



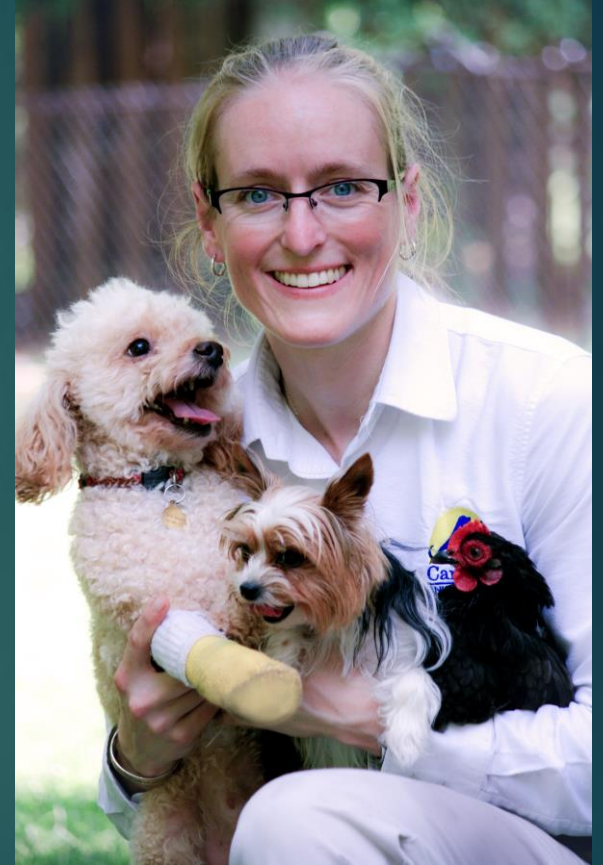
Feline Medicine

DR. PAGE WAGES

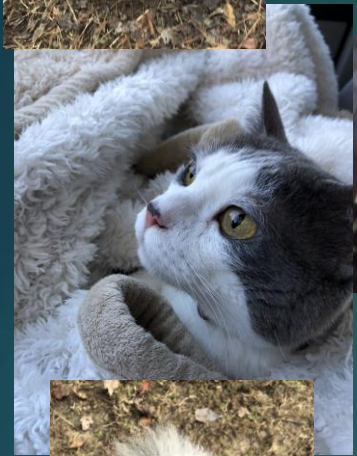
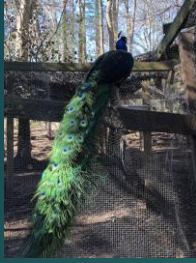
CAREFIRST ANIMAL HOSPITAL

About Me

- ▶ Originally from Upstate NY
- ▶ Graduated in 2001 SLU and in 2005 from NC State College of Veterinary Medicine
- ▶ One of the veterinarians with the team at CareFirst Animal Hospital since 2005
- ▶ Recently in the running for America's Favorite Veterinarian (got 3rd place in 2014 and 2015)
- ▶ Been involved with Christian Veterinary Mission leading trips to the Navajo, Cherokee, and Yup'ik in Alaska for the last 19 years

