1. **Rabies:**
   - Cats very susceptible to wildlife rabies strains
   - in the US (raccoon, skunk, fox and bat strains).
   - More cases in cats than in dogs in the USA since 1981.
   - Present more frequently with furious form, usually do not attack, but can be very aggressive, usually dies within a few days.
   - Vaccination should be performed everywhere where rabies is endemic (both from terrestrial reservoirs or bat reservoir).
### Rabies in Cats and Dogs, USA

<table>
<thead>
<tr>
<th>Year</th>
<th>Cats</th>
<th>Dogs</th>
<th>Total Rabies Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>299</td>
<td>99</td>
<td>7,967</td>
</tr>
<tr>
<td>2000</td>
<td>249</td>
<td>114</td>
<td>7,369</td>
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<tr>
<td>1999</td>
<td>278</td>
<td>111</td>
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<td>282</td>
<td>113</td>
<td>7,962</td>
</tr>
<tr>
<td>1997</td>
<td>300</td>
<td>126</td>
<td>8,513</td>
</tr>
<tr>
<td>1993</td>
<td>291</td>
<td>130</td>
<td>9,498</td>
</tr>
<tr>
<td>1990</td>
<td>176</td>
<td>148</td>
<td>4,881</td>
</tr>
<tr>
<td>1953</td>
<td>538</td>
<td>5,688</td>
<td>8,837</td>
</tr>
</tbody>
</table>

### Rabies in Cats, 2001

- N=249
- 1 Case
- 15 Cases
- 30 Cases
2. **Cowpox:**

- **Feline cowpox** first recognized in 1978 in the U.K.
- **Cat:** most commonly infected species in Western Europe (UK: about 30 feline cases/yr). Seroprevalence: 4% (8/200 cats).
- **Cats** get infected by direct contact with rodents, the natural reservoir. Break of the skin or rarely oronasal infection.

**Symptoms:** Primary skin lesion at inoculation site, viremia for 5 days, mild systemic signs, rarely pneumonia. Widespread skin lesions (nodules, then ulcers) 7-10 days after primary lesion.

**Human cowpox,** more commonly acquired from cats than from cows. Red papule, vesicle, pustule, ulcer, heals in 3 weeks with a scar on hands, arms or face. Lesions painful. Fever, nausea, regional lymphadenopathy. Hosp. 1/3 of cases.
VIRAL ZOONOSESVIRAL ZOONOSES

3. Borna Disease (BD)
First described > 200 years ago in southern Germany. 
Epidemic in horses in 1885 in the town of Borna (Saxony, Germany).
Bornaviridae (enveloped RNA). Viral etiology proven by transmission from infected horses to experimental animals (early 1900s).
Causes fatal neurologic disease of horses and sheep, characterized by a disseminated non-purulent meningoencephalomyelitis (MEM).

Natural infections in horses, ruminants, rabbits, cats, ostriches.

Cats: MEM with ataxia, behavioral abnormalities (staggering disease)
Virus transmitted by salival, nasal or conjunctival secretions.
Incubation of 4 weeks minimum. Initial phase with non-specific symptoms, then neurologic signs, paralysis and death in 1-3 weeks.
46.2% of Japanese cats with neurological symptoms BDV sero +

Possible Zoonosis: BDV antibodies found in humans with psychiatric disorders. Virus isolated from CSF and brain in humans.
VIRAL ZOONOSES

4. Hantaviruses

- Cats have been suspected as possible vector of Hemorrhagic Fever with Renal Syndrome (cat ownership found as risk factor).
- **Austria**: 5% of 200 cats positive (IFA) to Puumala virus.
- **UK**: 5% of 200 cats seropositive to Puumala virus (IFA).
- **UK**: 10-23% of cats tested (ELISA) positive for Hantaan
- **USA**: 2.8% (4/145) cats had trace reactivity to full-length SNV-encoded nucleocapsid proteins.

