Rounds Notes
Animal Health Department
Medical Rounds
"medicine for all"
NATIONAL MARINE LIFE CENTER
Caring for Stranded Marine Animals
Veterinary Research Department
Under the microscope
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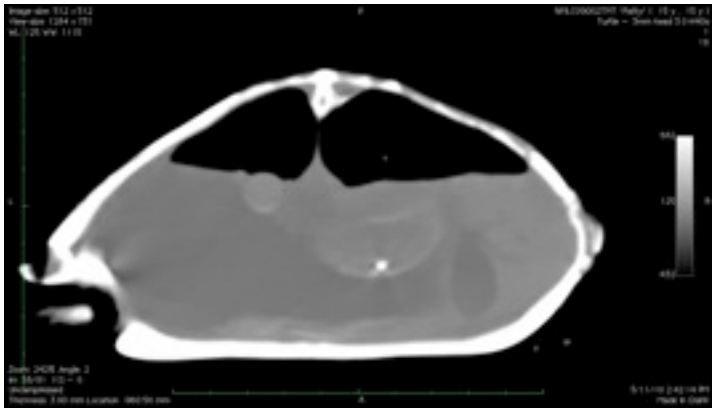
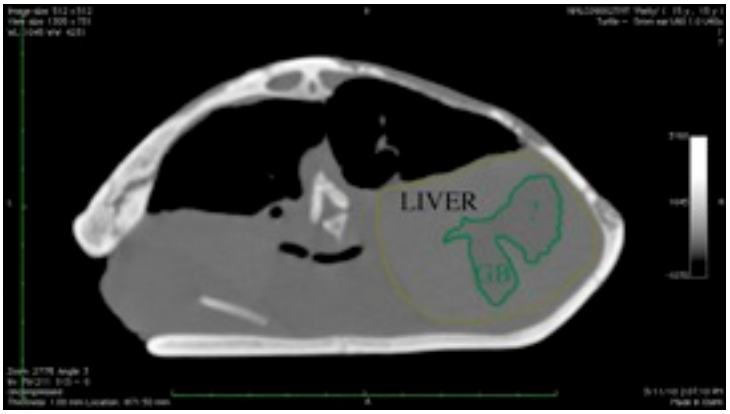
Patty fails to sit still for scan:

but here is what the CAT said about the turtle:

'Good turtle', 'sit', 'stay', all to no avail. While I did not want to sedate Patty for her repeat CAT scan, it took several scans to get her completely imaged, and the 3-D imaging is greatly effected by movement. Ah, physicians have it so easy, 'that's right', 'take a deep breath', 'hold it', 'be still', 'excellent.' I wish.
Despite our traveling turtle troubles, we were able to answer a number of questions concerning Patty. Here is my system by system review of the scan.

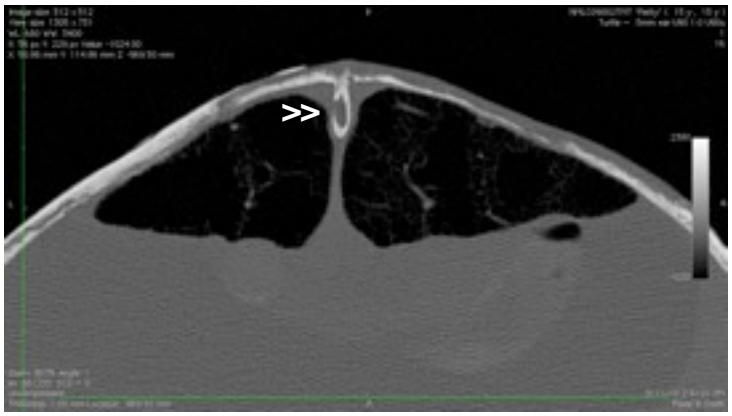
CARDIOVASCULAR: The heart was imaged and is normal in size and shape, the pulmonary vasculature is imaged and within normal limits.
DIGESTIVE: The oral cavity, esophagus, and stomach are within normal limits. Some radio-opaque material is settled in the stomach. The intestines are displaced by a large bladder that is assumed to be a urinary bladder (see previous CT). There are radio-dense objects in the colon and some gas floating on the liquid contents of the intestines. No gas dissented loops or evidence of obstruction was observed. Some of the material may even be retained barium from the study several months ago or shell material from her diet or some pisces of crushed coral from her substrate. The colon is slightly to the left of midline. The liver is divided on the left by the presumed urinary bladder, and a second cystic communication (green ?) is present dorsal and lateral to the gall bladder, which lies parallel to the plastron and not perpendicular as the normal gall bladder should.