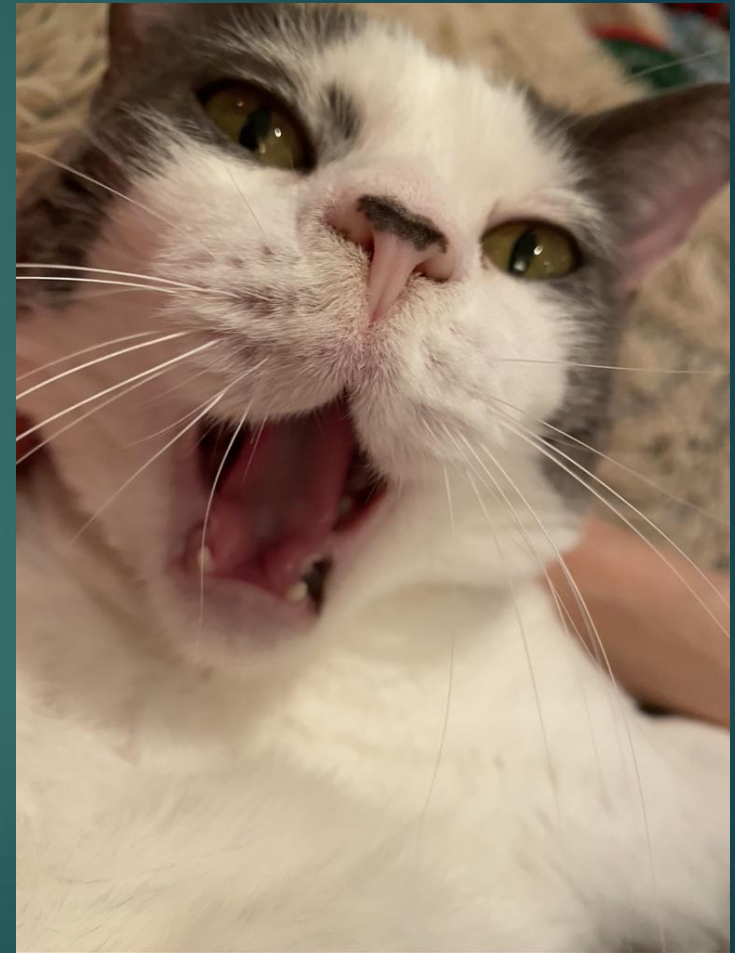


My other "job" is taking care of my family.

