Physical exam basics

Dr. Nancy Mettee

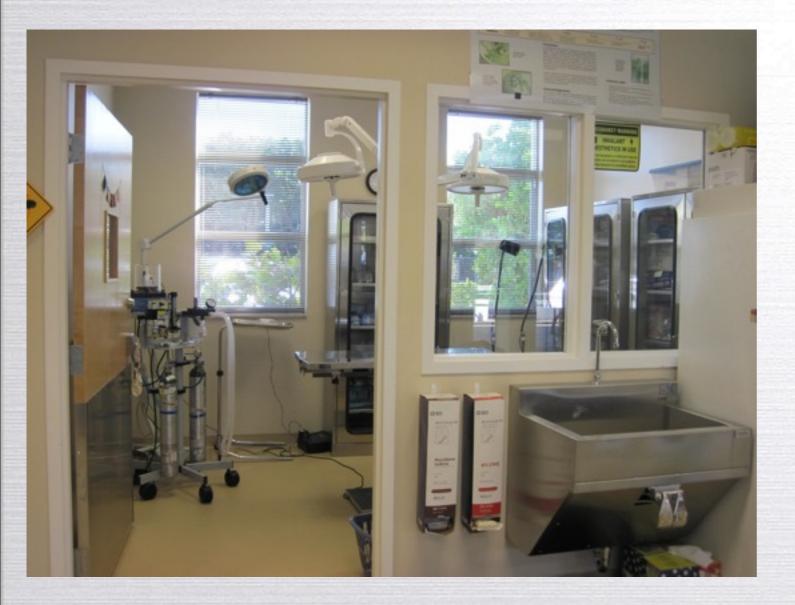




Our mission: To promote conservation of Florida's coastal ecosystem with a special focus on threatened and endangered sea turtles.



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





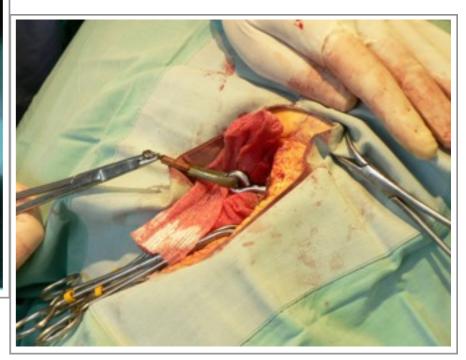
MARINELIFE CENTER

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.