**Cats do not appear to have a major role in the maintenance and transmission of Hantaviruses, especially Sin Nombre Virus.**

5. West Nile virus:

- A few cats reported positive for WNV in the USA, some died of disease. **No role as source of human infection.**

BACTERIAL ZOONOSES

1. Bite transmitted zoonoses:

**USA**: An estimated 500,000 cat bites/scratches per year
Cat bites more frequently infected than dog bites.

Pasteurellosis (*Pasteurella multocida*): More common from cats than dogs.
Women more likely (72%) to be bitten by cats than men (38%).
**Symptoms**: cellulitis, acute pain, redness, swelling,
**Complications**: tenosynovitis, septic arthritis, osteomyelitis.
**Treatment**: Augmentin (amoxicillin-clavulanic acid), penicillin, doxycycline, fluoroquinolones: 3-5 days up to 10-15 days.

**Capnocytophaga canimorsus**: Cat exposure << dog exposure.

**Other bacteria**: *Erysipelothrix insidiosa* (2 human cases)
*Francisella tularensis* (1.6% human cases after cat scratch or bite)
BACTERIAL ZOONOSES

2. zoonoses transmitted by scratches:
Cat Scratch Disease (*Bartonella henselae*):

Epidemiology: Cats are the main reservoir (28% of US pet cats seropositive). Cats can be bacteremic for months. Stray cats, young cats more likely to be bacteremic. No vertical/horizontal transmission. Fleas are main vector from cat to cat. Cat to humans: mainly scratch, likely inoculation of infective flea feces at time of scratch. Flea transmission to humans possible, not clearly demonstrated. Recent suggestion of possible tick transmission.


Diagnosis in humans, mainly based on serology.

Treatment: No benefit in classical forms. In severe cases, Doxycycline, Erythomycin, Rifampin, Azithromycin: 15-21 days.
Bartonella Sp.

Cat Scratch Disease

Vesicle at inoculation site

Figure 2. The primary inoculation papule of cat-scratch disease occurs three to 10 days after injury. The lesion has usually disappeared by the time symptoms develop. (Photograph courtesy of Churchill Livingstone, Inc.)
Cat Scratch Disease
Lymphadenopathy

Cat Scratch Disease
Purulent lymphadenopathy
**Bartonella henselae**

Source: Dr. Jane Koehler, UCSF

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**Ctenocephalides felis**
**Concurrent Infection of the Central Nervous System by *Borrelia burgdorferi* and *Bartonella henselae*. Evidence For a novel tick-borne disease complex.**

Eskow et al., Arch Neurol., 2001:58:1357-1363

**Subjects:** Two male patients (14 and 36 years old) and 2 female patients (15 and 30 years old) with a history of tick bites and Lyme disease.

**Results:**
- Patients living in Lyme-endemic area of New Jersey, with chronic Lyme disease symptoms (neuroborreliosis).
- Seropositive for *Bartonella henselae*. *B. henselae* DNA detected in patients’ blood.
- DNA of *B. henselae* and *Borrelia Burgdorferi* in CSF.
- *B. henselae* DNA detected in live deer ticks obtained from the households of 2 of these patients.
Bacillary Angiomatosis

Cutaneous Lesions

Source: Dr. Jane Koehler, UCSF

Bartonella: Warthin-Starry staining
Bacillary Angiomatosis

Source: Dr. F. A. Murphy

Bacillary Angiomaticosis: osseous lesions

Source: Jane Koehler, UCSF
BACTERIAL ZOONOSES

2. zoonoses transmitted by scratches:
Bacillary Angiomatosis (*Bartonella henselae, B. quintana)*:
Agents: *Bartonella henselae*: History of cat exposure, cat scratch/bite or flea bite.
*Bartonella quintana*: Homeless, alcoholic, lice infestation, no cat exposure.
Symptoms: cutaneous vasculo-proliferative lesions (i.e. Verruga peruana, confused with Kaposi sarcoma), hepatis peliosis, splenic lesions, osseous lesions, lymphadenopathy, prolonged fever, endocarditis.
Diagnosis: Blood culture, PCR, no antibodies (especially in AIDS patients)
Treatment: Doxycycline, Erythomycin, Azithromycin for several months. Lethal without antibiotic treatment.