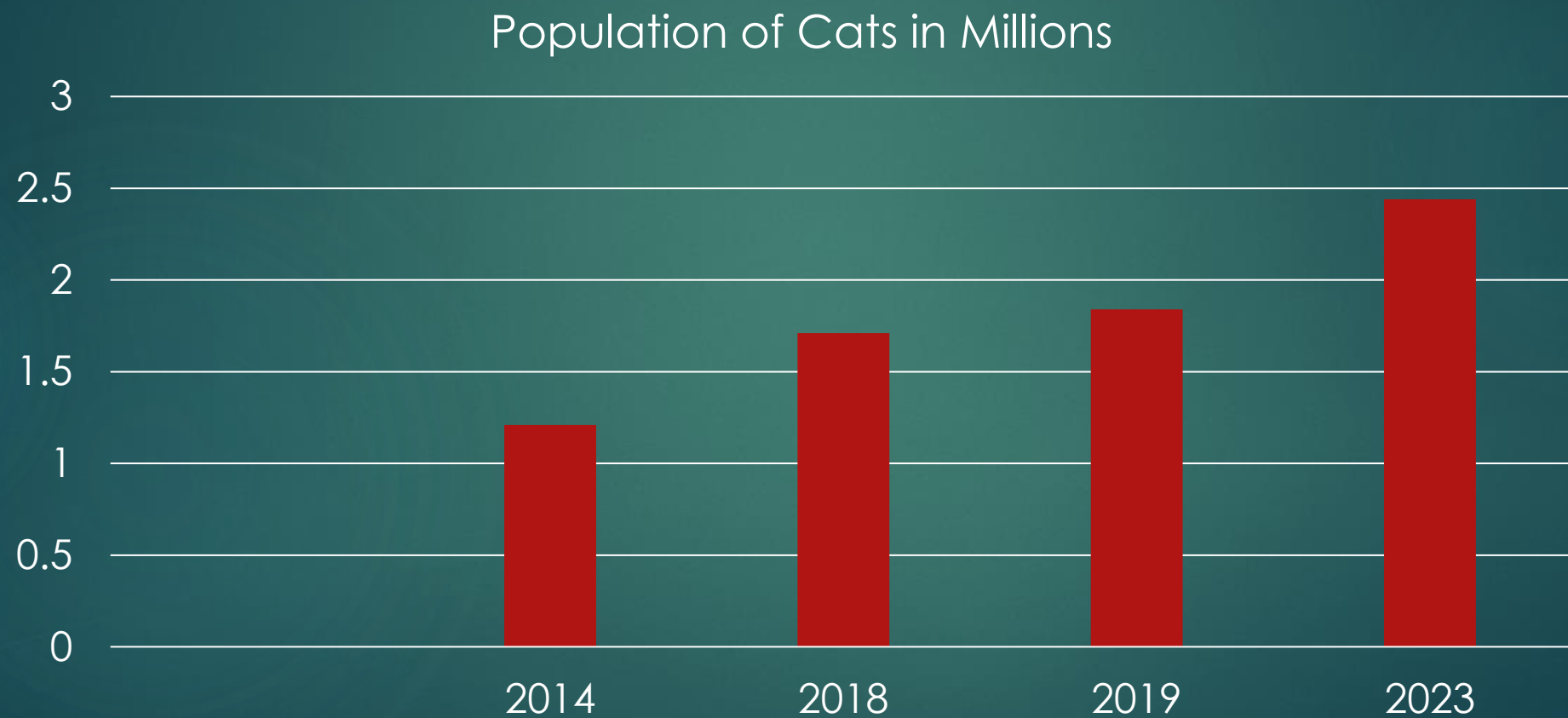


Let's talk about Cats.....

- ▶ 600 million cats in the world living with people
- ▶ 600 million cats in the world not living with people
- ▶ 95.8 million cats in US households (68% households have a pet)
- ▶ 2 million cats in India, projected to reach 2.5 million by 2023!



Cats in India



What is fun about having a cat?

- ▶ Affectionate
- ▶ Good companionship – great for senior humans
- ▶ Loyal
- ▶ Easy to care for – litterbox, food
- ▶ Live long
- ▶ Lower stress levels of their owners (clinically proven)
- ▶ Unique personalities
- ▶ Playful, cuddly, etc.



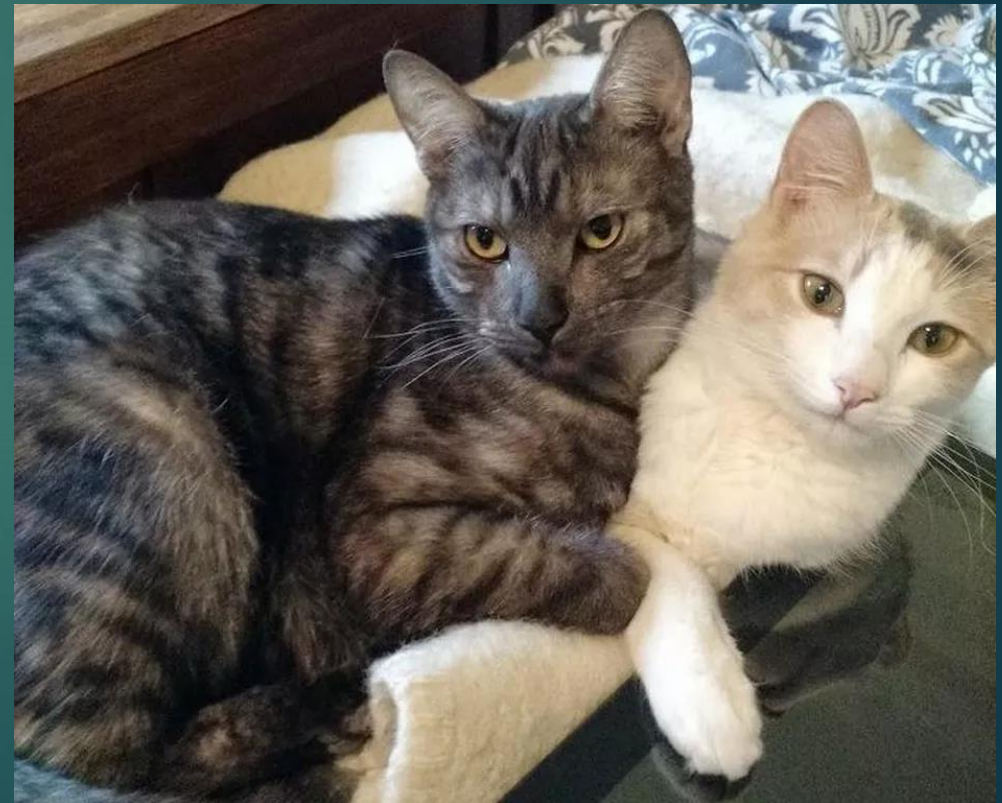
General Needs for cats

- ▶ Good diet
 - ▶ Taurine is a must
 - ▶ Commercially available diets
- ▶ Safe place to live
- ▶ Litterbox or place to urinate and defecate that can be cleaned routinely
- ▶ Routine medical care



