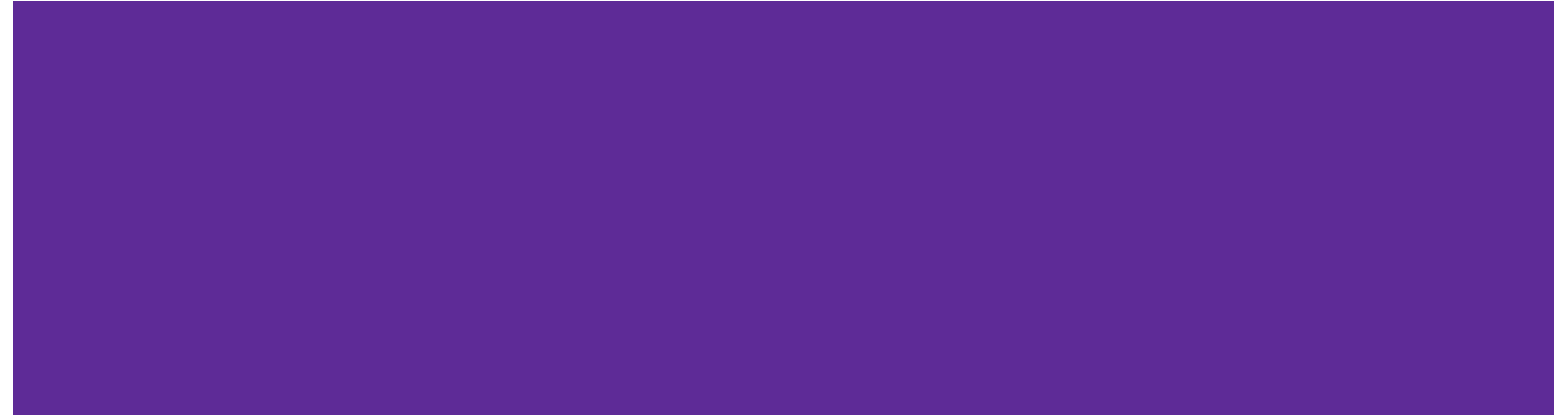


# FIP case presentation - Sam

Dr. Karen Chan



# Sam (2008-2015)



# Sam

- Signalment
  - DSH / MN / Black and White
  - DOB - 1/10/2008 (5y 5m)
  - 100% indoor
  - Multicat household
  - RC petshop dry food
  - Up to date with vaccination and flea preventative.
  - Not dewormed regularly

# Presentation & Initial PE

- 19/3/14 - presenting complaints -
- diarrhoea
- anorexia for a day
- vomiting (2-3 times)
- less active
- QAR, relaxed
- BSC 7
- Pyrexia
- DS 4/4
- Abdo palp unremarkable

