### Physical exam basics

#### Dr. Nancy Mettee

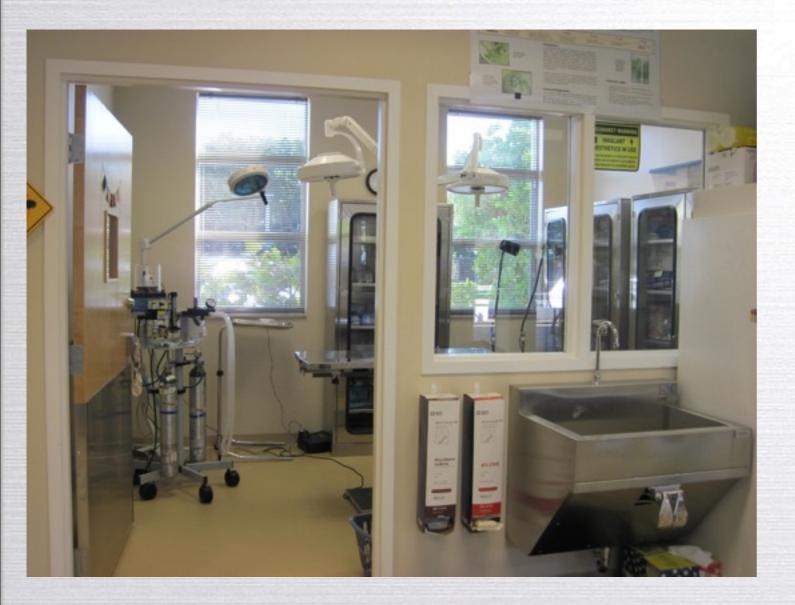




#### Our mission: To promote conservation of Florida's coastal ecosystem with a special focus on threatened and endangered sea turtles.



All medical and surgical facilities are available onsite. We are a state licensed veterinary hospital.





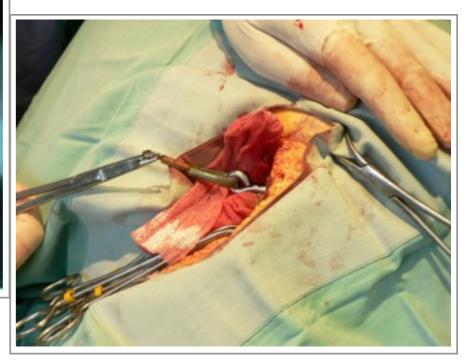
#### MARINELIFE CENTER

LMC houses a fully functional veterinary hospital with a unique focus on sea turtles. This allows us to dedicate our resources to this class of endangered animals and pioneer medical and surgical techniques to improve rehabilitation efforts worldwide.