Common Diseases of Cats

- ▶ Upper Respiratory
 - ▶ Viral
 - ▶ Bacterial
 - ▶ Fungal
- ▶ Gastrointestinal
 - ▶ Bacterial
 - ▶ Viral
 - ▶ Other
- ▶ Neurologic
 - ▶ Toxoplasmosis
 - ▶ FIP
 - ▶ Rabies
- ▶ Zoonotic
- ▶ Contagious
 - ▶ FIV
 - ▶ FeLV
 - ▶ FIP



Upper Respiratory Infections in Cats

- ▶ Viral
- ▶ Bacterial
- ▶ Fungal
- ▶ Combo



Viral Infections in Cats

- ▶ Feline Calicivirus Virus (FCV)
- ▶ Feline Herpesvirus (FHV)
- ▶ Chylamdia



Feline Calicivirus

- ❖ Signalment
 - ❖ Cats
 - ❖ Young kittens >6 weeks old
- ❖ Signs:
 - ❖ Sneezing / Nasal Discharge
 - ❖ Runny eyes / Conjunctivitis
 - ❖ ***Oral Ulceration
 - ❖ Pneumonia
 - ❖ Arthritis / Lameness
 - ❖ Fever

Vaccination isn't effective against all strains

Lives 7 days in environment

Carriers can shed for 10—300 days post infection



Calicivirus con't

❖ Treatment

- ❖ Usually outpatient as long as not severe pneumonia
 - ❖ Severe pneumonia may need oxygen
- ❖ Nursing care
 - ❖ Clean eyes and nose as needed
 - ❖ Provide soft foods
 - ❖ Oral or IV antibiotics
 - ❖ Green Tea!!

❖ Client education

- ❖ Excellent prognosis
- ❖ Clinical disease usually appears 3-4 days post exposure
- ❖ Recovered cats can be persistently infected for long periods (100-300 days)
 - ❖ Continuously shed small quantities of virus in oral secretions



Feline Herpesvirus/ Rhinotracheitis

- ❖ Most severe URI in cats
- ❖ Signalment
 - ❖ All domesticated and many exotic cats
- ❖ Signs:
 - ❖ Sneezing / ***Clear Nasal discharge
 - ❖ Depression
 - ❖ Anorexia
 - ❖ ***Clear eye discharge
 - ❖ Chronic infections can cause ulcerative keratitis and chronic Nasal Damage

Virus survives 18 hr in environment

Incubation 2-6 days

Carriers shed in times of stress



Rhinotracheitis con't

- ❖ Treatment
 - ❖ Nutritional and fluid support in anorexic cats
 - ❖ Outpatient usually
 - ❖ Antibiotics, eye medication
 - ❖ Famcyclovir
 - ❖ Lysine
 - ❖ 250mg q12hrs
- ❖ Prognosis
 - ❖ 7-10 days before spontaneous remission
 - ❖ Prognosis is good
 - ❖ Contagious in nature



Chlamydia Psittaci

- ❖ Chronic respiratory infection caused by intracellular bacteria
 - ❖ Conjunctivitis, URI, mild pneumonia
- ❖ Signalment-Cats and humans
- ❖ Signs
 - ❖ URI sneezing, watery eyes, coughing, rhinitis
 - ❖ Anorexia
- ❖ Treatment
 - ❖ Outpatient, Antibiotics
- ❖ Prognosis
 - ❖ Chronic lasting weeks to months unless antibiotics given
 - ❖ Prognosis is good



Bacterial Infections in Cats

- ▶ *Moraxella* sp.
- ▶ *Pasteurella multocida*
- ▶ *Streptococcus*
- ▶ *Escherichia coli*
- ▶ *Klebsiella pneumoniae*
- ▶ *Bordetella bronchiseptica*
- ▶ *Proteus* spp.
- ▶ *Mycoplasma*

