ASSESSMENT FOR CERTIFICATION OF COMPETENCE IN FETAL MORPHOLOGICAL EXAMINATION

LABORATORY LITTER ASSESSMENT – BOUIN'S FLUID FIXED HEAD SECTION EXAMINATION

SOCIETY OF Biology

THE INTERNATIONAL REGISTER OF FETAL MORPHOLOGISTS

THIS FORM WAS UPDATED IN JANUARY 2013 – CHECK THAT YOU ARE USING THE CORRECT VERSION

LABORATORY LITTER ASSESSMENT – BOUIN'S FLUID FIXED HEAD SECTION EXAMINATION

Name of Candidate: Said Makhloufi

Name of Applicant (Laboratory):	Said Makhloufi, WIL Research, Den Bosch
Examination type assessed (species):	**BOUIN'S FLUID FIXED HEAD SECTION EXAMINATION Rat**
Date of assessment:	May 21, 2014
Names of assessors:	Karon Critchell, Peter Delille

Specimens used for assessment: [insert Study code, litter and fetus ID in each box]

fet 2			

Key for abbreviations:

P – Needed prompting
PP – Needed frequent prompting
N – Nervous
VIP – Volunteered information previously
DK – Didn't know the answer
NC – Not consistent in technique
RA Rabbit assessment (same day)

Assessor's Summary:

[delete or underline to highlight the appropriate description from the options below:]

Competent/competent and focussed / engaged and focussed during the assessment, and demonstrated / effectively communicated / a sound knowledge / an impressive understanding / of all aspects

Assessor signatures / K Critchell.

Date May 21, 2014

LABORATORY LITTER ASSESSMENT – BOUIN'S FLUID FIXED HEAD SECTION EXAMINATION

Name of Candidate: Said Makhloufi

COMMENTS FROM LABORATORY SPECIMEN EXAMINATION: [insert free text in boxes]

Talk through/procedure

Question	Acceptable Response	Response
Sectioning – how many sections, why?	Consistency with colleagues; enables examination of specific head regions	8 sections minimally + Cranial organs R.A.
What is the importance of keeping the sections symmetrical?	Lateral symmetry or organs/brain areas; able to identify anomalies easier	sectioning R.A.
How do you achieve this?		
What would you do if a section wasn't symmetrical?	Recut/resection	
Describe to me what you are doing	Looking at both sides of section Comparing and checking laterality of paired structures Re-sectioning Looking at size shape form	
What might you see in that _____section? [Describe section]		
What might you see in that _____section? [Describe section]		
What might you see in that _____section? [Describe section]		
Note when candidate is recording observations – as they are found or at the end of the examination		R.A.

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Talk through/procedure

Question	Acceptable Response	Response
Confirm that sections are being manipulated appropriately.		✓

Consistency in procedural routines

Question	Acceptable Response	Response
Can you think what the importance of consistency in magnification across examiners might be?	Consistency is important so that all examiners see and record to the same level of detail.	R.A.
Do you always use the same sequence and routine for examination? Why do you think that it is important?	Yes – don't miss anything, important for pattern recognition, subconscious alert.	R.A.
Do you think it is necessary to look at structures from more than one aspect?	Yes – build up picture of structures by following them through the sections, ensuring correct size, shape and form. Important to look at both sides of sections	R.A.
Which structures would you examine in situ before you go on to disturb the tissues?	Lenses before clearing humour to check retina, palate before sectioning, cerebellum	

Terminology and recognition levels used

Question	Acceptable Response	Response
How do you decide to record observations? What could you do to make sure that you've chosen the most accurate term?	User guides and recognition levels Discuss with colleagues, reference material, user guides and recognition levels	R.A.
Would you assign a severity level, why?	User guides and recognition levels	

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FIXED HEAD SECTION EXAMINATION

Name of Candidate: Said Makhloufi

Terminology and recognition levels used

Question	Acceptable Response	Response
How do you ensure other examiners are using the same terms as you for the same observation?	Recognition levels/peer review/consistency check. Mention that examiner records are traceable back to original examiner.	R.A.
And for severities?	Discuss/review findings with colleagues, refer to recognition levels/user manuals/training /reference material/background data	

