Lungworm of cats
- Transmitted through ingestion of slug intermediate hosts and predation of paratenic hosts
- Similar exposure risk factors in adult cats as *Toxocara*
- Low prevalence in UK from recent prevalence studies
- Many macrocyclic lactones have been demonstrated to be effective as a treatment and preventative measure. Emodepside possible treatment.
- Worth considering prevention for high-risk cats
- Diagnosis by Baermanns or PCR



Summary

01 Routine preventative treatment for intestinal worms in cats and dogs on basis of risk is an important component in reducing zoonotic exposure and disease

02 Testing instead of routine treatment is a useful way of avoiding routine use but has some limitations

03 Testing alongside treatment confirms good compliance and is important for surveillance, especially early detection of resistance

04 Effective parasite prevention is required; whether a preventative treatment or testing approach is taken.

05 Risk based preventative treatment approach required for Angiostrongylus vasorum and tapeworm control

06 Testing vital to assess regional *Angiostrongylus vasorum* risk

IDEXX