Thanks to our friends at the Washington Department of Fish and Wildlife, some very interesting harbor seals with nematodes collected from the heart were examined. The top image is common to rounds, and while *Otostrongylus circumlitus* is best known as a lungworm, they can be found in the pulmonary vessels and the heart and likely cause just as much pathology if not more, these are large worms.

The middle box is the classic seal heart worm *Acanthocheilonema spirocauda*. While traditionally thought to be carried by the seal louse, some debate if a biting fly or other intermediate host is responsible to seal acquiring this serious infection.

The last box is an image from a sample that had 4 nematode fragments. Ideally identification would be a positive ID with complete mature male and female worms, less then that I’d often settle for an adult (L5) terminal end of the male. In this case I had two L4 caudal ends of the female, and an anterior end. I could rule out *Otostrongylus* based on the morphology of the anterior end, as *Otostrongylus* has a very characteristic round oral opening, and the width of the worm was interesting, it was too big to *A. spirocauda*, and consistent with the dog heartworm, *Dirofilaria immitis*. This is of course an identification based on exclusion and should be confirmed with molecular methods. I have even used a canine heartworm test, in pinch with ground worm in saline instead of blood.
Sea Turtles: #31 Cherry
fractured Left TIB/FIB, possible pneumonia
wt=2.2 kg, SCL=23.3, SCW=20.5, TPR=n/a, ?, ?, BS = 2/5
CC: strand 11/9/13 Orleans, left carapace instability, bilateral lung lesions, skull lesions, dysphagia
Last Rads: 12/3/13:
Last Blood: 11/25/13; 1/4/14
HIGH: WBC - lymphocytosis, ALKP (1884), CK (2070)
GLOB, UA (0.5)
A: mild lymphocytosis CWCT 2 more weeks
carapace instability, fractured and swollen left hind, exposed dermal bone on left hind marginal scutes, abrasions swelling and plastron lesions still significant, ventral rash
A: soft calus formation with fracture leg is stable, turtle is very active, small bite on left lower rhamphotheca healed, shell healing
TX:
2- ceftazidime 22 mg/kg IM q3d until 1/21/14
3- vit B1, sea tabs, and calcium (oral)
5- SSD to lesions

Sea Turtles: #32 Pearl
smallest sea turtle, sunken
wt=1.7 kg, SCL=21.4, SCW=19.9, TPR=n/a, 40, ? BS = 2/5
CC: strand 11/13/13 Brewster
Last Blood: 12/3/13
CBC = WNL (monitor low normal PCV)
HIGH: ALKP, LDH, CHOL, GLU, UA
LOW: ALB, TP, ALT, PCV (low normal)
Last Rads: 11/16/13 mineral density in coelum
sunken appearance, plastron bruising, very small turtle
small Left nuchal skin/carapace lesion, minor head lacerations ventral hyperemia, rash at base of rhamphotheca
A: improved, looking good
TX:
1- vit B1, sea tabs, and calcium (oral)
Sea Turtles: #33 Gage
pneumonia, skin separation at nuchial area, flipper tip lesions RIGHT
wt=4.3 kg, SCL=29.6, SCW=27.6, TPR=n/a, 50, ?, BS = 3/5
CC: strand 11/13/13 Brewster
Last Blood: 12/3/13; 1/6/14, 17/14
HI: LDH, WBC
A: improved labs d/c ABX
Last Rads: 11/16/13-ovoid gas in LEFT coelum, small mineral densities, BI pattern cranial lungs bilateral
Skin separation is healing nicely, rostral lesion healing, RFF is better, minor carapace scuffs/bites
TX:
1- vit B1, sea tabs, and calcium (oral)
2- SSD to wounds when pulled, after clean with chlorohexiderm

Sea Turtles: #34 Raphael
possible pneumonia
wt=2.3 kg, SCL=23.9, SCW=21.5, TPR= n/a, 50, ?, BS = 2/5
CC: strand 11/13/13 Brewster, R eye + corneal ulcer
Last Blood: 11/25/13; 1/6/14
HI: WBC (9.6), ALP, GLU, AST, LDH
A: improved ok to d/c ABX
Last Rads: 11/16/13; marked BI pattern reduced right lung lobe volume 0.6 x 3 cm soft tissue density in R lung, linear densities left coelum 12/10/13; possible mild left lung minor increase BI density.
minor bite wound on carapace Left Lateral 1-2 scute, looks good
TX
1- vit B, sea tabs, and calcium (oral)
2- SSD when pulled
Sea Turtles: #35 Julia  
**carapace lesions**
wt=3.8 kg, SCL=28.5, SCW=26.6, TPR=n/a, 50, BS = 3/5  
CC: strand11/16/13 Fisher Beach  
Last Blood:12/3/13; 1/6/14  
HI: ALKP (1674), LDH (3000), GLU(118)  
A: improved CBC normal, ok to d/c ABX  
Last Rads:12/19/13:1cm mineral and gas densities in coleum;  
plastron bruising and hyperemia, mild shell abrasions, minor  
front flipper tip lesions, small R sided carapace, minor FFtip,  
lesions Right axilla, minor plastron bruising, looking good.  
A: eating better, doing well, consider d/c ABX after next  
blood tests  
TX:  
1- vit B1, sea tabs, and calcium  
2- SSD when pulled

