



# Lifelong Ear Partnership

Veterinary Guidance: Fundamentals for  
successful otitis externa treatment

Background to success – why do cytology for ear disease

Primary care practitioners are presented with cases of otitis externa frequently, with prevalence rates of approximately 10% (O’Neil et al 2014). Given that otitis cases make up a significant portion of general practice caseload, it is particularly important that the plan for otitis externa is clear and well executed, so that successful outcomes are achieved.



Figure 1: 4T's of otitis treatment

Following the 4 Ts in figure 1 can simplify the work up and treatment of otitis externa.

**THINK:**

A key challenge faced in the otitis journey is the identification and management of the underlying cause of otitis externa. This is especially true in dogs where otitis is a frequent re-occurrence.

This is why the first step of the plan should not only be to focus on resolution of acute inflammation but also to consider and resolve the underlying cause.

By identifying and addressing primary (underlying) causes as well as predisposing and perpetuating factors the veterinary team can avoid treatment failure and prevent re-occurrence. Figure 2 shows the primary, secondary, predisposing and perpetuating factors that contribute to otitis externa.

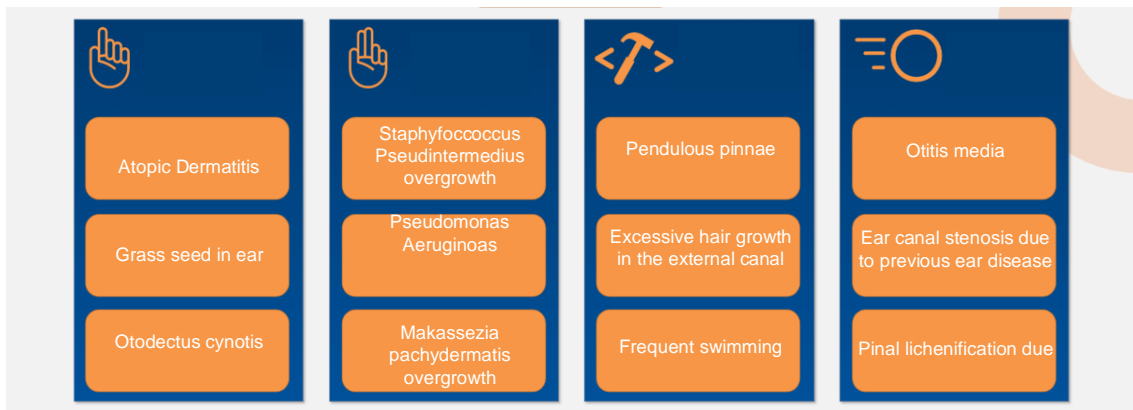


Figure 2: Primary, Secondary, Predisposing and Perpetuating Factors (PSPP)

**TIMING:**

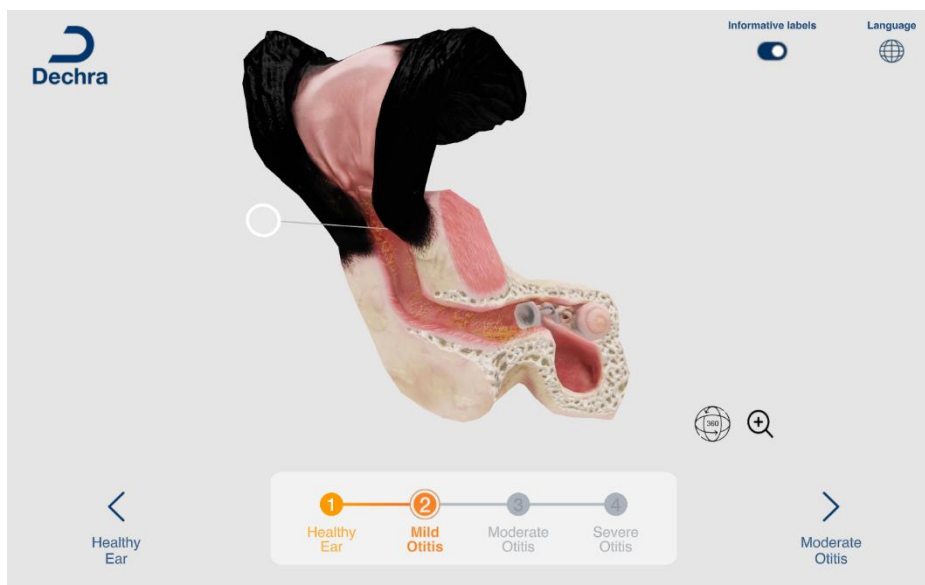
Timing of intervention is crucial, selecting the correct otic treatment product first time will prevent time lost to trial and error and any resulting chronic changes to the ear from the extended disease period. Cytology can be an

essential tool in product selection and should be performed in the first consultation for this reason.

#### TEAMWORK:

Collaboration between all members of staff is advisable and appropriate. Aiding an owner's understanding of the diagnostic process, the condition, and long-term management is key.

Visual aids such as the 4d Ear Model (<https://www.4d-earmodel.com/>) can facilitate owner communication.

