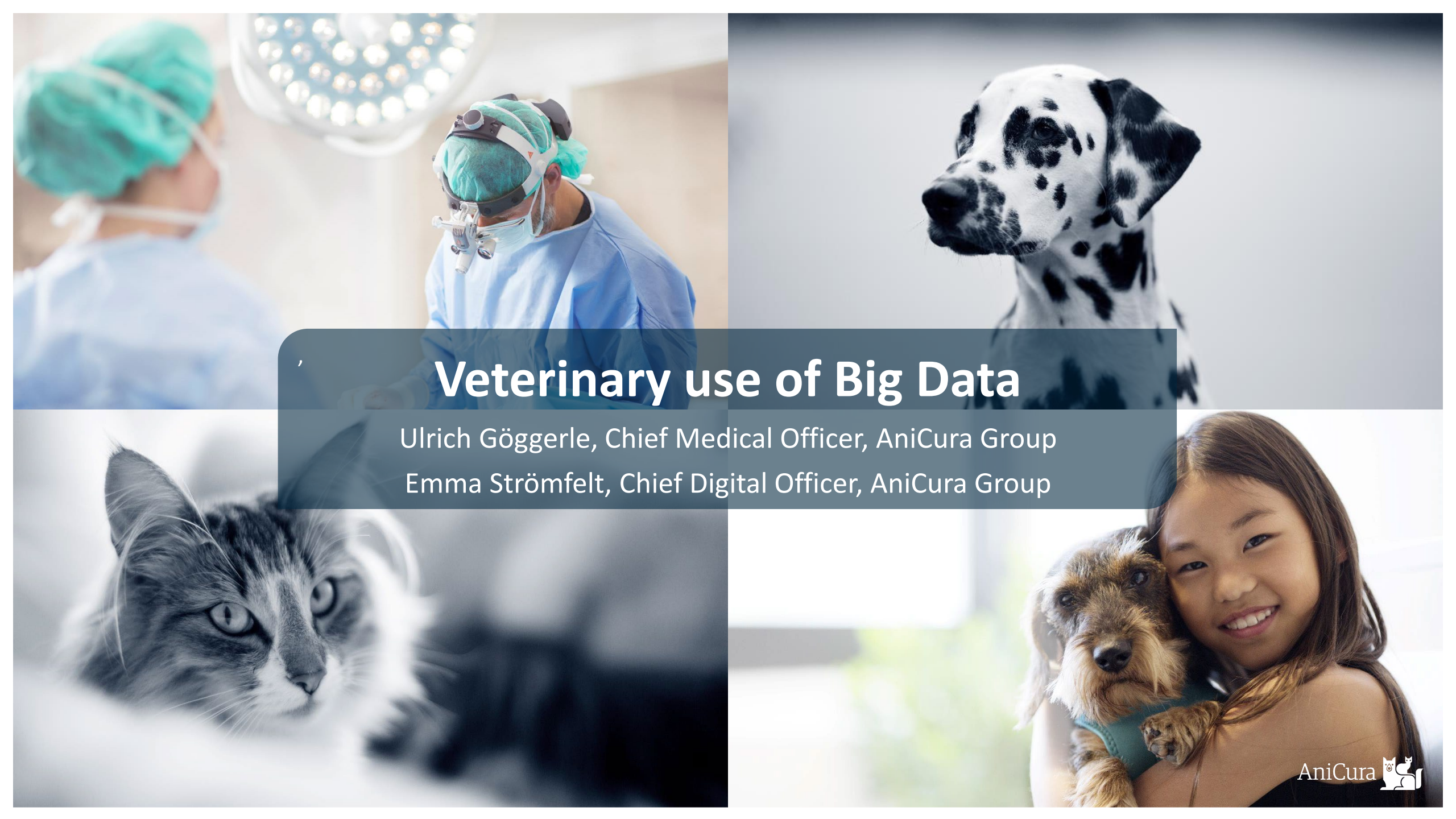




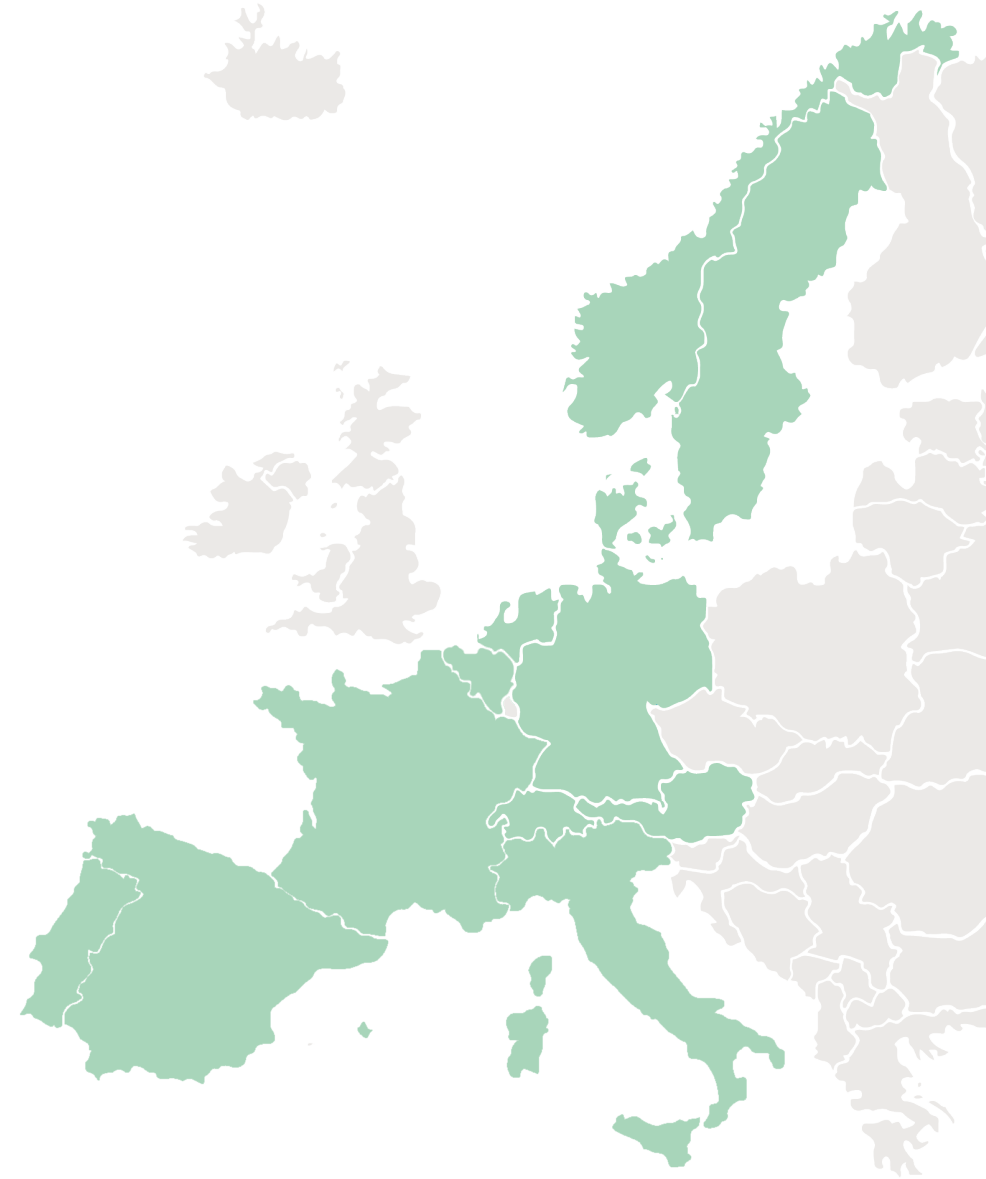
Veterinary use of Big Data

Ulrich Göggerle, Chief Medical Officer, AniCura Group

Emma Strömfelt, Chief Digital Officer, AniCura Group

This is AniCura

- ▮ **7,500** employees, **2,800** are veterinarians
- ▮ A leader within advanced care for companion animals
- ▮ **350** well known animal hospitals in Europe
- ▮ **3,000,000** patients per year
- ▮ Values driven company with unique culture
- ▮ Founded in Sweden in 2011 by a non-profit foundation (Animal Hospital Foundation in Greater Stockholm)
- ▮ Born out of the idea that cooperation, shared resources and knowledge creates opportunities for better veterinary care
- ▮ Part of Mars Veterinary Health family of practices