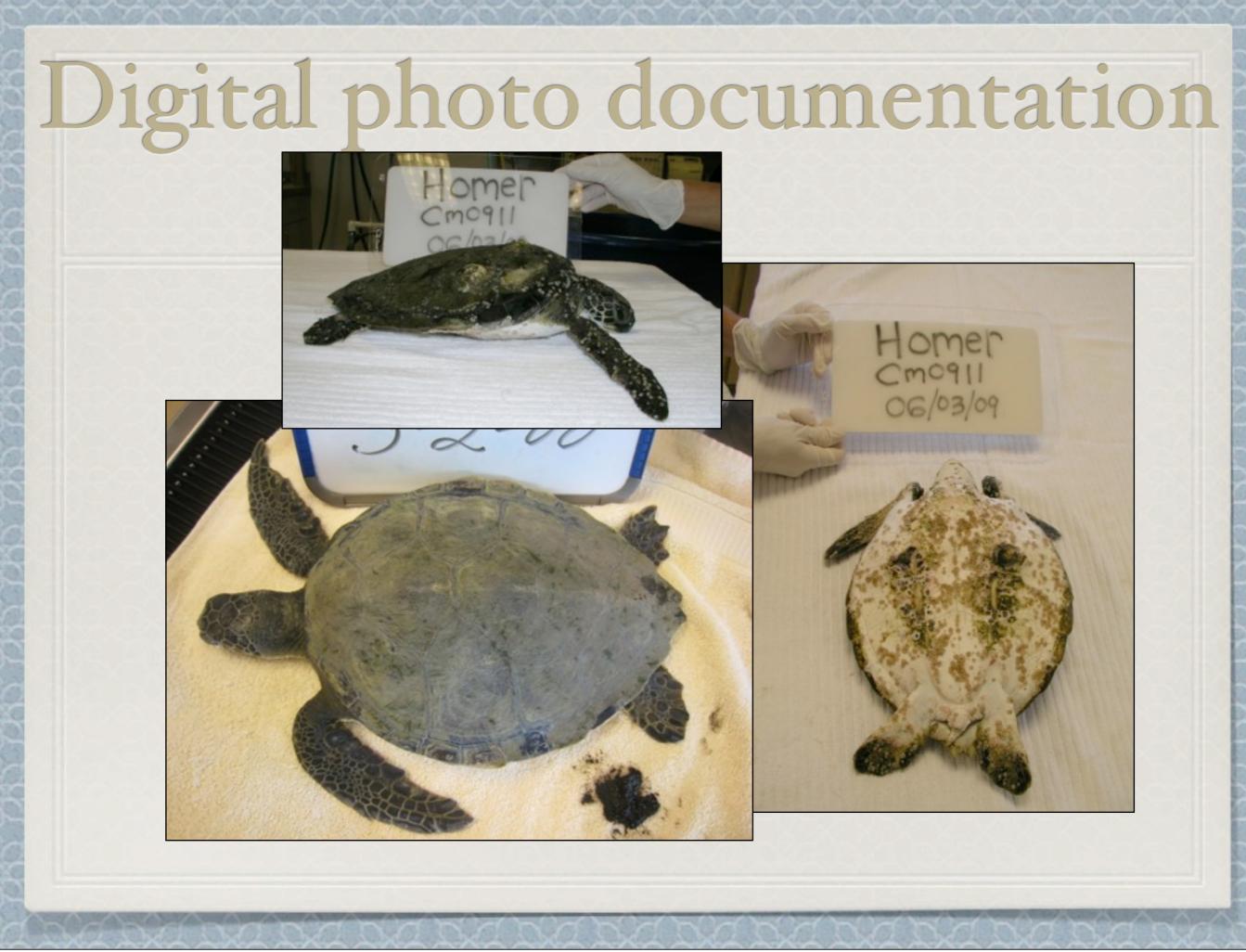


Our patients each receive a full diagnostic workup. This includes a thorough physical examination, temperature & weight check, complete blood work, and full body radiographs. This information is then compiled into a diagnosis and plan.



#### LMC minimum data base

- bistory (nature of stranding)
- digital photos (3 minimum)
- weight & measurements
- complete physical exam with nutritional assessment.
- full body radiographs
- bloodwork (istat, cbc, chemistry panel)





#### Ophthalmic/Otic

With natural light and white light. Includes flourescein dye test for corneal ulceration. Observe salt gland activity





#### Musculoskeletal

Palpate all limbs for range of motion, swelling, or crepitus Evaluate muscle tone and strength Evaluate carapace and plastron for signs of injury

#### Integumentary



Scutes cover bone Scales cover skin

Skin should be evaluated for excessive sloughing, wounds, abscesses, and scars

The thickness of sea turtle skin makes bruising invisible in most instances

#### Cardiac

Peripheral pulses cannot be

felt

Rate can be obtained via doppler, EKG, or ultrasound

### Respiratory system

Movement of carapace (up) and plastron (down) needed for full excursion.

Nares typically have no discharge

Audible (gurgling) is atypical



Forced expiration followed by rapid inhalation with breath holding - rate will vary

Will lift head to breathe, even out of the water



#### Gular pumping

Normal flushing of water out thru nares

Digestive system



Oral exam.



Cloacal exam





#### open the mouth



Carefully





#### Fecal analysis Direct smear, sedimentation, and evaluation for foreign. material.

## Lymphatic system

- lack distinct lymph nodes
  lymphatics wrap blood vessels
- Iymph may be obtained during blood sampling, seen as clear liquid (will dilute blood sample)



### Endocrine system

- little is known.
- few normal blood parameters for comparison.
- euthyroid sick?
- endocrine disruptors?



#### Neurologic system



\*In water exam. \*Out of water exams-both on back and on. belly \*Serial exams needed to evaluate trends

Neurologic exam form.