Trench Fever

caused by:
*Bartonella quintana*

transmitted by the human body louse *Pediculus humanus corporis*
Verruga Peruana

*Lutzomyia verrucarum*
female
*Bartonella bacilliformis*
vector

---

**BACTERIAL ZOONOSES**

3. zoonoses acquired by inhalation/contact:
**Bordetellosis** (*Bordetella bronchiseptica)*:

**Epidemiology:** causes kennel cough in dogs,
cats, especially in shelters, frequent carriers.
rare in humans, mainly children or immuno compromised

**Symptoms:**
- **Cats:** fever, nasal discharge, sneezing, cough,
  lethargy, adenopathy, sometimes pneumonia.
- **Humans:** a few cases in children (whooping cough-like)
  and in AIDS patients: mild upper respiratory
  symptoms to severe pneumonia

**Diagnosis:** culture of nasal swab, not easy
**Treatment:** Erythromycin, Tetracycline.
3. zoonoses acquired by inhalation/contact:

**Q fever** (*Coxiella burnetii*):

Epidemiology: Up to 20% of cats in north-East (Canada/USA) seropositive. Cats infected from environment, ingestion of infected materials, tick bite, etc.

Human infection from direct exposure to cats or inhalation of infected materials from parturient or aborted cats.

Symptoms: **Cats**: Most cats are asymptomatic. Rarely abortion

**Humans**: subclinical, flu-like to atypical pneumonia, hepatitis. Chronic form: endocarditis.

Diagnosis: usually serology (IFA), Phase I and Phase II antigen

Treatment: Erythromycin, Tetracycline.

---

3. zoonoses acquired by inhalation/contact:

**Chlamydiosis** (*Chlamydophila felis*):

Conjunctivitis in cats, sometimes rhinitis (5 weeks to 9 months).

Mild conjunctivitis in humans working in catteries.

Treated with tetracycline, hygiene (hand washing)
3. zoonoses acquired by inhalation/contact:

**Plague** (*Yersinia pestis*):

**Epidemiology:** Present in Western USA.

**Reservoir:** Rodents and their fleas. Transmitted by fleas.

About 10-15 human cases/year in USA.

Cats susceptible, like humans, and source of human infection (especially for pneumonic form): 23 cases (7.7% of 297) of cat-associated human plague (5 fatal) in USA for 1977 - 1998.

Bites, scratches, or other contact with infectious materials while handling infected cats resulted in 17 cases of bubonic plague, 1 case of primary septicemic plague, and 5 cases of primary pneumonic plague. (Only 2 of 228 not-cat associated cases acquired plague through inhalation of infectious materials)

**Incubation:** 1-6 days

**Symptoms:** Bubonic (88% of cases), pneumonic (2%), septicemic (10%), lesion at bite site, buboe, bacteremia…

**Diagnosis:** Serology, Direct fluorescence, culture, PCR.

**Treatment:** streptomycin, gentamicin, doxycycline and tetracyclines
BACTERIAL ZOONOSES

3. zoonoses acquired by inhalation/contact:

**Tularemia (Francisella tularensis):**

Epidemiology: 2 Biovars present in the USA : A: *tularensis* >>>> B: *paleartica* (USA, Europe, Russia, Siberia, Japan).

reservoir: Rodents, rabbits, Hare. Transmitted by tick bites, contact with infected animals, aerosol, contaminated water.

About 100-150 human cases/year in USA.

Cats susceptible, like humans, and source of human infection
3. zoonoses acquired by inhalation/contact:

**Tularemia** (*Francisella tularensis)*:

**Symptoms:**
- **Cats:** fever, adenopathy, draining abscesses, microabscesses on liver, spleen, icterus, depression, septicemia.
- **Humans:** incubation: 4-5 days, lesion at bite site, abscess, bacteremia...ulcero glandular, oculoglandular, glandular, Pharyngeal, pneumonia (15%), septicemic.