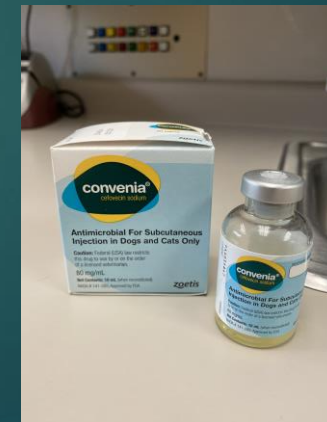
▶ Usually require a pre-existing problem, except *Bordetella*

- ▶ Viral infections
- ▶ Stress → Reduced Immunity
- ▶ Respiratory Tract damage
- ▶ Brachycephalic (Anatomy)
- ▶ Underlying disease



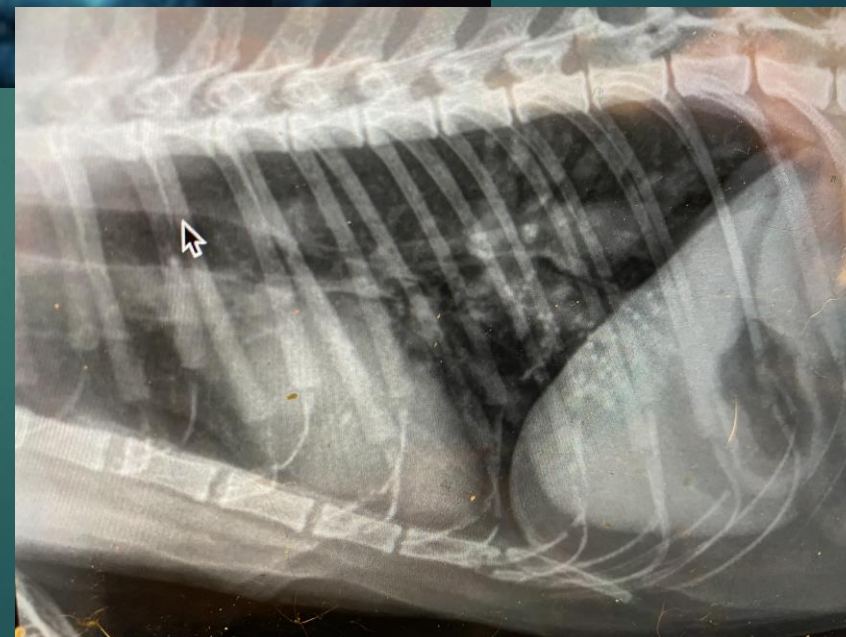
Treatment for URI kitties

- ▶ Lysine
- ▶ Supportive Care
- ▶ Eye Meds (if indicated)
 - ▶ Tobramycin
 - ▶ Ofloxacin
 - ▶ Terramycin
- ▶ Antibiotics
 - ▶ Convenia or Clavamox
 - ▶ Fluoroquinolone (Orbax or Bayril)
 - ▶ Azithromycin
 - ▶ Doxycycline (remember to wash down with water)
- ▶ Feeding tube /Force Feeding until they can smell enough to eat