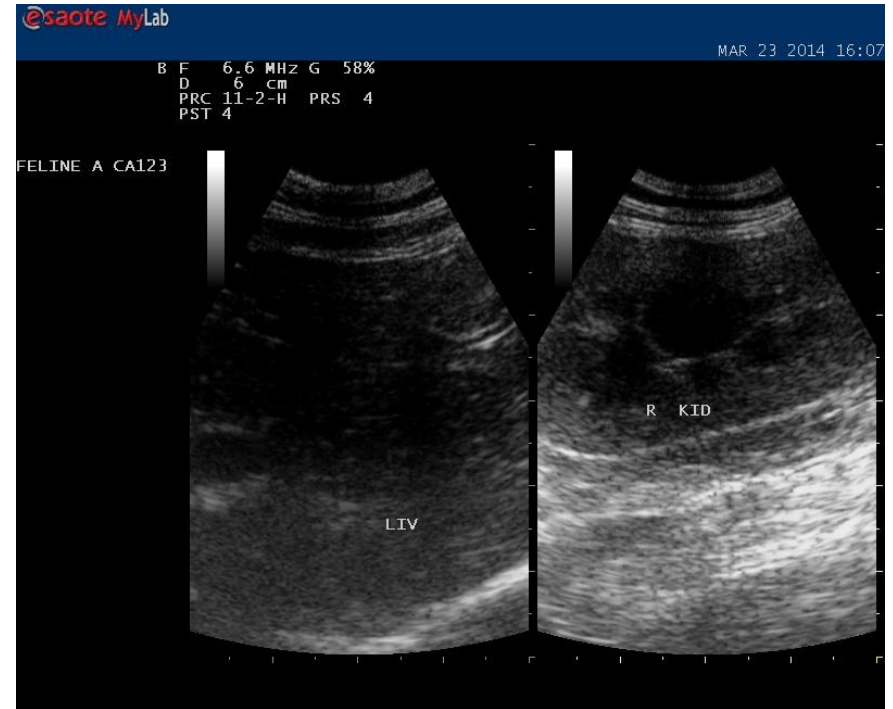
# Diagnostics

- CBC:
  - neutrophilia
  - thrombocytopenia
- Biochem:
  - hypoalbuminemia
  - hyperbilirubinemia
  - hypophosphatemia
  - hyponatremia
  - increased TP and globulin
  - hyperglycemia
  - increased amylase
- Lipase - fPLi - normal
- FeLV / FIV - neg
- Pre/Post prandial - no cholestasis
- Urine - (obtainable after IVFT)
  - blood 4+
  - bilirubin 2+
  - protein trace
  - SG 1.020
- Albumin:Globulin ratio
  - **0.28**
  - lower than 0.8 - indicative

<b>WBC</b>	<b>29.37+</b>	<b>10<sup>9</sup>/l</b>	<b>(5-19.5)</b>				
LYM	2.14	10 <sup>9</sup> /l	(1.5-7)				
MON	1.59+	10 <sup>9</sup> /l	(-1.5)				
<b>GRA</b>	<b>25.64+</b>	<b>10<sup>9</sup>/l</b>	<b>(2.5-14)</b>	<b>ALB</b>	<b>2.0*</b>	<b>(2.2-4.4)</b>	<b>G/DL</b>
LY%	7.3-	%	(20-55)	ALP	17	(10-90)	U/L
MO%	5.4	%	(1-3)	ALT	67	(20-100)	U/L
GR%	87.3+	%	(35-80)	<b>AMY</b>	<b>1928*</b>	<b>(300-1100)</b>	<b>U/L</b>
.....				<b>TBIL</b>	<b>0.8*</b>	<b>(0.1-0.6)</b>	<b>U/L</b>
RBC	9.58	10 <sup>12</sup> /l	(5-10)	BUN	10	(10-30)	MG/DL
HGB	13	g/dl	(8-15)	CA++	9.3	(8.0-11.8)	MG/DL
HCT	40.59	%	(24-45)	<b>PHOS</b>	<b>2.2*</b>	<b>(3.4-8.5)</b>	<b>MG/DL</b>
MCV	42	fl	(39-55)	CRE	1.2	(0.3-2.1)	MG/DL
MCH	13.6	pg	(12.5-17.5)	GLU	253*	(70-150)	MG/DL
MCHC	32.1	g/dl	(30-36)	<b>NA+</b>	<b>141*</b>	<b>(142-164)</b>	<b>MMOI/L</b>
RDWc	18.3	%		K+	3.9	(3.7-5.8)	MMOI/L
.....				<b>TP</b>	<b>9.1*</b>	<b>(5.4-8.2)</b>	<b>G/DL</b>
PLT	118-	10 <sup>9</sup> /l	(300-800)	<b>GLOB</b>	<b>7.1*</b>	<b>(1.5-5.7)</b>	<b>G/DL</b>
PCT	0.17	%					
MPV	14	fl	(12-17)				
PDWc	19.6	%					

# Abdominal ultrasound

- Ultrasound -
  - Liver sl hypoechoic relative to the right renal cortex
  - Most of GI tracts all 5 layers identified
  - Prominent LN - esp caudal to stomach



# **IDEXX - FeCoV(FIP) Antibody**

Dated: 27/3/2014

Test: FeCoV (FIP) Antibody

Result: Positive

Reference Range: @1:400



# Hospitalisation

- Fluid therapy
- Antibiotics
- Antiemetics
- Antacids
- Vitamins B
- Liver meds - s-adenosyl & marin
- Dewormer
- Feeding tube placed after initial stabilisation.