User Centric Development

Solving real problems – for real users

PET OWNERS



VETS & NURSES



PETS



It's all about the DATA



Turning clinic data into actionable insights

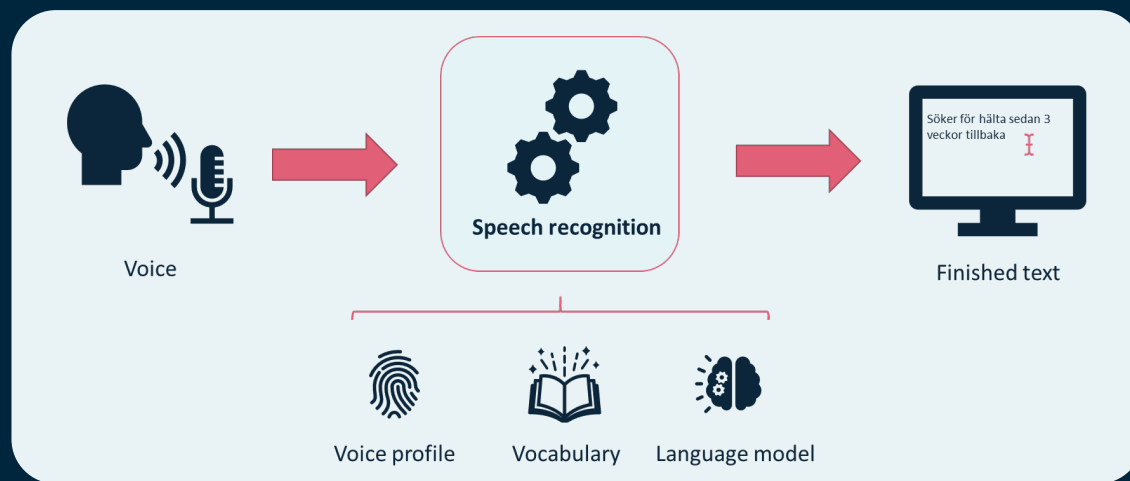
- 1) Capture
- 2) Clean
- 3) Combine
- 4) Understand
- 5) Make actionable



Human powered by AI



Capture data with Voice-to-Text



3x

faster to dictate compared to typing

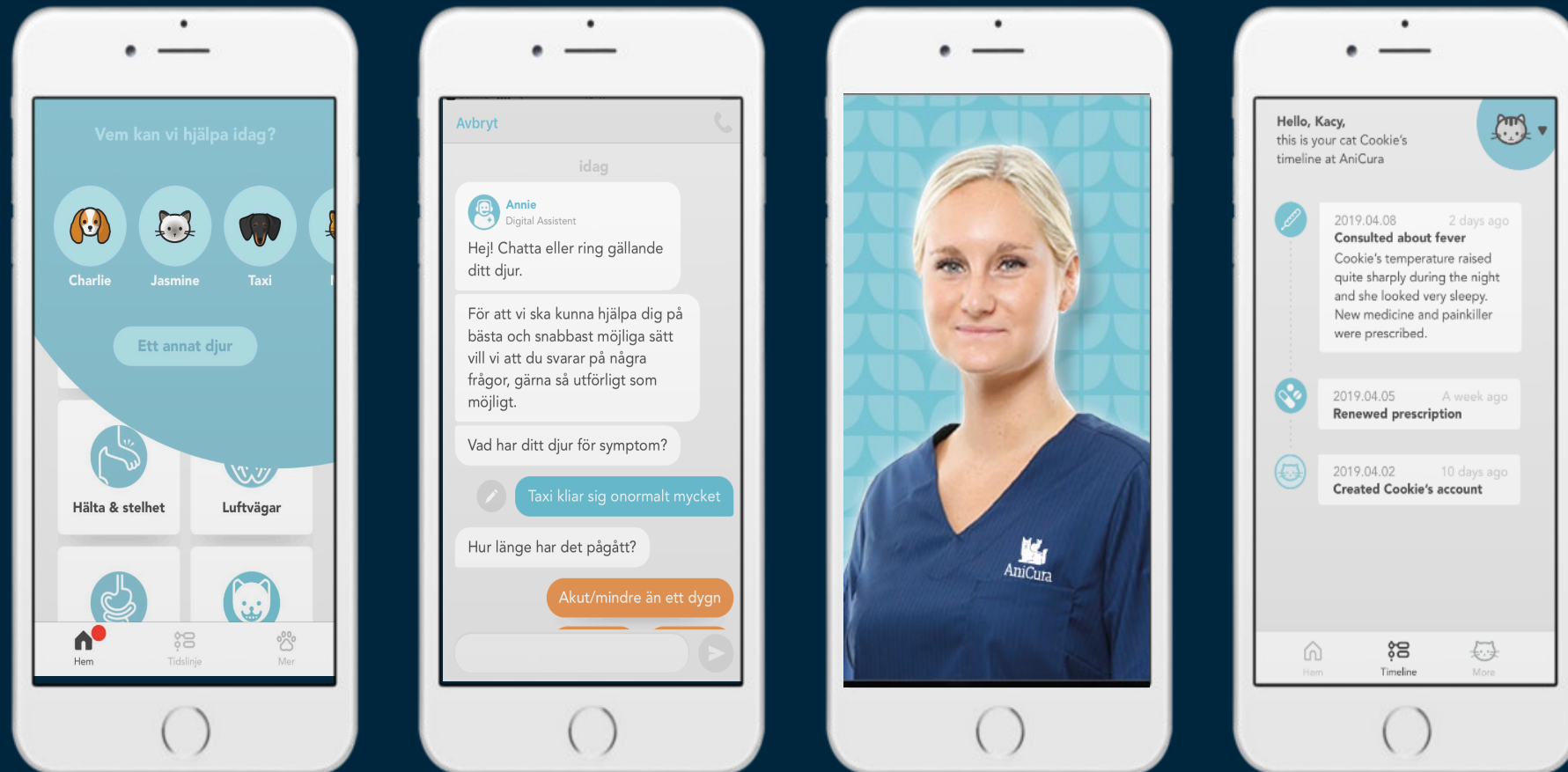


Advanced analytics: Image recognition and analysis

- 1) Cleaning/Filtering images
- 2) Developing disease algorithm
- 3) Embedding decision support to vet