**Diagnosis:** Serology, Direct fluorescence, (culture, very dangerous), PCR.

**Treatment:** Streptomycin, Gentamicin, Doxycycline and tetracyclines.

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**Tuberculosis** (*Mycobacterium bovis, M. tuberculosis)*:

**Epidemiology:** Cats susceptible to *M. bovis*, usually after consumption of infected cow milk and possible source of human infection. Cases caused by *M. tuberculosis* rarely reported. Recent report from the UK of cat infection with a variant intermediate between *M. bovis* and *M. tuberculosis*.

**Symptoms:**
- **Cats:** cutaneous lesions and/or submandibular adenopathy.
- **Humans:** chronic cough, weight loss, pulmonary lesions.

**Diagnosis:** Histopathology, Culture (Bactec system), PCR.

**Treatment:** (cats): **EUTHANASIA (Treatment not recommended)** (Enrofloxacin, clarithromycin and rifampicin for 2 months, then 2 of the 3 drugs for 5 months).
Facial tuberculosis (Parrot Disease) in a cat

BACTERIAL ZOONOSES

4. zoonoses acquired by fecal-oral transmission:
Campylobacteriosis (C. jejuni, C. upsaliensis):

Epidemiology: Present in GI of many species, isolated from cat feces (1% positive for C. jejuni). Cats with diarrhea more likely to be shedders.

Symptoms: flu-like illness with fever, malaise, cramping, diarrhea.
Complications: arthritis, Guillain-Barre syndrome, colitis, bacteremia

Diagnosis: feces culture.
Treatment: Erythromycin, fluoroquinolones (ciprofloxacin).
BACTERIAL ZOONOSES

4. zoonoses acquired by fecal-oral transmission:

Salmonellosis (*Salmonella spp.*)

Epidemiology: Has been isolated from cat feces. Cats with diarrhea more likely to be shedders. About 1% of cats carry *S. typhimurium.*

Symptoms: flu-like illness with fever, malaise, vomiting, cramping, diarrhea. Bacteremia, septicemia in very young and elderly.

Diagnosis: feces culture.

Treatment: trimetho/sulfa, fluoroquinolones

Prevention: washing hands prior to eating of after cat petting.

---

Yersiniosis (*Y. pseudotuberculosis, Y. enterocolitica*)

Epidemiology: Has been isolated from cat feces. Cats can be carriers and shedders, mainly *Y. pseudotuberculosis,* rarely *Y. enterocolitica.*

Symptoms: *Cats:* asymptomatic carriers, but also anorexia, vomiting, diarrhea, jaundice.

*Humans:* incubation: 4-10 days. pseudo-appendicitis, enterocolitis, sometimes septicemia, erythema nodosum, arthritis.

Diagnosis: feces culture.

Treatment: trimetho/sulfa, fluoroquinolones

Prevention: washing hands prior to eating of after cat petting.
4. zoonoses acquired by fecal-oral transmission:

**Yersiniosis** *(Y. pseudotuberculosis, Y. enterocolitica)*

**Helicobacteriosis** *(H. bizzozeronii/heilmannii, H. felis)*:

**Anaerobiospirillum** *(A. succiniciproducens, A. thomasii)*
Epidemiology: isolated from cats with or without diarrhea.
Symptoms: **Cats**: asymptomatic carriers or with diarrhea.
**Humans**: 3-7 days of diarrhea, fever, abdominal pain, vomiting.
Diagnosis: feces culture.
Treatment: trimetho/sulfà, fluoroquinolones
Prevention: washing hands prior to eating of after cat petting.
### BACTERIAL ZOONOSES

#### 5. Vector-borne zoonoses:

<table>
<thead>
<tr>
<th>Disease</th>
<th>Agent</th>
<th>Vector</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plague</td>
<td><em>Y. pestis</em></td>
<td>Fleas</td>
<td>aerosols/contact</td>
</tr>
<tr>
<td>Tularemia</td>
<td><em>F. tularensis</em></td>
<td>Ticks</td>
<td>contact, bite</td>
</tr>
<tr>
<td>Cat scratch Disease</td>
<td><em>B. henselae</em></td>
<td>Fleas</td>
<td>scratch</td>
</tr>
<tr>
<td>Murine typhus-like Erhlichia</td>
<td><em>Rickettsia felis</em></td>
<td>Fleas</td>
<td>flea bite</td>
</tr>
<tr>
<td></td>
<td><em>E. canis, (E. equi)</em></td>
<td>Tick</td>
<td>No transmission to humans</td>
</tr>
</tbody>
</table>

### Murine typhus-like disease (*Rickettsia felis*)

**Epidemiology:** Opossums are the main reservoir and the cat flea (*Ctenocephalides felis*), the main vector. Seropositive cats (up to 20%) reported from various parts of the USA. Human cases reported in Texas, California.