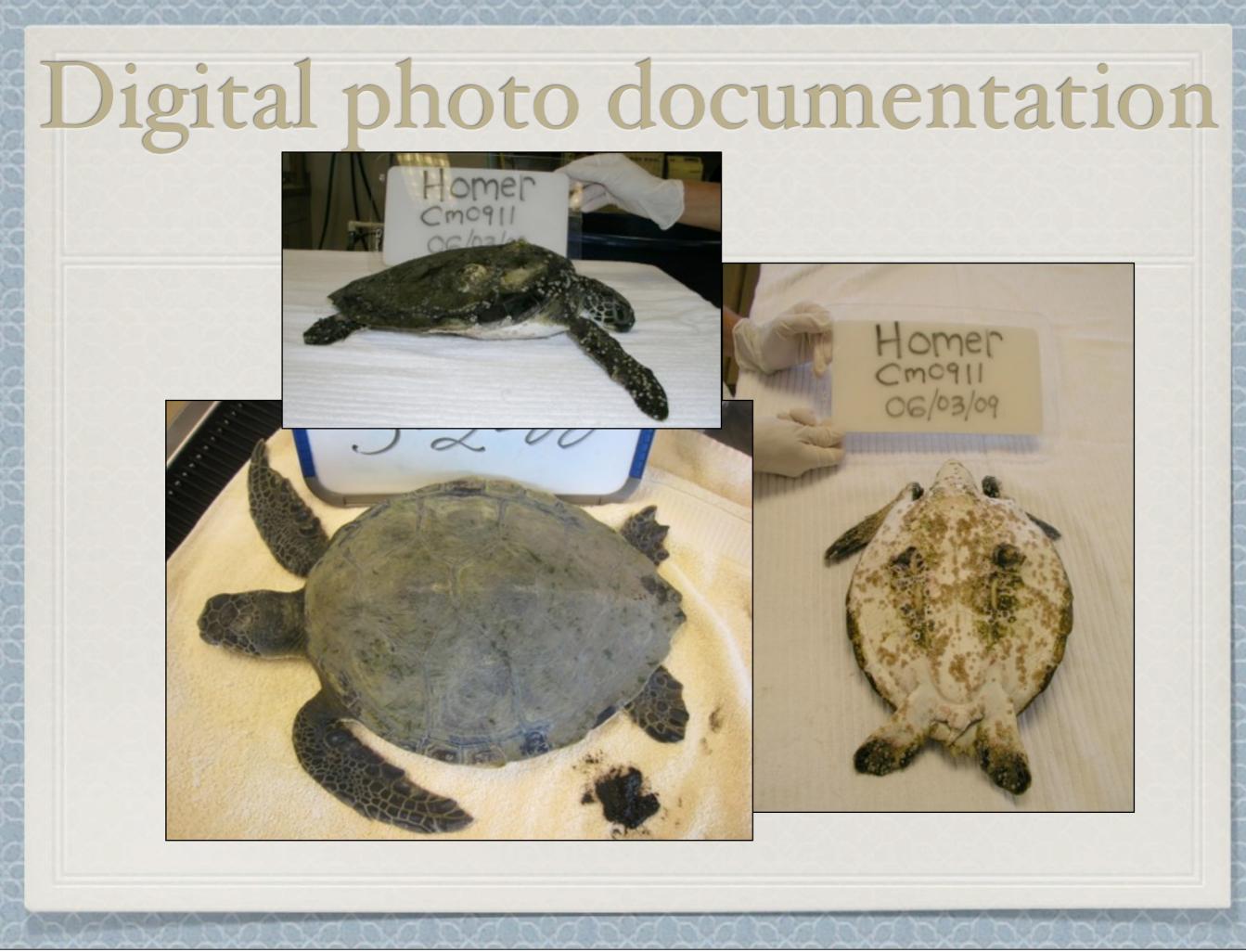


Our patients each receive a full diagnostic workup. This includes a thorough physical examination, temperature & weight check, complete blood work, and full body radiographs. This information is then compiled into a diagnosis and plan.



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.

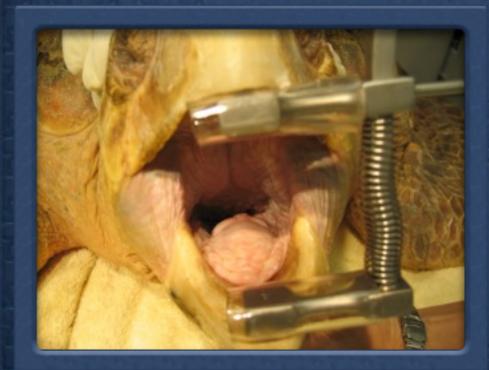


Cloacal exam





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.

21

		Mark II.	turtle is in	the water			
Called and the	(ns (Check ap		ex)		
Mentation	Alert		Depressed	Demented	Staporou		Comatose
	0		a succession				Ω
Compulsive	None		Both directions	Left	Right		
circling Head posture	Level	1.	Tilted Left	Turned left	Tilted Ri	ght	Turned Right
No. Contraction	0				-		0
Head movement	t Norm	ul	Decreased	Absent	Uncoord		Tremors
Body posture	Level		Tilled Left	Tilted Righ	Pelvic fie	10	-
bouy posture	0		D	0	-		
Comments:						_	
Indicate appropriate	r number; Key: -	-uncoordina	ned; 3-increase	d; 2-normal;	I-absent, NE-no	evaluat	ed
Visual avoidant	ce		0 10 14 00 000	Thor	acic limbs	Pelvis	: limbs
Left eye							
Visual avoidand Right eye	ce		Moveme	ot L	R	L	R
General activity			Strength				
Righting respon	150			_			
Tail movement							
State of the second			-				
Comments:							
While turtl	e is out of th	e water in	ventral rea	umbency	Check anny	oprist	- hor)
Activity while ifted	Increased	Normal	Re	duced (2	Absent		July
Mentation	Alert	Depresses		mented 🗆	Stuporous 🗇	-	Comatose 🛛
lead posture	Level	Tilted Let	ft Tu	mod left 🗆	Tilted Right	a - 1	Turned Right
lead novement	Normal	Decreased	1 Ab	sent 🗆	Uncoordinat	ed T	Tremors 🗇
Comments:							