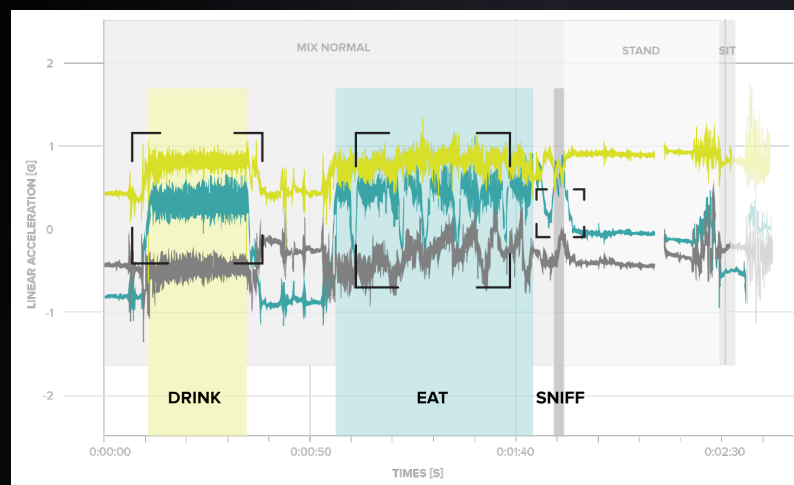


AI chat bot triage prior to veterinary consultation



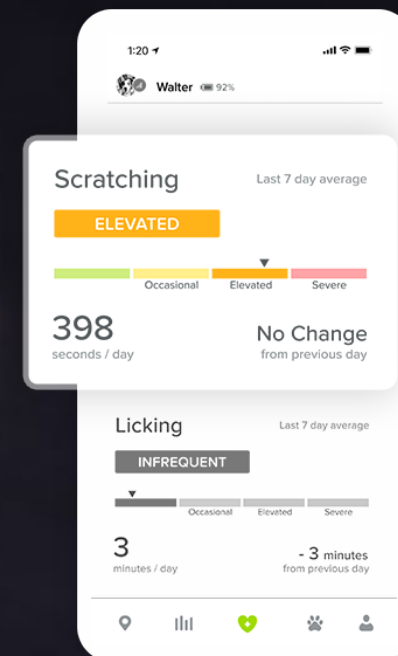
JANIE
TODAY

**FRACTURED A
TOOTH PLAYING
WITH A FRIEND**



**110 MINUTES OF ACTIVITY
6.0 MILES TRAVELED**

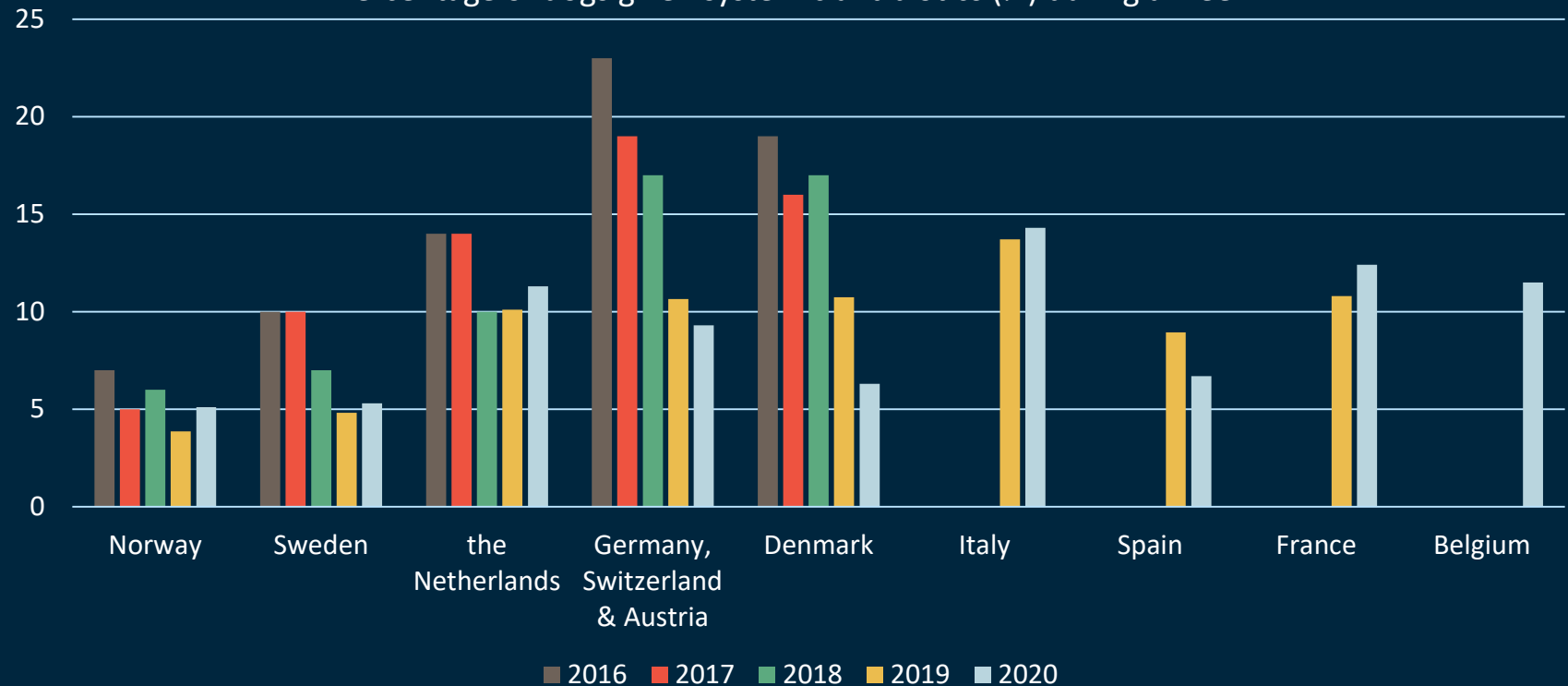
**NEVER BREAKS
EYE CONTACT**



QualiCura Q4 survey on antibiotics

11 countries, 165 clinics

Percentage of dogs given systemic antibiotics (%) during a week



Decline in systemic use of antibiotics in dogs over the last 5 years