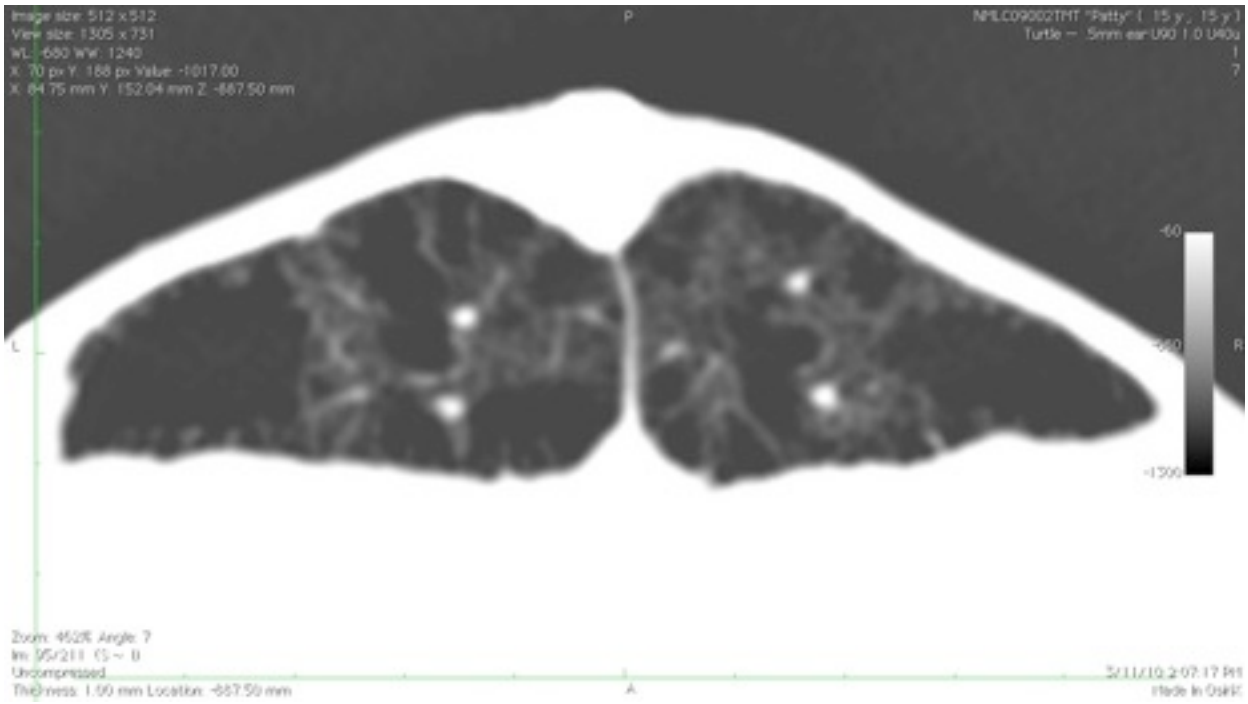


ENDOCRINE: The endocrine system is not evaluated directly.

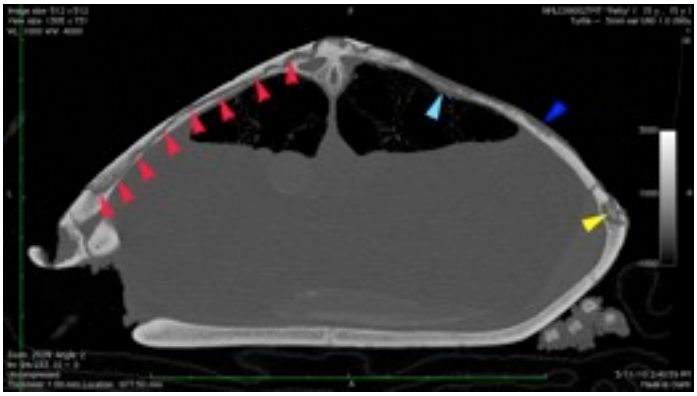
LYMPHATIC: The lymphatic system is not evaluated directly.
MUSCULAR: Overall muscle mass is appropriate, no lesions are identified.
NERVOUS: The nervous system is not evaluated directly, the skull and spinal column is intact, although skeletal changes involving the ribs and vertebral processes are effected by the generalized disease of the carapace. The dorsal vertebral foramina is enlarged on the left in one of the vertebrae which may be related to the left hind limb weakness or the more generalized process involving the dermal bone.
REPRODUCTIVE: No follicular development is noted, the uterus is not identified.



RESPIRATORY: The lungs are normal for a terrapin. Large somewhat symmetrical areas of non-alveolar tissue is present. No areas of consolidation are noted.