- Otfaction	Cranial nerves	L	R		Comments:	ot evaluated; NA-not applicab
I.VII - Measer IIII I.I.I Propilary refus IIII II.I.V.VI - Strabionus IIIII - Propilary refus IIII - Vestibular sistag IIIII - Vestibular sistag X.X Swallowing IIIII - Vestibular sistag X.X Swallowing IIIII - Trangare Mile turtle is out of the water in dorsal recumbency ndicate appropriate number: IIIII - Vestibular sistag City - 4-unccoordinated; 3-increased; 2-normal; 1-decreased; 0-absent; NE-not evaluated; NA-not applicab IIII - R R Movement IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII				_		
I,III - Pupiliary refus III II,IV,VI - Strabionus III /- Jow teachtreagth III /VII - Palp refus IIII /III - Ventibular sistag IIII XX - Swabowing IIII (III - Tongos IIII - Ventibular sistag XX - Swabowing IIII (III - Tongos IIIII - Tongos While turtle is out of the water in dorsal recumbency ndicate appropriate number: IIIII - Tongos IIII - Tongos IIIII - Tongos IIII - Tongos IIIIII - Tongos While turtle is out of the water in dorsal recumbency ndicate appropriate number: IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII			-	-		
III.IV.VI - Stratbioman						
- Jaw teachtreigth	III.IV.VI - Strahismen		-	_		
7.VII - Palp refers	V - Jaw tone/strength		-	_		
III - Vestibular aistag III - Vestibular aistag X,X - Swallowing III - Tongse While turtle is out of the water in dorsal recumbency odicate appropriate number: Coasca & Tail Key: 4-uncoordinated; 3-increased; 2-normal; 1-decreased; 0-absent; NE-not evaluated; NA-not applicab III - Tongse Cloaca & Tail Movement III - R R III - Tongse Cloaca & Tail Movement Cloaca I nociception Tail movement Tail movement Tenssed extensor IIII - R R Crossed extensor IIII - R R Demal nociception IIII - R R Neek IIII - R R Comments: Comments: R			-	_		
X,X - Swallowing Image While turtle is out of the water in dorsal recumbency odicate appropriate number: Image: Colspan="2">Contrast: 1-decreased; 0-absent; NE-not evaluated; NA-not applicable Image: Colspan="2">Output: Colspan="2">Colspan="2" Mole turtle is out of the water in dorsal recumbency Colspan="2" Colspan= 2 Colspan= 2 Colspan= 2 Colspan= 2 Colspan= 2 Colspan= 2 <			10 1000			
While turtle is out of the water in dorsal recumbency Molecute appropriate number: Contrast: 1-decreased; 0-absent; NE-not evaluated; NA-not applicable It R L R It R L R Cloaca & Tail Movement Cloaca & Tail Cloaca & Tail Cloaca & Tail Strength Cloaca in occception Tail movement Tail movement Crossed extensor It R L R Clasp response It R L R Dermal nociception It R L R Neek It R Comments: Comments:	IX,X - Swallowing		100	-		
While turtle is out of the water in dorsal recumbency ndicate appropriate number:	XII - Tongar					
Indicate appropriate number: Icy: 4-uncoordinated; 3-increased; 2-normal; 1-decreased; 0-absent; NE-not evaluated; NA-not applicab I. R L R Novement I. R L R Novement Cloaca & Tail Cloaca & Tail Cloaca & Tail Cloaca & Tail Cloaca & Tail Cloaca & Tail Cloaca & Tail Novement Cloaca & Tail Net Cloaca & Tail Net Net Cloaca & Tail Net Net Cloaca & Tail Net Net Net Net Cloaca & Tail Net Net Net Net Net Net Net Net						