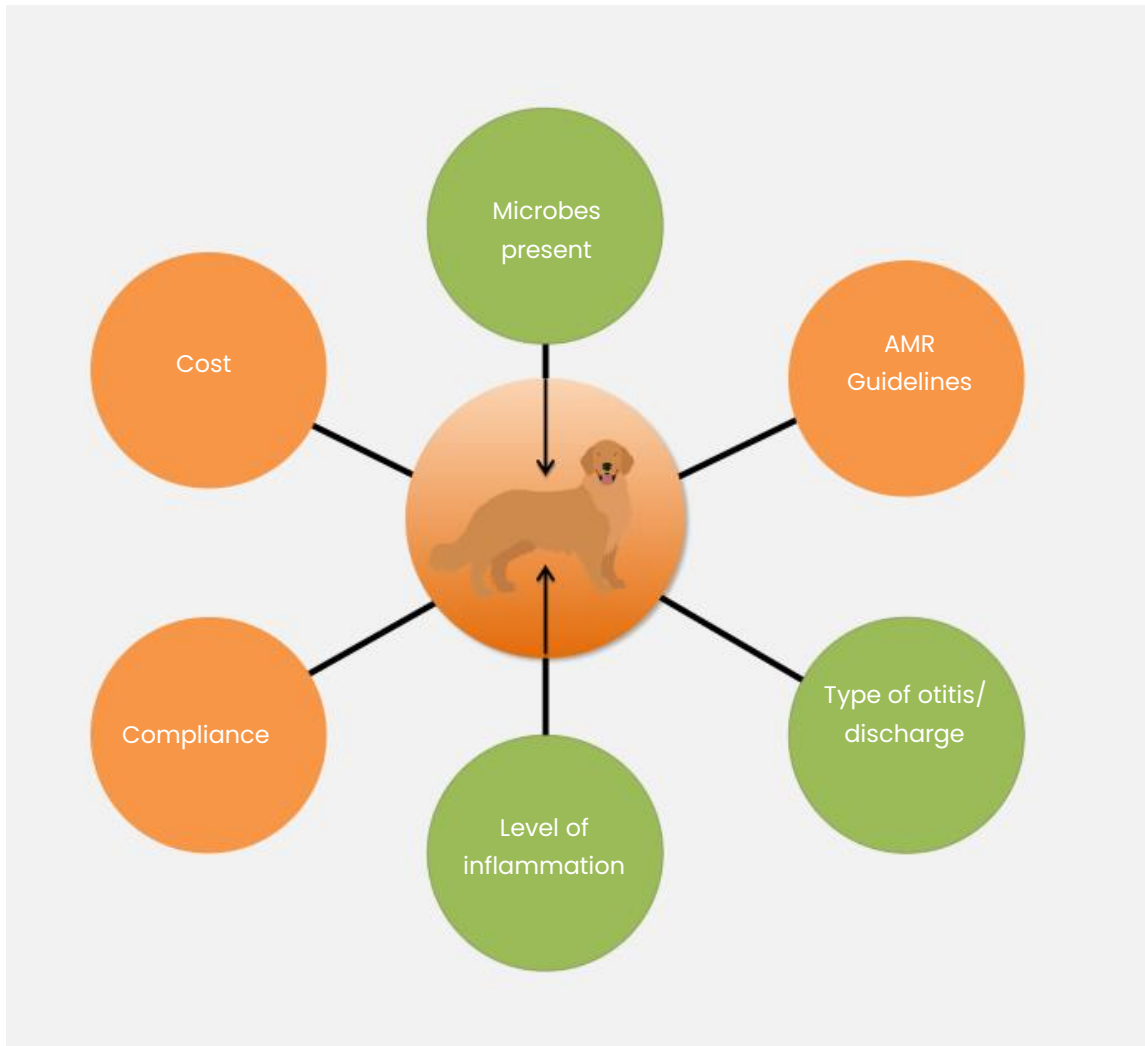


*Figure 2: 4D ear model, an interactive web-based owner communication tool*

It is easy to overlook the patient as a key team member!

It is essential the patient is collaborative to enable treatment, approach the dog from a non-threatening angle using verbal reassurance. Ensure to use sufficient analgesia and do not be afraid to sedate where appropriate to minimise any negative experiences for the dog. Otitis is a painful condition and consideration should be made for reducing the handling and manipulation of the ear. The use of veterinarian administered otic gel medications, such as Osumnia, can significantly improve the dog and owner's

quality of life in comparison to owner-administered daily topical otic therapy (Noli et al 2017).



*Figure 3 Factors to be evaluated to when tailoring treatment.*

TAILOR:

Lastly, for long term success the approach to otitis externa has to be *personalised* to individual factors for the specific patient. Figure 4 illustrates factors that should be evaluated during treatment tailoring.

Cytology is an essential tool for treatment tailoring. Cytology identifies the types of microbes present as well as the level of inflammation, information which is essential when selecting the correct treatment of an acute episode of otitis externa.

Otic cytology is an inexpensive and quick test that can be undertaken with basic equipment. The benefits of performing cytology as part of the ear examination in cases of otitis externa are extensive and include the following:

1. Increasing the chance of reaching a more specific diagnosis.
2. Helps the prescription of a more targeted treatment
3. Ensures prudent use of antimicrobials by reducing tendency to dispense empirical therapy.
4. Provides a tangible way to show visual findings to the owner, increasing understanding and communication.
5. Helps monitor response to therapy:
6. Improves your ability to give clients pointers on prognosis:
7. Allows better clinical outcomes, creating better client satisfaction.

In the next article we shall cover how to perform cytology in practice.

References:



O Neill DG, Church DB, McGreevy PD, Thomson PC, Brodbelt DC. Prevalence of disorders recorded in dogs attending primary-care veterinary practices in England. *PLoS One*. 2014 Mar 4;9(3):e90501. doi: 10.1371/journal.pone.0090501. PMID: 24594665; PMCID: PMC3942437.

Noli C, Sartori R, Cena T. Impact of a terbinafine-florfenicol-betamethasone acetate otic gel on the quality of life of dogs with acute otitis externa and their owners. *Vet Dermatol*. 2017 Aug;28(4):386-e90. doi: 10.1111/vde.12433. Epub 2017 Mar 15. PMID: 28295766.