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#### support in water

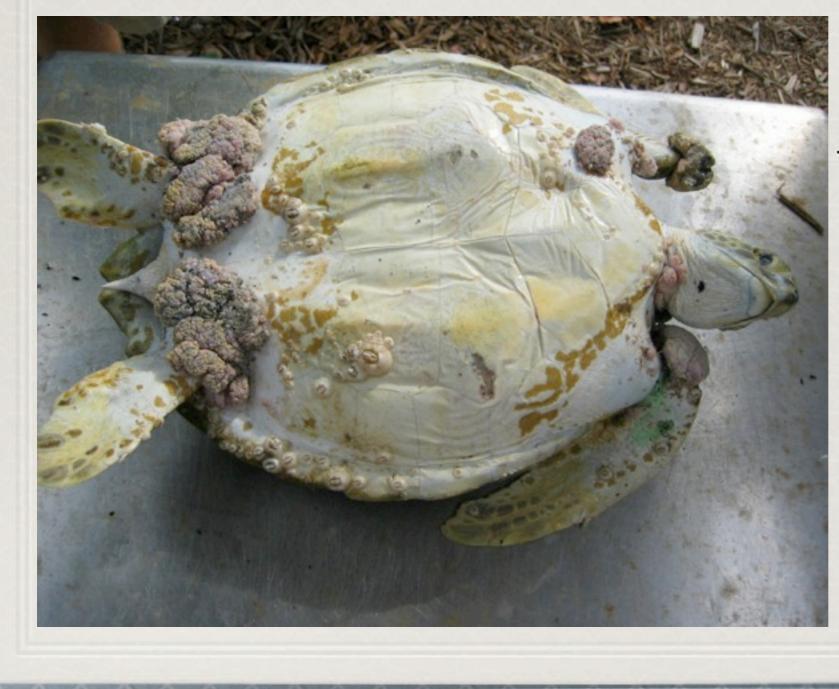


#### Urogential system

Urinalysis not effective diagnostic Most of urogential tract is inside shell



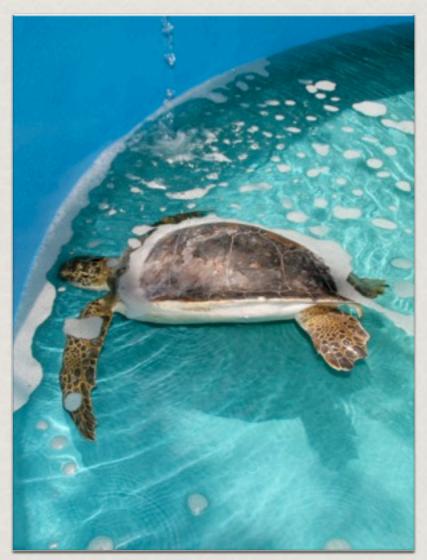
#### Fibropapilloma



-class 1, 2, or 3 -quarantine -fibropapilloma form

#### In water exam + buoyancy

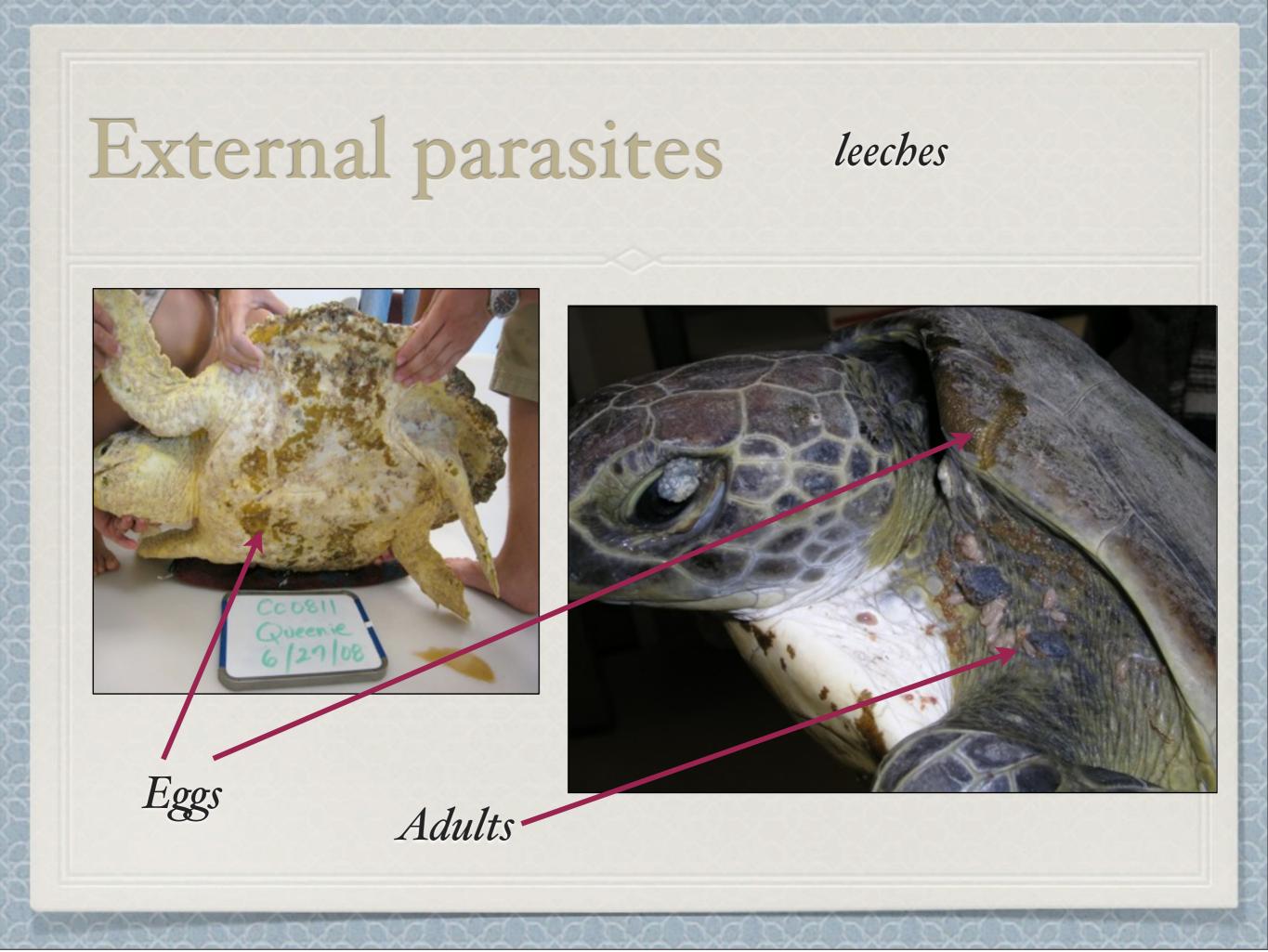