Indicate appropriate number: Icy: 4-uncoordinated; 3-increased; 2-normal; 1-decreased; 0-absent; NE-not evaluated; NA-not applicab I. R L R Novement I. R L R Novement Cloaca & Tail Cloaca & Tail Cloaca & Tail Cloaca & Tail Cloaca & Tail Cloaca & Tail Cloaca & Tail Novement Cloaca & Tail Net Cloaca & Tail Net Net Cloaca & Tail Net Net Cloaca & Tail Net Net Net Net Cloaca & Tail Net Net Net Net Net Net Net Net	W	hile turt	le is out o	of the wate	r in dorsal	recumbency
Theracic limbs Pelvic limbs L R L R Movement Image: Cloaca & Tail Cloaca & Tail Strength Image: Cloaca & Tail Cloaca & Tail Tone Image: Cloaca & Tail Cloaca & Tail Flexor reflex Image: Cloaca & Tail Cloaca & Tail Crossed extensor Image: Cloaca & Tail Tail movement Clasp response Image: Cloaca & Tail Tail nociception Dermal nociception Image: Cloaca & Tail Image: Cloaca & Tail Periosteal nocicep. Image: Cloaca & Tail Image: Cloaca & Tail Siensation L R L Neck Image: Cloaca & Tail Image: Cloaca & Tail Comments: Image: Cloaca & Tail Image: Cloaca & Tail	Indicate appropriate numb	er:		Contraction of the	AND DESCRIPTION OF ADDRESS	the second second second second second
L R L R Movement Cloaca & Tail Cloaca & Tail Strength Cloaca & Tail Cloaca & Tail Fone Tail movement Tail movement Crossed extensor Tail nociception Clasp response Dermal nociception Dermal nociception Exercise and the second se	Key: 4-uncoordinated; 3-i	ncreased; 2	t-normal; 1-	decreased; 0-	absent; NE-no	st evaluated; NA-not applicabl
Movement D R Cloaca & Tail Strength Cloaca & Tail Cloaca & Tail Cone Tail movement Crossed extensor Tail mociception Clasp response Cloaca & Tail Dermal nociception Cloaca & Tail Periosteal nocicep. Cloaca & Tail Stensation L R L Neck Cloaca & Tail						
Strength Cloacal nociception Cone Tail movement Texor reflex Tail nociception Crossed extensor Tail nociception Clasp response Dermal nociception Dermal nociception Dermal nociception Sensation L R L Neck Dermal nociception Comments: Dermal nociception		L	R	L	R	
Tone Tail movement Clesor reflex Tail moviception Crossed extensor Tail mociception Clasp response Tail mociception Dermal mociception Tail mociception Periosteal mocicep. Tail mociception Seek Tail mociception Comments: Tail mociception		-	-		-	
Texor reflex Tail motication Crossed extensor Image: Construction Clasp response Image: Construction Dermal nociception Image: Construction Periosteal nocicep. Image: Construction Sensation L R L Neck Image: Construction Comments: Image: Construction		1.000	-	and the second		
Crossed extensor Image: Constraint of the sector prior Clasp response Image: Constraint of the sector prior Dermal nociception Image: Constraint of the sector prior Periosteal nocicep. Image: Constraint of the sector prior Sensation L Neck Image: Constraint of the sector prior Comments: Image: Constraint of the sector prior		-	-	-	-	
Clasp response			-	-	-	Tail nociception
Dermal nociception		-	-		-	
Periosteal nocicep. L R L R Sensation L R L R Neck Sicute Comments:			-	-	-	
Sensation L R L R Neck Scute Comments:			-	-	-	
Neek comments:		L	R	L	R	and the surgering the field
Comments:	Neck		-	-	-	and, for prive loads becauged
Comments:	Scute	-	A CONTRACTOR	-	-	
"Do need to be sense a first the set of a first set of the set of	A PROPERTY OF A		-		100 Carl 100 Carl 100 Carl	of states of a state of
ocation of lesion(s):			and of the	er den falste	6. 44. 50 6	
	Location of lesion(s):	-				