Sea Turtles: #36 - Thetis  
**carapace ulcers & abrasions**
wt=3.4 kg, SCL=26.7, SCW=24.4 TPR=n/a, 40, BS = 3/5  
CC: strand 11/12/13 Brewster  
Last Blood:12/3/13  
CBC = mild lymphocytosis (5880)  
HI: CHOL, GLU  
A: major improvement, OK to d/c abx  
Last Rads:12/17/13; lungs improved, WNL  
Carapace abrasions, minor, R lateral scute #2 and vertebral  
scute 4 with ulcers, RFF D2 boney knob (check with rads),  
plastron bruising, carapace ulcers, small rostral lesion  
A: doing well, aggressive turtle, blood tests, looking good  
TX:  
1- vit B1, sea tabs, and calcium (oral)  
2- chlohexiderm soak 5 min, followed by SSD on pull days
Sea Turtles: #37 Marina
flipper lesions
wt=2.1 kg, SCL=24.0, SCW=22.2, TPR=n/a, 50, ? BS = 2/5
CC: strand 11/13/13 Brewster, right eye slight opacity, Left eye central opacity
Last Blood:11/25/13; 1/4/14
HI: WBC (10K) lymphocytosis, ALP, GLU (120), UA (0.4)
A: improved ok to d/c ABX
Last Rads:11/15/13; 12/31/13- WNL, AP exposure failure
Brusing on plastron, R marginal scute #12-13 lesions, LFF missing notch, minor carapace Left lateral scute #3 lesion, minor plastron bruising, minor head lesion with exposed skull, but still appears as a minor wound, bite wound on head contracting
A: head wound healing
TX
1- vit B, sea tabs, and calcium (oral)
2 - SSD when pulled

Sea Turtles: #38 Shosho
rostral lesion
wt=2.1 kg, SCL=23.6, SCW=21.5, TPR=n/a, 50 ,? BS = 2/5
CC: strand 11/4/13 Brewster
Last Blood:12/3/13; 1/6/14
HIGH: PCV (31%)-persistent, ALKP, GLOB, CHOL, GLU
A: continued slightly elevated HCT, but improved, OK to d/c ABX
Last Rads:11/22/13; 1/14/14: 7 x 4 mm ovid mineral density in coleum, possible soft tissue densities in lung fields on DV
Rostral lesion healed but scared, minor head lesions, minor FF tip lesions, minor plastron bruising with poorly defined rash like area
A: everything getting better, good eater
TX:
1- vit B1, sea tabs, and calcium (oral)
2- SSD when pulled
Sea Turtles: #39 Squirt

cloacal prolapse; CAUTION BITES!
wt=4.0 kg, SCL=28.0, SCW=26.4, TPR=n/a, 40, ? BS =2/5
CC: strand 11/11/13 Eastham, 3-4 raised barnacle like lesions in oral cavity, slight cloacal prolapse, opacity to LEFT eye minor
Last Blood:11/25/13; 1/4/14
HI: WBC lymphocytosis, ALKP, CK(2445), LDH (4639), GLU (115), K (4.9)
A: improved, ok to d/c ABX
Last Rads:12/19/13 min. BI pattern bilateral, 0.4 cm rectangular density and very small mineral density, no GI obstruction
Confirmed oral/tongue lesions look like barnacles, also appears to be resolving, minor FF tip lesions, no prolapse, mild plastron bruising, R hind nail avulsion, new bump on head, bilateral hind flipper nail avulsions, reducible cloacal prolapsed
A: sugar failed to resolve the prolapse, try topical preparation H for 1 week
TX:
1- vit B1, sea tabs, and calcium (oral)
2- Preparation-H small amount applied topically SID, check HR

Sea Turtles: #40 North Star

LEFT Front Flipper, early osteolysis D2P1-2

wt=2.8 kg, SCL=26.1, SCW=23.4, TPR=n/a, 60, ? BS =2/5
CC: strand 11/13/13 Brewster, cloacal prolapse
Last Blood:11/25/13, 1/4/14
HIGH: WBC-lymph, ALKP, LDH (3588), GLU (118), UA (1.6)
A: continue ABX for 1 weeks
Last Rads: 12-24-13: BI pattern bilateral, increased soft tissue density in LEFT lung field, end plate lysis LFF D2P1-2, minor lesion RFF D3 P3 and P4 lytic lesions
Swelling of LFF subjectively better with 2 foci of swelling, healing Left side of face bite, minor rostral lesion
TX
1- ceftazidime 22 mg/kg IM q3d
2- vit B1, sea tabs, and calcium (oral)
3- SSD when pulled
-recheck blood next week-
Sea Turtles: #41 Tide the loggerhead
loss of scutes from flippers
wt=39.3 kg, SCL=63.2 SCW=53.6, TPR=n/a, 44, 4 BS =3/5
CC: strand 12/8/13 Brewster, cold stun
Last Blood: 12/11/13 @ NEAq
HIGH: CK (19373), LDH (1113), UA (0.8)
LOW: ALB (1.1)
Last Rads: 1/7/14
SOAP: BAR, active, resists examination,
20-30 barnacles, most dead, some coming off, some on
plastron, lesions to both front flippers with loss of scutes
Much better without barnacles, less odor, dermal lesions
improving
Shell looks much better without barnacles, front flipper loss of
scutes is fine but will take a long time to heal
TX
1-LRS 500ml LRS SQ ETD w/ ABX
2- ceftazadime 22 mg/kg IM q3d
3- vit B1, sea tabs, and calcium (oral)
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