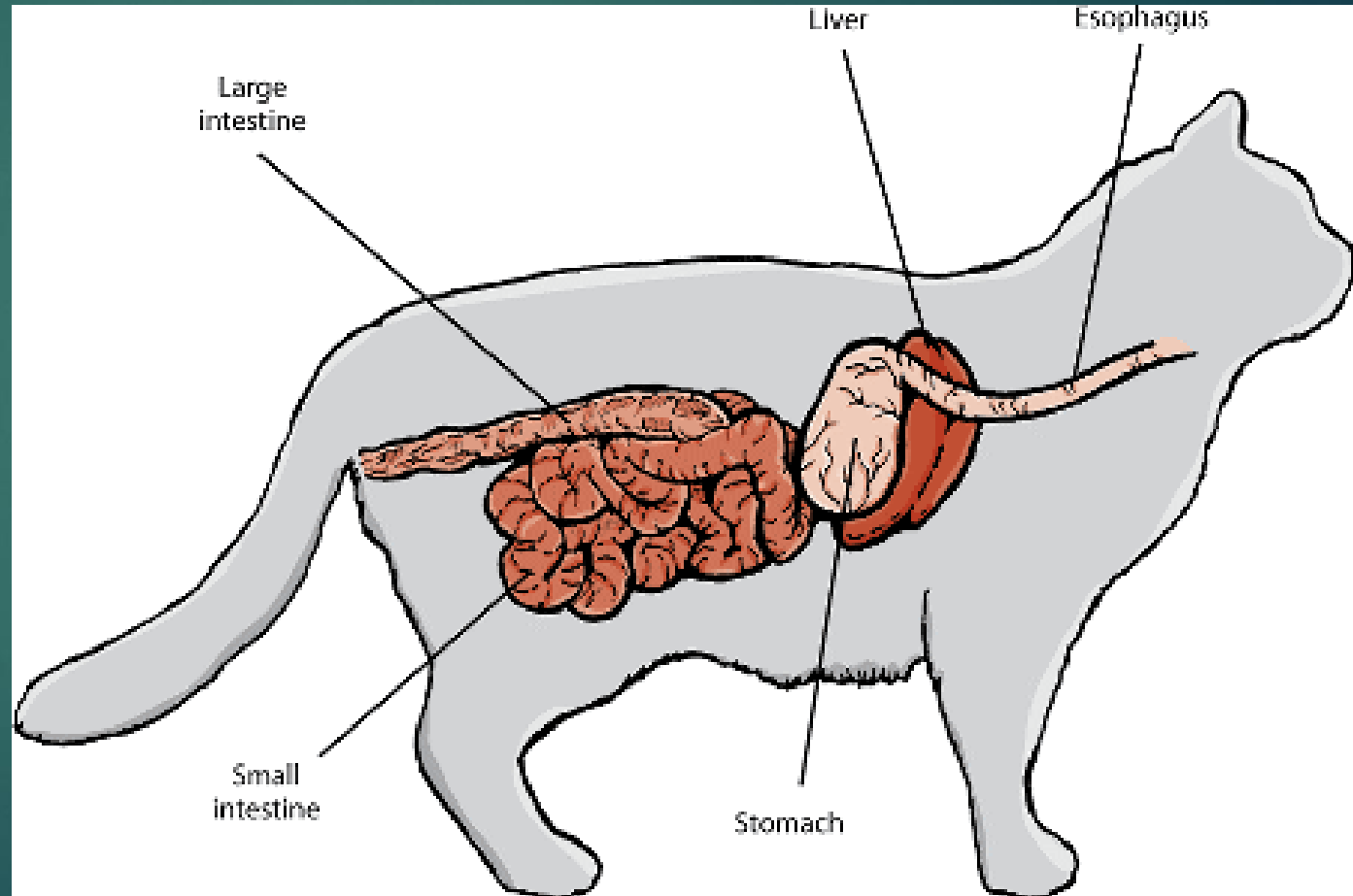
Fungal infections in Cats

- ▶ Cryptococcus
- ▶ Histoplasmosis
- ▶ Blastomycosis



GI diseases

- ▶ Infectious
- ▶ Acute
- ▶ Chronic



Infectious: Feline Panleukopenia

- ❖ Acute enteric viral infection of cats
- ❖ Signs
 - ❖ Sudden onset
 - ❖ Depression, dehydration, vomiting, diarrhea
 - ❖ Fever
 - ❖ Abdominal pain
 - ❖ Panleuk posture
 - ❖ Sternum and chin resting on floor, feet tucked, scapulae elevated above the back
 - ❖ Ataxia from cerebellar hypoplasia seen in kittens infected in utero or neonatally
 - ❖ Signs develop at 10-14 days of age and persist for life
 - ❖ Hypermetria, dysmetria, incoordination with wide based stance and elevated rudder tail