# Initial treatments...

Day 2

- persistent pyrexia
- diarrhoea with coffee grounds in hosp

Day 3

- omm slight icteric
- bloody diarrhoea multiple times

Day 4-6

- Continue treatment...



# Repeat Biochemistry prior to discharge

ALB	1.3*	(2.2-4.4)	G/DL
ALP	<5*	(10-90)	U/L
ALT	44	(20-100)	U/L
AMY	1761*	(300-1100)	U/L
TBIL	0.6	(0.1-0.6)	U/L
BUN	11	(10-30)	MG/DL
CA++	8.6	(8.0-11.8)	MG/DL
PHOS	4.6	(3.4-8.5)	MG/DL
CRE	1.1	(0.3-2.1)	MG/DL
GLU	132	(70-150)	MG/DL
NA+	145	(142-164)	MMOI/L
K+	3.6*	(3.7-5.8)	MMOI/L
TP	6.3	(5.4-8.2)	G/DL
GLOB	5.1	(1.5-5.7)	G/DL

# Options for owner... PI

- Prev 2 cats in household diagnosed with FIP (deceased)
- March 2014
  - option for polyprenyl immunostimulant
  - new drug
  - not a cure
  - improve quantity of life in dry form FIP
  
- Discharged day 6 with FT

# PI

- 3mg/kg per dose three times a week.
- 2mg/ml
- 10ml per bottle
- 8.7ml PO q2-3d for 2wks. -- recommend try 5 doses
- **\$\$\$\$\$!!!**
- Client given information:
- <http://www.vetimmune.com/go/index.php/polyprenyl-immunostimulant/faq>



# Waxing and waning...

**29/4/14**

- 5.65kg (weight loss)
- occ feeding liquid food by mouth
- loose feces
- bright at home - climbing cat trees
- WBC high -  $46.7 \times 10^9/l$  (5.5-19.5) despite antibiotics

# 13/5/14

- 5.17kg - wt loss
- inapp, dull, v/d
- started course of vit b12 wkly inj
- advice may need euthanasia if no better...
- BUT... owner persisted.

# June 2014 - March 2015...

- convenia once every two weeks and vit b12 every two weeks after initial weekly injections.
- PI meds long term
- Mirtazapine 15mg ¼ tab po q3d
- Occasional buprenorphine -- o report cat seems to be in pain when defecating - loose feces persists.
- owner giving sc fluids twice a week
- **cat is happy - owner report playing with other cats**



# One year on... 22nd March 2015

One year after FIP (dry) diagnosed.

Only on PI +/- buprenorphine

On and off vomiting / anorexia - medical conservative treatment.

<b>WBC</b>	<b>19.74+</b>	<b>10<sup>9</sup>/l</b>	<b>(5.5-19.5)</b>
LYM	2.39	10 <sup>9</sup> /l	(1.5-7)
MON	0.5	10 <sup>9</sup> /l	(0-1.5)
<b>NEU</b>	<b>15.52+</b>	<b>10<sup>9</sup>/l</b>	<b>10<sup>9</sup>/l</b>
EOS	1.30+	10 <sup>9</sup> /l	(0-1)
BAS	0.04	10 <sup>9</sup> /l	(0-0.2)
.....			
RBC	9.25		(5-10)
HGB	8.5 mmol/l		(5-9.3)
HCT	39.63		(24-45)
MCV	43 fl		(39-55)
MCH	0.92 fmol		(0.78-1.09)
MCHC	21.4 mmol/l		(18.6-22.3)
RDWc	19.4 %		
RDWs	32.8 fl		
.....			
PLT	159-	10 <sup>9</sup> /l	(300-800)
PCT	16.7 %		
MPV	0.27 fl		(12-17)
PDWc	28.1 %		

# 16/5/15

Repeat ultrasound due to on and off vomiting and advice by other vet.