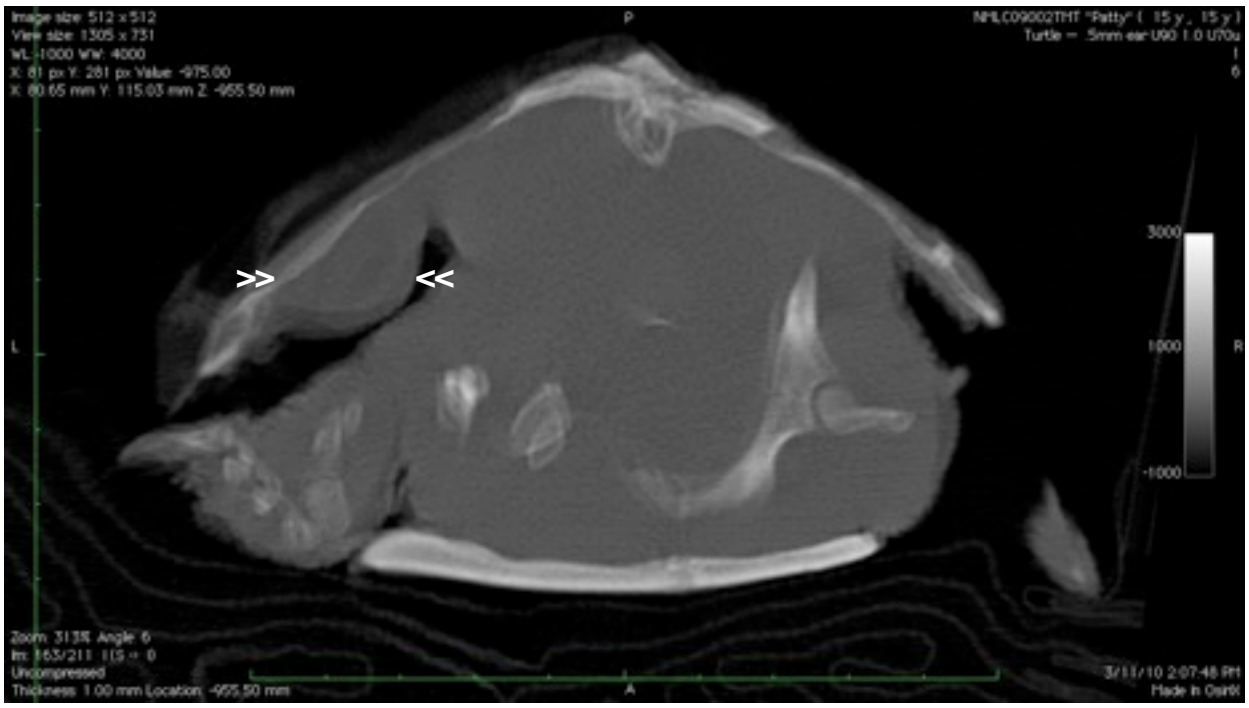
SKELETAL: The appendicular skeleton is normal. The plastron is also improved and within normal limits. The skull and cervical vertebra are normal. The changes that are present are in a diffuse but nonuniform manner involving the carapace and the bridge. The primary lesions are of lamination of rib bones with necrosis and loss of the dermal layer, leaving a layer of dermal bone under the epithelium, which, in connection with a surface layer of epithelium, we have termed the pseduoshell. This is not comprehensive and leaves some pleuro-peritonaeum and the pseudoshell and as the only covering for the lungs. The spinal column was effected, but areas directly surrounding the spinal cord were spared. The dorsal aspects of the thoracic vertebra do show the same lamination and dermal bone loss.



(red arrows=lamination of dermal bone, light blue= pleuro-peritonaeum, dark blue=pseudoshell, yellow= dermal bone sequestrum)

INTEGUMENTARY: The psuedoshell layer is variable ranging from an thin non-measurable covering, to a thickness of 5mm in some areas. The pleuro-peritonaeum is visible and thus thickened in areas.
URINARY: The renal tissue is not distinct in the studies, but is not mineralized. The urinary bladder is extremely large and the dominate structure of the body cavity. It displaces intestine to the periphery. On the right it may even be confluent with a structure of the liver and separates liver lobes.

That "renal mass" that I've been taking about, is images and interesting. When palpating Patty, a distinct caudal dorsal left sided smooth oval mass is felt under the plastron. This is lateral and behind the lungs, the CT finally reveals the location of this mass and it appears to be too lateral



to be renal tissue, this is good news for Patty. However, the nature of this swelling is still unknown. It appears to be more associated with the shell disease and is peripheral enough to allow a FNA and perhaps a Tru-Cut biopsy. There may even be a soft tissue lucency to the center of this structure and a thick wall cyst is a possibility.

Terrapins, Cooters, and Turtles, oh my . . .:

head-starts getting read for a fresh-start

I've decided to rename the red-bellies, "green-bellies" for the shear quantity of vegetable matter they ingest. I've doubled their ration of ReptoMin, and their growth appears right on target.

A tentative release date for the Diamondback terrapins has been discussed, around the second week of June. Winter is over, the first day of spring is rapidly approaching and it may be 60°F today, with a bright sun of optimism. We have a few things to do to get them ready. We must acclimate them slowly to brackish water, complete exit physicals and release statements to the state, allow temperature fluctuations to mimic what they will encounter in mid-June on the Cape, and make sure they can identify, capture, and eat wild-type prey items.

C Roger Williams VMD

Sea Rogers Williams VMD
attending veterinarian and director of science

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