Panleuk con't



❖ Treatment

- ❖ Supportive care
 - ❖ IV fluids /SQ fluids
 - ❖ monitor electrolytes
 - ❖ IV Antibiotics / SQ antibiotics until able to take oral

❖ Prognosis

- ❖ Virus will remain infectious on the premise for years unless disinfected with bleach
- ❖ Most cases acute and last only 5-7 days
 - ❖ If death doesn't occur during acute disease then recovery is usually rapid
 - ❖ Guarded

Acute Vomiting/Diarrhea

- ▶ Parasites

Roundworms
Hookworms
Tapeworms
Coccidia

- ▶ Foreign Body

- ▶ Intussusception

- ▶ Pancreatitis/Triaditis



Chronic Vomiting/Diarrhea

- ▶ IBD
- ▶ Lymphoma
- ▶ Neoplasia of Gut, Liver, Stomach



Other Viruses in Cats

- ▶ Feline Leukemia
- ▶ Feline Immunodeficiency Virus
- ▶ Feline Infectious Peritonitis
- ▶ Rabies

Feline Leukemia Virus (FeLV)

- ❖ Virus that causes immunodeficiency in domestic cats
- ❖ Signalment
 - ❖ Cats
 - ❖ Prevalence highest between 1-6 years
 - ❖ M>F
- ❖ Causes
 - ❖ Cat to cat transmission - Saliva
 - ❖ Bites
 - ❖ Close casual contact-grooming, shared disease, shared litter pans
 - ❖ Can be spread from mother → Kittens



FeLV con't

❖ Signs

- ❖ Fever, Weight loss
- ❖ Pancytopenia or leukopenia
- ❖ Neoplasia
 - ❖ Lymphoma, Leukemia, Fibrosarcoma, Enlarge LN
- ❖ Non-neoplastic
 - ❖ URI
 - ❖ Diarrhea
 - ❖ Gingivitis, stomatitis
 - ❖ Skin infections that are chronic or recurrent
 - ❖ Ataxia

❖ Prognosis

- ❖ 50% succumb to related diseases within 2-3 post infection
- ❖ Keep cats indoors and separated from other FeLV neg cats



Feline Immunodeficiency Virus (FIV)

- ❖ Immunodeficiency disease in domestic cats
 - ❖ Similar to HIV
 - ❖ Infection disrupts immune system function
- ❖ Signalment
 - ❖ Cats
 - ❖ Prevalence of infection increases with age
 - ❖ More common in males
- ❖ Causes
 - ❖ Cat to cat transmission—bite wounds



FIV

❖ Signs

- ❖ Recurrent minor illness, esp URI and GI issues
- ❖ Enlarged LN
- ❖ Gingivitis, stomatitis
- ❖ URI with rhinitis, conjunctivitis, keratitis,
- ❖ CRF
- ❖ Diarrhea
- ❖ Chronic or recurrent ear and skin infections
- ❖ Fever and weight loss
- ❖ Lymphosarcoma
- ❖ Neurologic change-behavioral changes, pacing, aggression



❖ Treatment

- ❖ Treat secondary infections

❖ Prognosis/Client Education

- ❖ FIV positive can have chronic or recurrent health issues
- ❖ Keep cat indoors to protect them from exposure to other disease since immuno-compromised and to prevent spread of FIV

Feline Infectious Peritonitis (FIP)

- ❖ Systemic viral disease characterized by persistent unresponsive fever, pyogranulomatous tissue reaction, accumulation of effusion in body cavities, and death
- ❖ Coronavirus
- ❖ Signalment
 - ❖ Cats
 - ❖ Kittens 3 months to 3 years
 - ❖ Significant decrease in incidence after 3 years of age