Antibiotics Survey

165

Participating clinics

24,761

Total number of dogs

1,914

Treated dogs

7.7%

% treated dogs

Country

All

Clinic

All

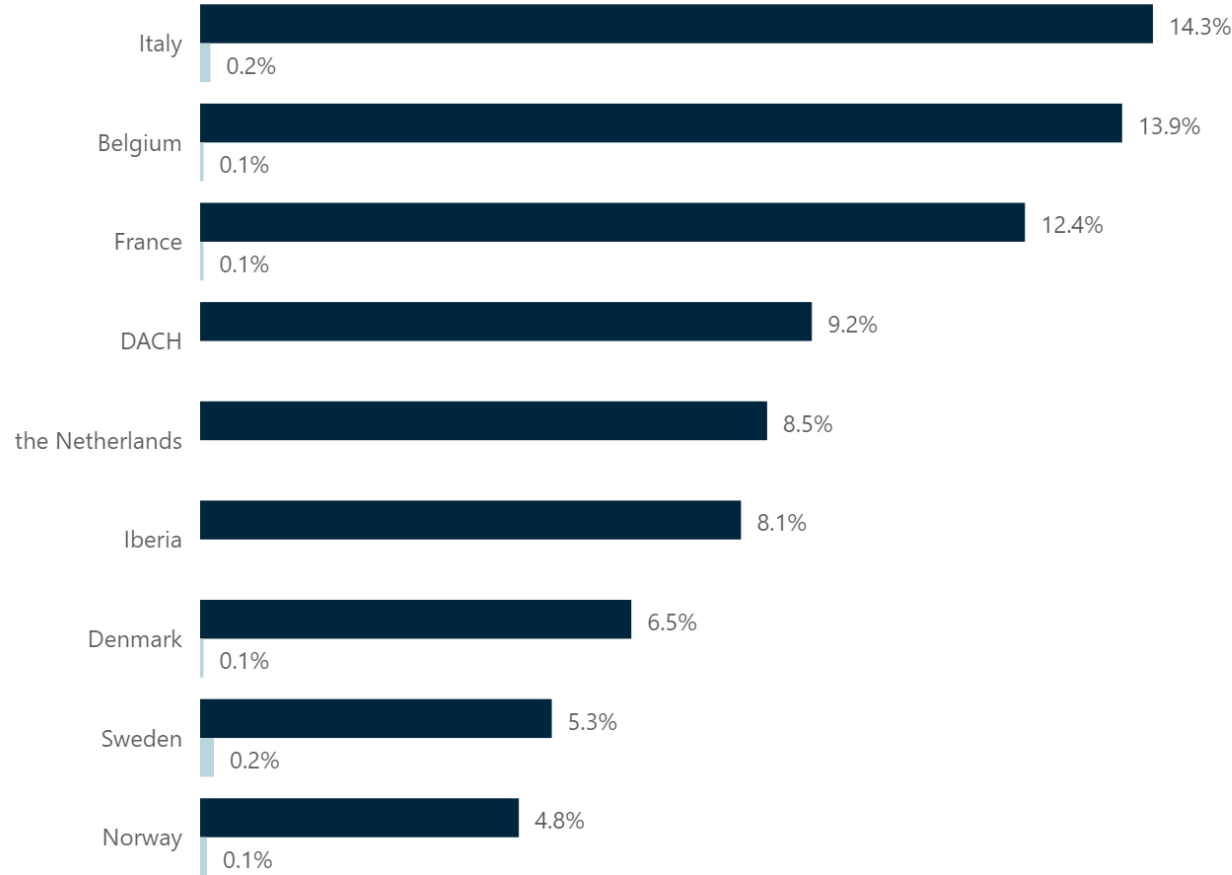
EMA Categories

All

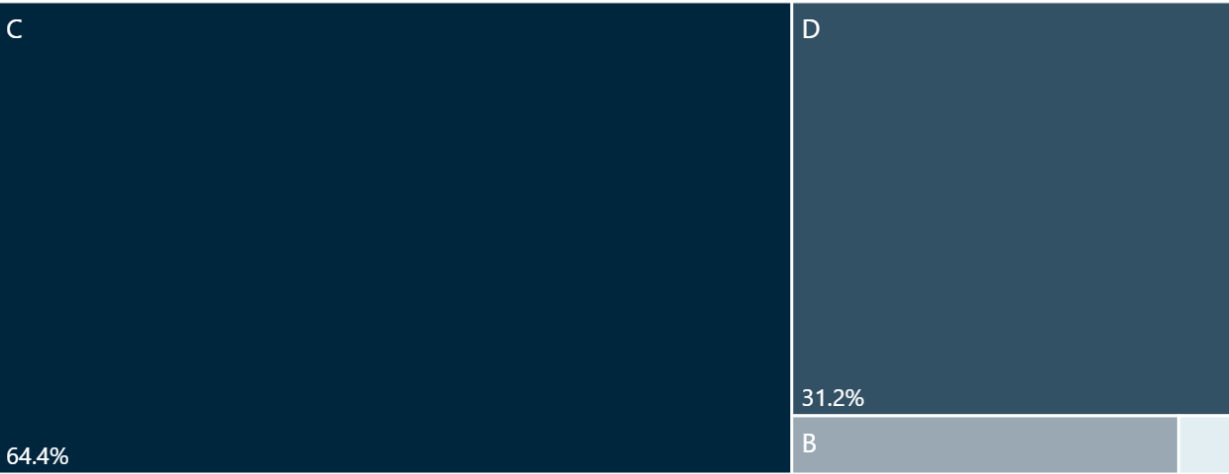


Antibiotic treated dogs

● % treated dogs ● % clinics zero antibiotic patients



EMA categories



Categorisation of antibiotic classes for veterinary use

Group A – AVOID

- Carbapenems
- Piperacillin-tazobactam
- Mupirocin

Group B – RESTRICT

- Fluoroquinolones
- Cephalosporins, 3rd- and 4th-generation



Local individual treatment (e.g. udder injector, eye or ear drops)
Parenteral individual treatment (intravenously, intramuscularly, subcutaneously)
Oral individual treatment (i.e. tablets, oral bolus)
Injectable group medication (metaphylaxis), only if appropriately justified
Oral group medication via drinking water/milk replacer (metaphylaxis), only if appropriately justified
Oral group medication via feed or premixes (metaphylaxis), only if appropriately justified