Cranial or caudal? Right or left? Central? Can turtle submerge? (Corking) Estimate % of carapace out of water Daily notes to assess trends



#### External parasites/epibiota

\*note distribution\_ (carapace & soft\_ tissue?) \*algae





#### External parasites





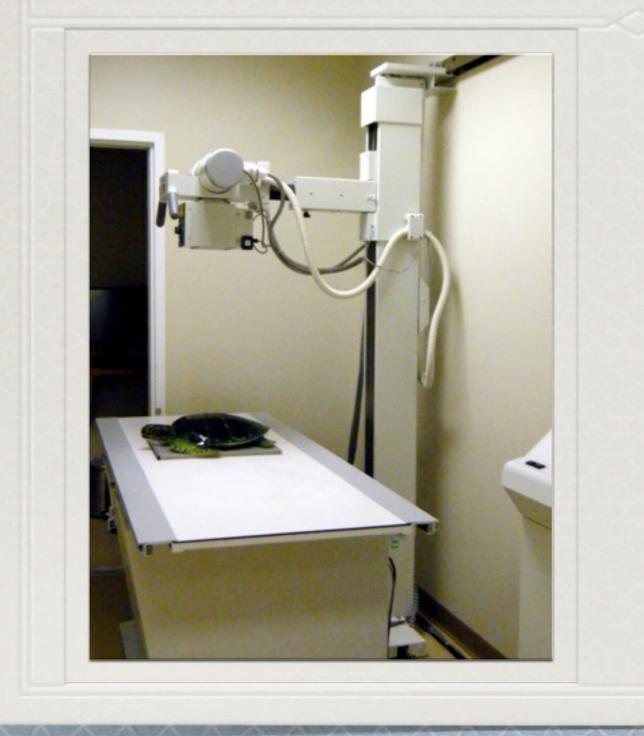
### Dry Dock

All patients dry dock first night.