**Symptoms:**
- **Cats:** asymptomatic carriers
- **Humans:** Murine typhus-like syndrome.
  - Incubation period: 6-14 days. High fever, Headaches, maculopapular rash, nausea, vomiting.

**Diagnosis:** Isolation from blood culture, PCR, Serology.

**Treatment:** Doxycycline

**Prevention:** Flea control.
PARASITIC ZOONOSES

TOXOCARIASIS (*T. cati, Toxascaris leonina*)

**Epidemiology:**
Cats commonly infested. Infected by colostrum or by oral route. After hatching in the small intestine the organisms migrate to other parts of the body, such as liver, lungs. Parasites that are coughed up or subsequently swallowed will mature in the small intestinal lumen. Ova are excreted in feces, infectious after 2 weeks, survive several months in soil.

USA: about 10,000 human cases/year.

**Symptoms:**
- **Cats:** mainly asymptomatic. Stunted growth, unthriftiness, gastroenteritis, intestinal obstruction.
- **Humans:** asymptomatic. Larva migrans (visceral or ocular, sometimes cutaneous). Some patients with abdominal pain, cough, pneumonitis, uveitis, neurological symptoms.
- Eosinophilia

**Diagnosis:** Serology (ELISA), presence of larvae in biopsies.

**Treatment:** Mebendazole, diethylcarbamazine.

**Prevention:** Prevent cats to defecate in sandboxes, cover sandboxes with lids when not used. Prevent pica. Washing hands prior to eating.
PARASITIC ZOONOSES

**Cutaneous Larva Migrans** (*Ancylostoma braziliense*, *A. tubaeforme*, *Uncinaria stenocephala*)

**Epidemiology**: Cats commonly infested in Southeastern USA. Ova are excreted in feces. Fecal prevalence ranges from 9% to 18%. Humans get infected when larvae penetrate the skin.

**Symptoms**: Cats: mainly asymptomatic or gastroenteritis, bad haircoat. Humans: cutaneous larva migrans: linear cutaneous eruptions with intense pruritus and erythema.

**Diagnosis**: mainly based on clinical signs.

**Treatment**: topical Thiabendazole.

**Prevention**: Prevent cats to defecate in sandboxes, cover unused sandboxes with lids. Prevent walking barefoot in sand.

---

**Dirofilariasis** (*Dirofilaria immitis* and *D. repens*)

Affects dogs, cats and foxes in Europe, Africa and Asia. Occasionally causes subcutaneous nodules and lesions (lung, peritoneum, spermatic cord) in humans. Mosquitoes serve as vectors, carrying the organism from the microfilaraemic cat to man.
**PARASITIC ZOONOSES**

**Dipylidiasis** *(Dipylidium caninum)*

Epidemiology: Cats commonly infested. Fleas ingest eggs, which then develop into cysticercus stage. Humans (mainly children) get infected when fleas are accidentally ingested.

Symptoms: **Cats**: mainly asymptomatic, gastroenteritis, poor haircoat.

**Humans**: eosinophilia, mild GI discomfort.

Diagnosis: Demonstration of proglottids in a stool sample.

Treatment: Niclosamide.

Prevention: Prevent toddlers to eat foreign objects, wash hands, treat pet cats against ectoparasites.

---

**Opisthorchiasis** *(Opisthorchiasis felineus)*

Common liver fluke of cats in Southeast Asia, Eastern Europe, NOT USA). Occasionally transmitted to humans.

Embryonated eggs excreted in cat feces. Eggs ingested by a snail. Cercariae released into fresh water and penetrate fish.