FIP con't

❖ Signs

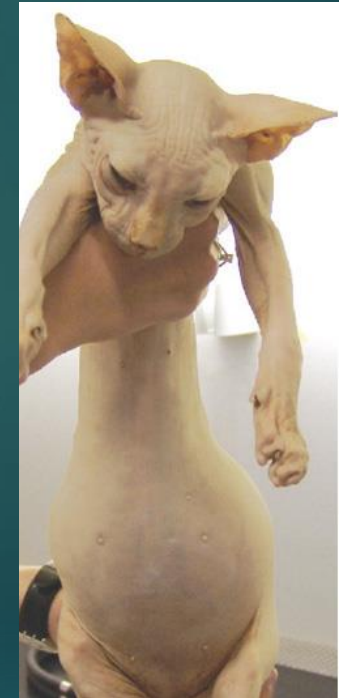
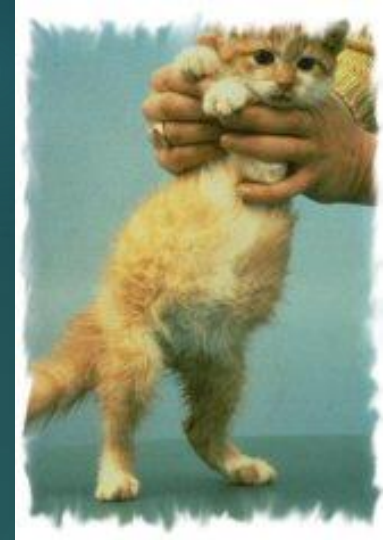
- ❖ Dry-Targets organs
- ❖ Wet-Targets body cavities
 - ❖ Depression, Weight loss, anorexia, pot bellied appearance
 - ❖ Fever that is persistent and usually not responsive to antibiotics
 - ❖ Icterus
 - ❖ Abdominal or pleural effusion

❖ Treatment

- ❖ Supportive care
 - ❖ Inpatient or outpatient depending on severity
 - ❖ Therapeutic paracentesis to relieve pressure of effusion
 - ❖ Steroids

❖ Prognosis

- ❖ Grave prognosis
 - ❖ Clinical course can be a few days to months
 - ❖ Mortality is 100% once symptoms occur



Rabies!

- ❖ 3 billion a people a year bitten by rabid dog
 - ❖ 59,000 people die each year
 - ❖ 1 person every 9 minutes
- ❖ 20,000 people a year die from Rabies in India
 - ❖ 92% of those are dog bites
 - ❖ 3% monkey bites
 - ❖ 2% cat bites



Rabies Virus



- ❖ Severe fatal viral polioencephalitis of all warm blooded animals
- ❖ Pathology
 - ❖ Virus enters through wound or mm → spreads to neuromuscular junction → travels to CNS
- ❖ Signalment
 - ❖ Worldwide except for Australia, New Zealand, Hawaii, Japan, and parts of Scandinavia
 - ❖ All warm blooded animal can be affected

Rabies con't

❖ Signs--Variable

- ❖ Change in attitude—solitude, nervous, anxiety, shyness, aggressive
- ❖ Erratic behavior—biting, snapping, licking/chewing at wound, wandering, excitability, irritability, viciousness
- ❖ Disorientation
- ❖ Ataxia, seizures, paralysis
- ❖ Excessive salivation, Inability to swallow
- ❖ Fever

❖ Treatment

- ❖ Euthanasia

❖ Client Education

❖ Prognosis

- ❖ Fatal
- ❖ Succumb within 7-120 days of onset of clinical signs



Rabies- associated sarcomas?



Necessary Vaccines

- ▶ FVRCP
 - ▶ 8w, 12 w, 16 w
 - ▶ 1 year, then every 3 years
- ▶ Rabies
 - ▶ 12 or 16 w
 - ▶ 1 year, then every 3 years
- ▶ FeLV
 - ▶ 12 w, 16 w
 - ▶ 1 year, then annually



Old cats....losing weight

- ▶ Heart disease
- ▶ Renal disease
- ▶ Hyperthyroidism
- ▶ Neoplasia
- ▶ IBD/Triaditis
- ▶ Bloodwork
- ▶ Ultrasound
- ▶ X rays



What to do with the neurologic cat?

- ▶ Bloodwork
- ▶ Toxoplasmosis titer
- ▶ FIP (Coronavirus titer)
- ▶ CT scan/MRI
- ▶ Toxoplasmosis
 - ▶ Clindamycin - 1 month
 - ▶ Prednisolone
 - ▶ Cyproheptadine