#### Radiographs

#### Three standard views





#### Blood-work

#### Collect into lithium heparin (green tops) and make slides.



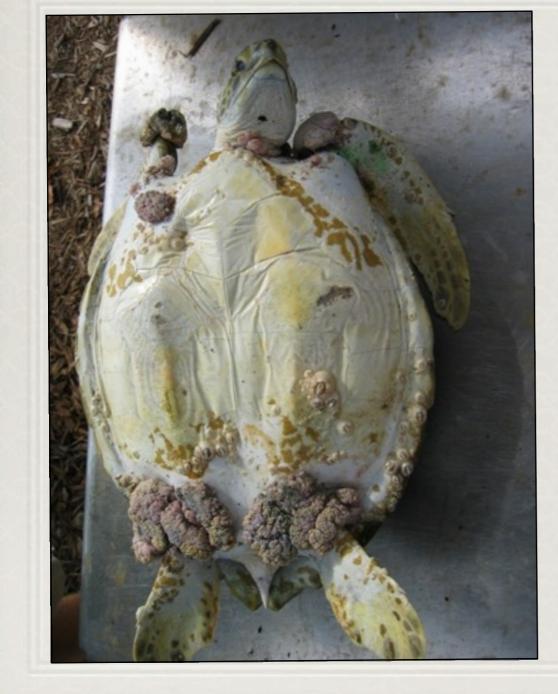


#### Nutritional assessment: emaciated





### Nutritional assessment: emaciated





#### Nutritional analysis : thin



### Nutritional assessment: thin





#### Nutritional assessment: good





#### Nutritional analysis : good



#### Nutritional analysis: robust

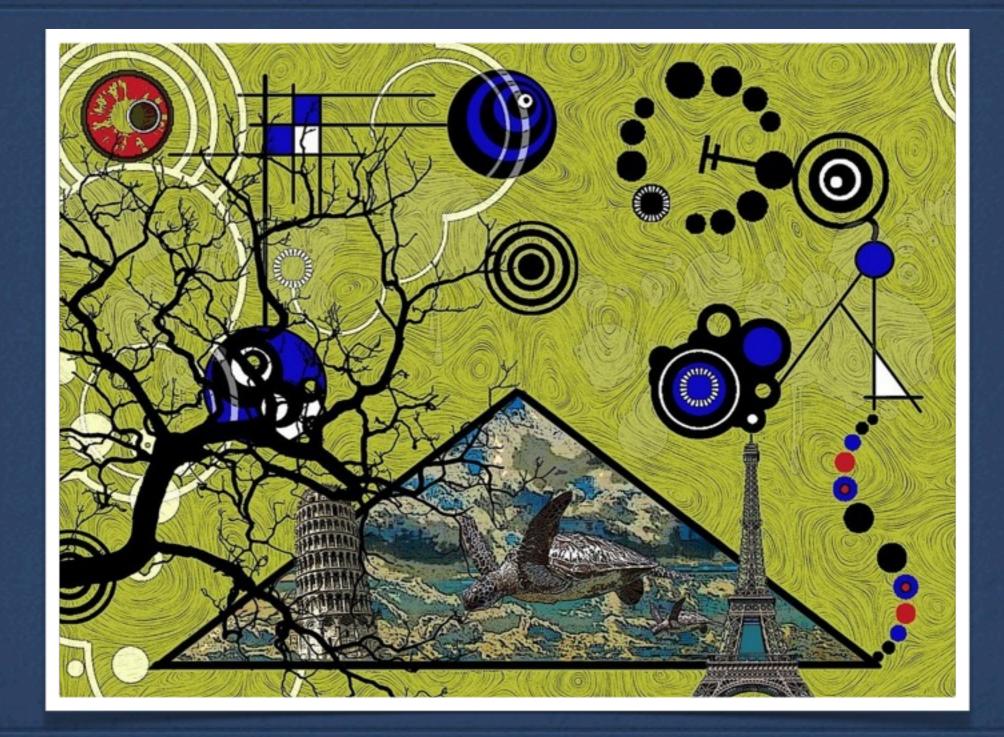


#### nutritional assessment robust



# Nutritional analysis: skeletal deformity





## Thank you