support in water



Urogential system

Urinalysis not effective diagnostic Most of urogential tract is inside shell



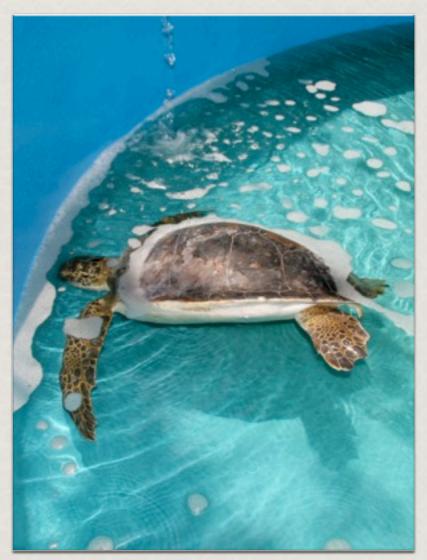
Fibropapilloma



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

In water exam + buoyancy

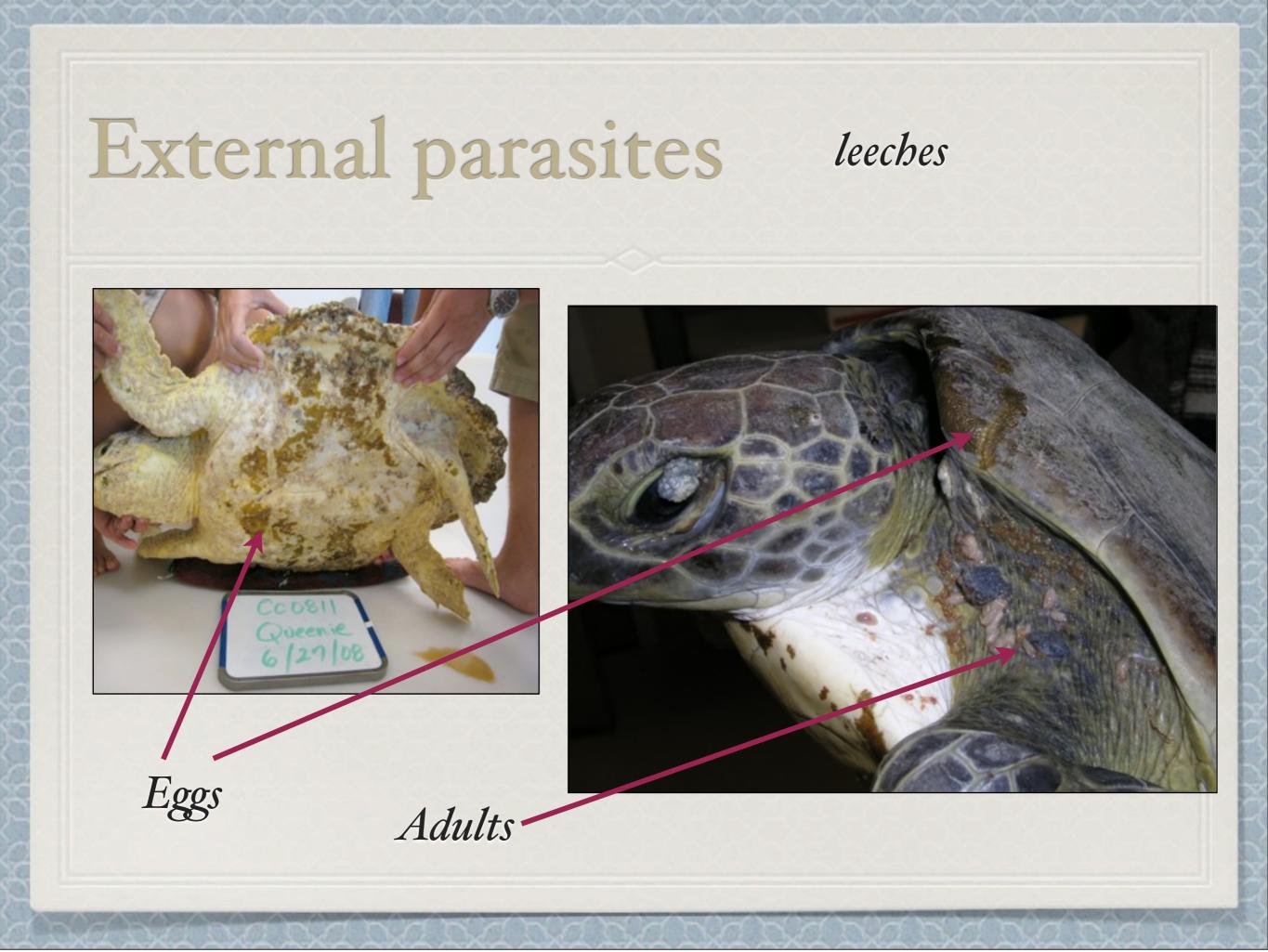
Cranial or caudal? Right or left? Central? Can turtle submerge? (Corking) Estimate % of carapace out of water Daily notes to assess trends