Antibiotics Survey

1,914

Treated dogs

Country

All



Clinic

All



Indication

All



Substance

All

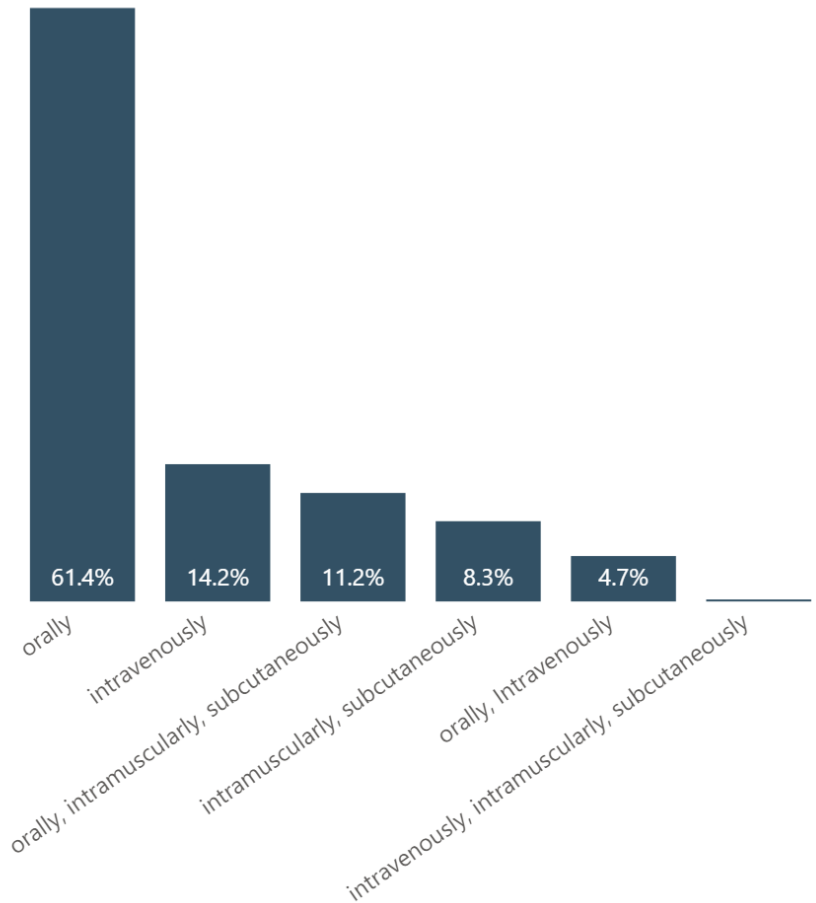


EMA Categories

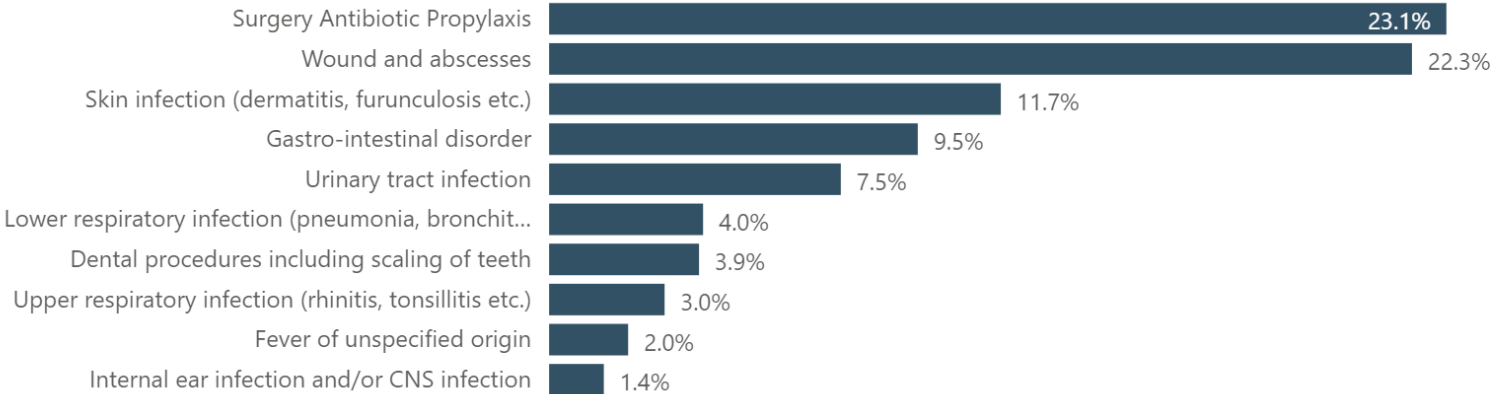
All



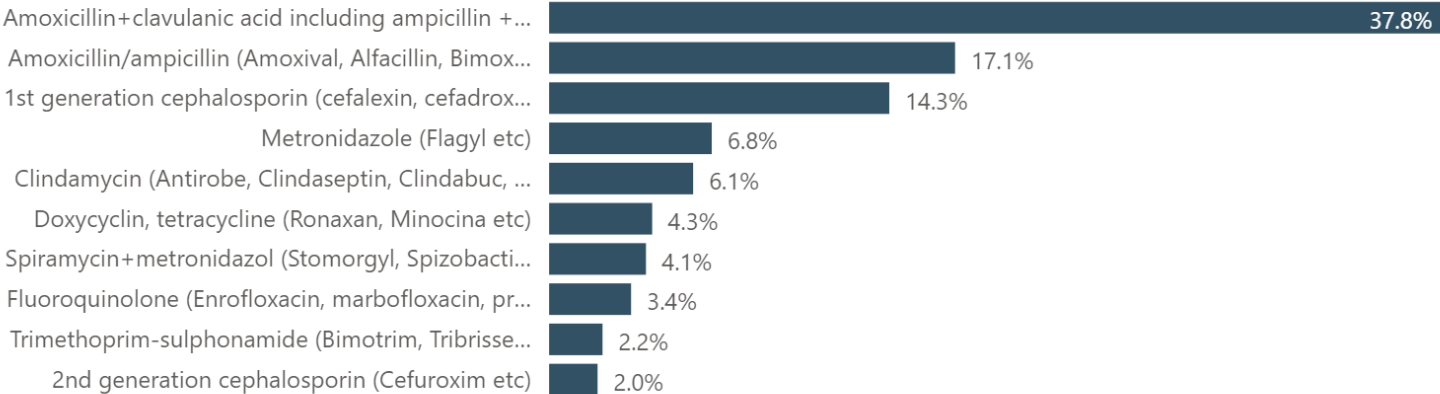
Administration Routes



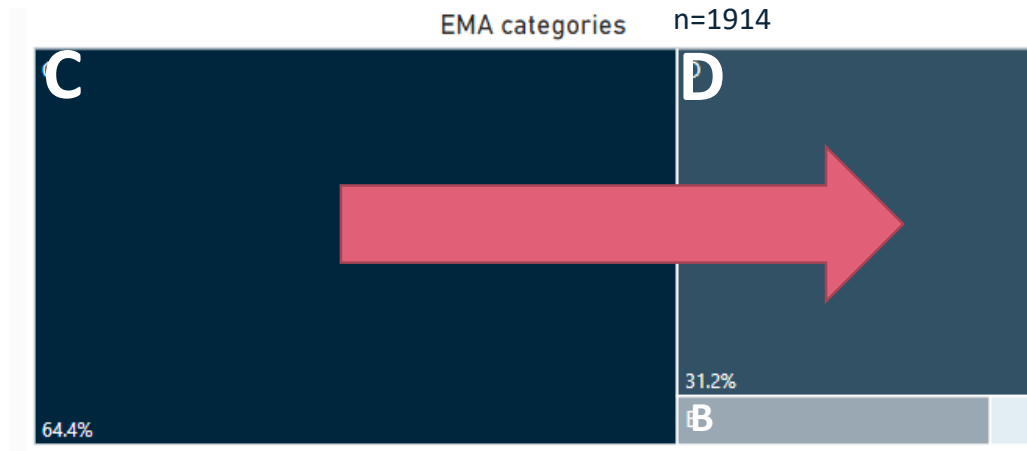
Indication



Substance

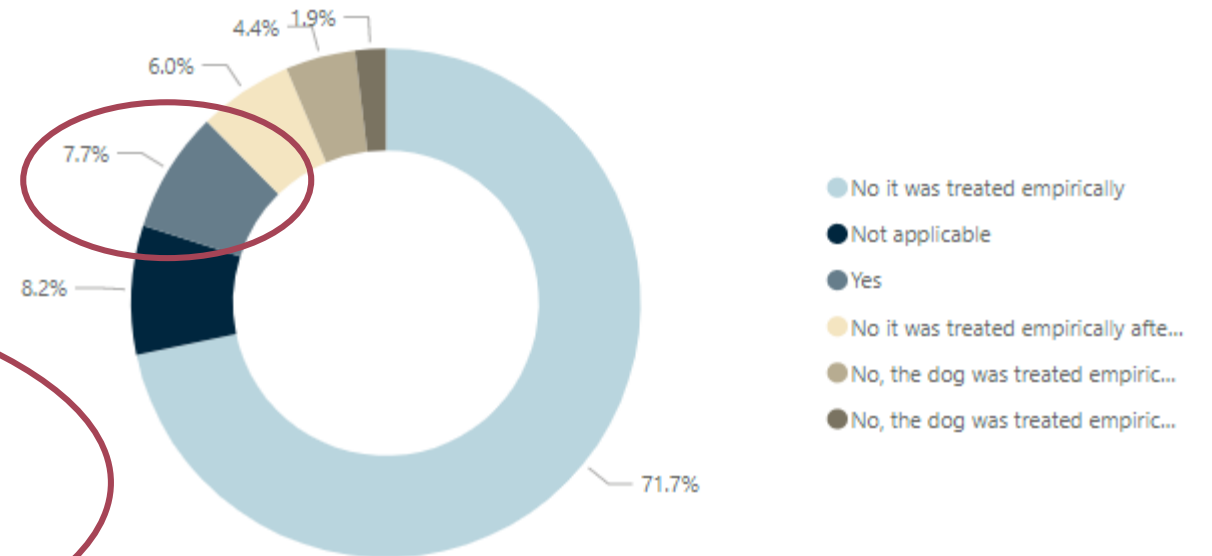


Distribution within EMA categories across AniCura Group



Did bacteriology culture and antimicrobial susceptibility testing support this use?

84% treated empirically



Do we really need to treat with amoxicillin-clavulanic acid?

Opportunities for the Future

Pet Owners



- Remote access to care
- Home diagnostics
- Proactive notifications for care need

Vets & Nurses



- Digital decision support for both diagnostics and treatment options
- Real-time individualised reporting and suggestions for improvements

Pets



- Early detection of health condition through wearables
- Chronic disease monitoring



AniCura