Human/feline infection by eating rare or raw fish. Adult parasites in bile ducts. Patients asymptomatic or cholangitis and hepatitis.

Treatment: praziquantel
**Echinoccocosis** (*Echinococcus multilocularis*)

**Epidemiology:**
Cats become infested by ingesting alveolar hydatid cysts in the tissue of prey. Infection rare in North America, reported in Europe from cat source. Wildlife cycle: foxes/small rodents. Rural cycle dog/cat and small rodents.

Humans become infected by ingestion of food contaminated with eggs from feces of tapeworm infested animals (foxes, dogs, cats).

**Symptoms:**
- Cats: asymptomatic.
- **Humans:** liver lesion, mainly. Rarely pulmonary or cerebral metastasis. Jaundice, hepatomegaly, fever, weight loss.

**Diagnosis:** Demonstration of proglottids in a stool sample for the cat. Liver lesions in humans.

**Treatment:** Surgery, Mebendazole, Albendazole.

**Prevention:** Do not eat raw fruits/veggies, wash hands after petting a cat/dog, treat pet cats regularly against internal parasites.
PROTOZOAN ZOONOSES

**Toxoplasmosis (Toxoplasma gondii)**

**Epidemiology:**
- **Cats:** definitive hosts. Shed oocysts for 1-3 weeks (millions of oocysts shed daily).
- **Oocysts need to mature in the environment to become infectious. They survive for several months.**

**Humans** become infected by ingestion of uncooked/undercooked meat or exposure to embryonated eggs. A report from Nova Scotia showing prevalence of 5.2% in children living in rural areas compared to 1.1% in urban children. Cat ownership was associated with antibodies to T. gondii only in rural children. Rural children in households with cats 3 times more likely to be infected than children with no cats (Pereira et al. Pediatrics, 1992;89:1169-1172).

**Symptoms:**
- **Cats:** asymptomatic or ocular lesions (chorioretinitis and anterior uveitis). Pulmonary toxoplasmosis in kittens. Severe forms in FIV infected cats (anorexia, lethargy, weight loss, CNS symptoms..)
- **Humans:** asymptomatic to mild infection (fever, adenopathy). Very severe in pregnant women during first trimester. Abortion, stillbirth, severe sequelae (retardation, cerebral calcifications, hydrocephalia…)

**Diagnosis:** Mainly serology.

**Treatment:** Sulfadiazine or clindamycin and pyrimethamine.

**Prevention:** Do not eat undercooked meat, wash hands and fresh food before eating, gardening wearing gloves. Change cat litter regularly.
PROTOZOAN ZOOONOSES

Toxoplasmosis (Toxoplasma gondii)

Toxoplasma gondii (trophozoites (tachyzoites)) in the bronchoalveolar lavage (BAL) material from an HIV infected patient.
PROTOZOAN ZOOLOSES

Toxoplasmosis (*Toxoplasma gondii*)

Epidemiology: Cats: can play a role of carrier and shed the organisms in the environment. Prevalence of 4-5% in cat feces reported. Cat to human infection has been reported.

Symptoms:
- Cats: asymptomatic or profuse diarrhea.
Severe infection in immunocompromised individuals (cholecystitis).

CRYPTOSPORIDIOSIS (*Cryptosporidium parvum*)

Epidemiology: Cats: can play a role of carrier and shed the organisms in the environment. Prevalence of 4-5% in cat feces reported. Cat to human infection has been reported.

Symptoms:
- Cats: asymptomatic or profuse diarrhea.
Severe infection in immunocompromised individuals (cholecystitis).
PROTOZOAN ZOONOSES

Cryptosporidiosis (*Cryptosporidium parvum*)

Diagnosis: Identification of organisms in stool specimens or tissue biopsies.
Treatment: very difficult. Spiramycin and paromomycin in humans.
Prevention: Proper water treatment. Do not eat unwashed food from gardens where animals may have defecated.

Gardiasis (*Gardia duodenalis*)

Cats may harbor *Gardia* (2-3%) and be shedders in the environment. Causes asymptomatic to diarrheal infection in cats and humans.