External parasites/epibiota

*note distribution_ (carapace & soft_ tissue?) *algae





External parasites





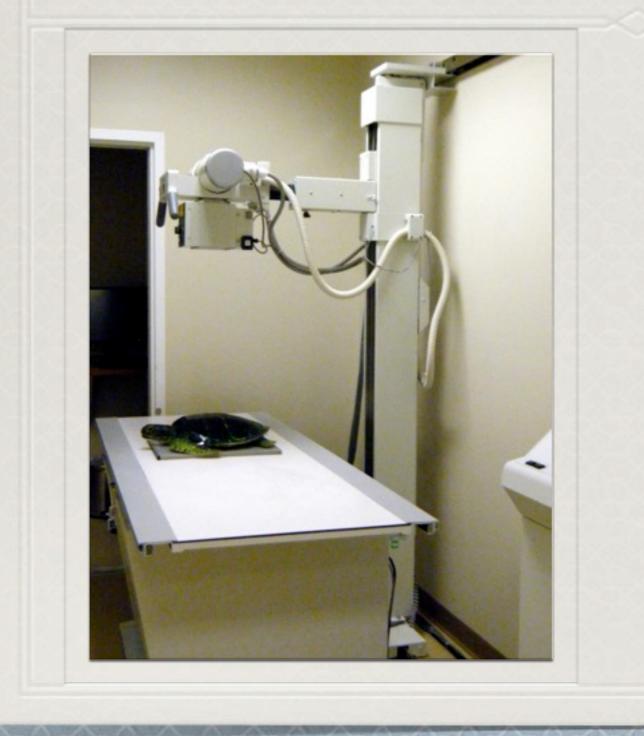
Dry Dock

All patients dry dock first night.



Radiographs

Three standard views





Blood-work

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



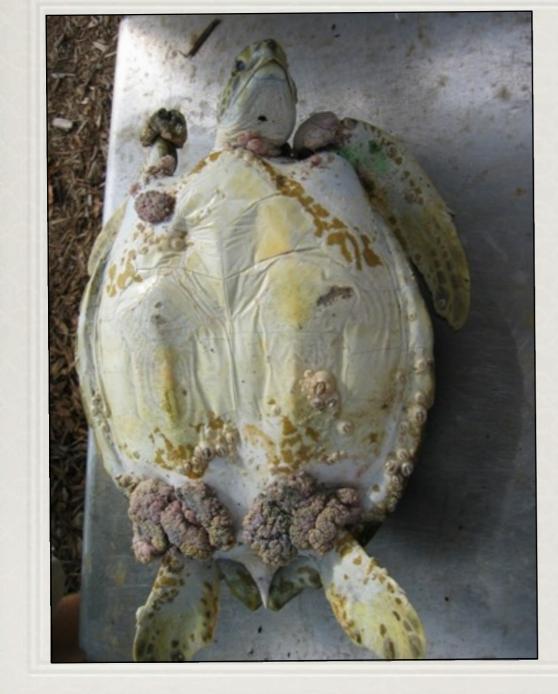


Nutritional assessment: emaciated





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