- ICCJ junction abnormal - focally thickened
- Jejunal and proximal colic LN prominent + enlarged.
- Recommendations FNA of LN or better with biopsy.

DDx (other than FIP)-

- IBD, low grade intestinal lymphoma, poss granulomatous enteritis/colitis

# 19/5/15

- owner not keen on biopsy.
- advised -
  - dietary modification - z/d / hypoallergenic
  - antibiotic trial (metronidazole for 4 wks)
  - prednisolone trial for 6 wks
  - continue vit b12 injections monthly.

# PI revisited

Owner had questions too, of course...

- How long to treat?
  - as long as possible
- How often to give?
  - every 2-3 days, long term every 3 days.
  - owner gave every 4 days when low on meds (waiting for stock)

# The end of the line...

## **1/7/15 - admitted. deteriorated...**

- drooling, vomiting, not eating/drinking, vocalising at home...
- cbc - marked neutrophilia
- diagnostic - electrolytes abnormalities, increased BUN
- UA - concentrated urine, otherwise unremarkable
- fPLi - normal

<b>WBC</b>	<b>81.89+</b>	<b>10^9/l</b>	<b>(5.5-19.5)</b>
LYM	2.39	10^9/l	(1.5-7)
MON	0.5	10^9/l	(0-1.5)
<b>NEU</b>	<b>69.72</b>	<b>10^9/l</b>	<b>10^9/l</b>
EOS	1.03+	10^9/l	(0-1)
BAS	0.04	10^9/l	(0-0.2)
.....			
RBC	7.93	10^12/l	(5-10)
HGB	9.0	g/dl	(5-9.3)
HCT	39.63	%	(24-45)
MCV	43	fl	(39-55)
MCH	1..14+l	pg	(0.78-1.09)
MCHC	28.5+	g/dl	(18.6-22.3)
RDWc	21.9 %		
RDWs 32.8 fl			
.....			
PLT	210-	10^9/l	(300-800)
PCT	13.2 %		
MPV	0.28 fl		(12-17)
PDWc	33.7 %		

ALB	3.4	(2.2-4.4)	G/DL
ALP	17	(10-90)	U/L
ALT	34	(20-100)	U/L
AMY	1751*	(300-1100)	U/L
TBIL	0.3	(0.1-0.6)	U/L
<b>BUN</b>	<b>42*</b>	<b>(10-30)</b>	<b>MG/DL</b>
CA++	8.8	(8.0-11.8)	MG/DL
PHOS	4	(3.4-8.5)	MG/DL
CRE	0.6	(0.3-2.1)	MG/DL
GLU	79	(70-150)	MG/DL
<b>NA+</b>	<b>141*</b>	<b>(142-164)</b>	<b>MMOI/L</b>
<b>K+</b>	<b>3.1*</b>	<b>(3.7-5.8)</b>	<b>MMOI/L</b>
TP	7.6	(5.4-8.2)	G/DL
GLOB	4.2	(1.5-5.7)	G/DL

# Exploratory laparotomy

- severe stenosis over cecal colic area
- feces in ilium cannot be milked through
- resected affected area and anastomoses area
- histopath submitted



# Post op...

- PCV - 25%
- electrolytes corrected.
- WBC still very much elevated
- increased ALT
- hypothermia
- doing poorly 2 days after surgery...
- owner opt for *euthanasia*.
- Histopathology results (after euthanasia) - Confirm diagnosis FIP dry form.

# Conclusion

- FIP - no definitive diagnosis without biopsy.
- Sam had 15 months of good quality living.
- A case of a very dedicated and vigilant owner.
- This family an option to spend additional quality time together