PROTOZOAN ZOONOSES

Enterocytozoonosis (*Enterocytozoon bieneusi*)

- **Microsporidia** are newly emerging pathogens of humans and animals. *Enterocytozoon bieneusi*, the species known to be the most frequent in microsporidial infections of humans was not discovered until 1985.
- It is now recognized as a true pathogen, causing diarrhea and acausal cholecystitis, especially in immunocompromised patients. *E. bieneusi* has been found in the feces of animals including pigs, SIV-infected rhesus macaques, cats and cattle. However, the potential reservoirs and the mode of transmission of this pathogen are still unknown.
- Molecular analysis of isolates from humans, cats, pigs, cattle and a llama revealed the lack of a transmission barrier between *E. bieneusi* from humans and animals (cats, pigs and cattle). Thus, *E. bieneusi* appears to be a zoonotic pathogen.
PROTOZOAN ZOONOSES

Enterocytozoonosis (Enterocytozoon bieneusi)

It is now recognized as a true pathogen, causing diarrhea and acalculous cholecystitis, especially in immunocompromised patients.

FUNGAL ZOONOSES

Sporotrichosis (Sporothricum schenkii)

Epidemiology: Mycosis common in coastal regions and river valleys of the southern USA. Soil is natural reservoir. Very common in South America. Usually human infection of farmers and florists after accidental inoculation. Cats can also be infected and shed fungi continuously from their cutaneous lesions. Usually get infected by contamination of fight wounds. Several human cases by direct exposure to infected cats.

Symptoms: Cats and humans: cutaneous, suppurative, ulcerated lesions that spread along lymphatics. Possible pulmonary or disseminated forms. Incubation of a few weeks to several months.
**FUNGAL ZOONOSES**

**Sporotrichosis** (*Sporothrix schenckii*)

**Diagnosis:** Cytology of exsudate. Culture, histopathology, Fluorescence antibody staining.

**Treatment:** Potassium iodide, ketoconazole, itraconazole.

**Prevention:** wear gloves when treating cats. Wash and with fungicides after handling infected cats (povidine-iodine scrub).
ECTOPARASITIC ZOONOSES

Dermatophilosis (*Dermatophilus congolensis*)

Cats may become infected with *D. congolensis*, an actinomycete causing abscesses in muscles and lymph nodes and fistulous tracts. Humans handling infected cats may become infected.

At the lesion site, cat hair are crusty and removed very easily. The hair around the lesion should be clipped and the lesion kept dry.

Human infection is characterized by an exsudative, pustular dermatitis at the site of contact. The lesions will usually resolve within 2 weeks without treatment.

Treatment by application of iodine solutions or in severe cases injection of penicillin-related compounds.

ECTOPARASITIC ZOONOSES

Scabies (*Sarcoptes scabiei*) and *Cheleytiella* mite infestation

Infested cats can infect humans. Scabies mites causes pruritic papular lesions where they burrow into the skin. Itching increases at night.

Treatment consists of ridding the infested pets of mites and washing clothes and bedding. Topical treatment to reduce itching.
ECTOPARASITIC ZOONOSES

Dermatophytosis or Ringworm

(Microsporum canis, Trichophyton mentagrophytes)

Epidemiology: Feline ringworm prevalence has been reported to range from 6-88% and is most common in kittens. In households with infected cats, 50% of humans contracts infection.

Humans develop disease through direct contact with infected animals or contaminated environment.

ECTOPARASITIC ZOONOSES

Dermatophytosis or Ringworm

(Microsporum canis, Trichophyton mentagrophytes)

Symptoms: Cats are asymptomatic or have patchy alopecia and scaly lesions (on face or paws). Incubation: 1-3 weeks. Humans exhibit a round, scaly, non pruriginous lesions where the rim is more inflamed and scaly, called tinea circinata.

Diagnosis: based on examination of cat with Wood’s lamp (UV light), culture of skin scraping or microscopy.

Treatment: topical fungicide (miconazole, clotrimazole or tioconazole). For more systemic infections, oral therapy: griseofulvin (humans or cats) or itraconazole (humans)
FELINE ZOONOSES

Not just pets.... HealthyPets!™

THE END