Recognition of artefacts

Question	Acceptable Response	Response
How would you decide if real or artefact?	Does the condition of adjacent sections support your decision?	
	Reconstruct the sections, check forwards and backwards through the sections, both sides of each section	
What procedural errors are likely to lead to artefacts?	Are the margins of the structure smooth or jagged?	some of the skin was cut off when decapitating the fetus → no pinna present → artefact.
	Has the specimen not been placed in sufficient fixative, resulting in poor decalcification?	
	Has the fixation caused any shrinkage or swelling?	Head cut off very close to the skull → difficult to assess medulla oblongata
	Is the structure an unusual colour?	
	Background knowledge/experience	
	Refer to necropsy observations, correct handling of specimens	

LABORATORY LITTER ASSESSMENT – BOUIN'S FLUID FIXED HEAD SECTION EXAMINATION

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Recognition of artefacts

Question	Acceptable Response	Response
Can you think of any observations which could be caused by an artefact?	Cystic dilatation, haemorrhage, absent pinna, forceps damage to palate, blood in cochlea, head damaged when cut off from body	
Would you record artefacts? How would you record an artefact?	 Explain how	

Correct identification of anomalies

Question	Acceptable Response	Response
What could you do to make sure that you've chosen the most accurate term?	Discuss/review findings with colleagues; refer to recognition levels/user manuals/training material/background data.	
Why have you used that term? (any observation with a recognition level, relative to the norm)	Give reason based on degree of displacement, normal variation. Based on symmetry; alignment; position in relation to other structures, normal variation	
How would you decide if you thought one eye was displaced?	Give reason based on degree of displacement, normal variation, alignment; position in relation to other structures, normal variation; compare to normal specimen	
What would you do if you thought the pituitary gland was missing?	Recut/resection	
What anomalies might you see in the ...../state region?.		RA

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Correct identification of anomalies

Question	Acceptable Response	Response
What anomalies might you see in the ...../ state region?		R.A.
What anomalies might you see in the ...../state region?		R.A.

Demonstration of knowledge of consequence of findings (choose minimum of 3 from this section)

What else might you see with:	Acceptable Response	Response
Single naris	Single incisor socket, displaced orbital sockets, form of oral cavity	
Flat eye bulge	Check for presence/size of eye	
Domed head	Dilated ventricles (lateral, 3rd and 4th) Check for artefact and size of fetus	Check also nose and palate.
Short lower jaw	Large/small/protruding tongue, absent incisors, form of oral cavity	Check palate.
Skin lesion/haemorrhage cranium	Meningocoele (skin covered), 4th ventricle dilation.	
What would you expect to record in association with low fetal weight?	Thin, translucent, fragile skin, oedema over snout, domed cranium, apparent change in size of eye bulge, non-eruption of incisors, "perimeningal cavitation", dilation of ventricles, change in shape of lens, separation of subcutaneous layers, very clear fixation [Check day of PM if whole litter affected]	

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Demonstration of knowledge of consequence of findings (choose minimum of 3 from this section)

What else might you see with:	Acceptable Response	Response

Awareness of importance of communication lines as reaction to unusual findings

Question	Acceptable Response	Response
What would you do if you had never seen a finding before? What would you do if you were unsure how to describe an observation?	Describe what is seen, discuss/review findings with colleagues, refer to recognition levels/user manuals/training /reference material/background data	

Additional comments

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RAT BOUINS FLUID FIXED HEAD SECTION IMAGES FOR CERTIFICATION

Name of Applicant (Laboratory):	Said Makhloufi, WIL Research, Den Bosch
Examination type assessed (species):	**BOUINS FLUID FIXED HEAD SECTIONS RAT**
Date of assessment:	May 21, 2014
Names of assessors:	Karon Critchell, Peter Delille

Specimens used for assessment: [insert fetus ID in each box]

Key for abbreviations:

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Assessor signature K. Critchell

Date 21st May 2014.

RAT BOUINS FLUID FIXED HEAD SECTION IMAGES FOR CERTIFICATION

Image 1	Questions	Answers given

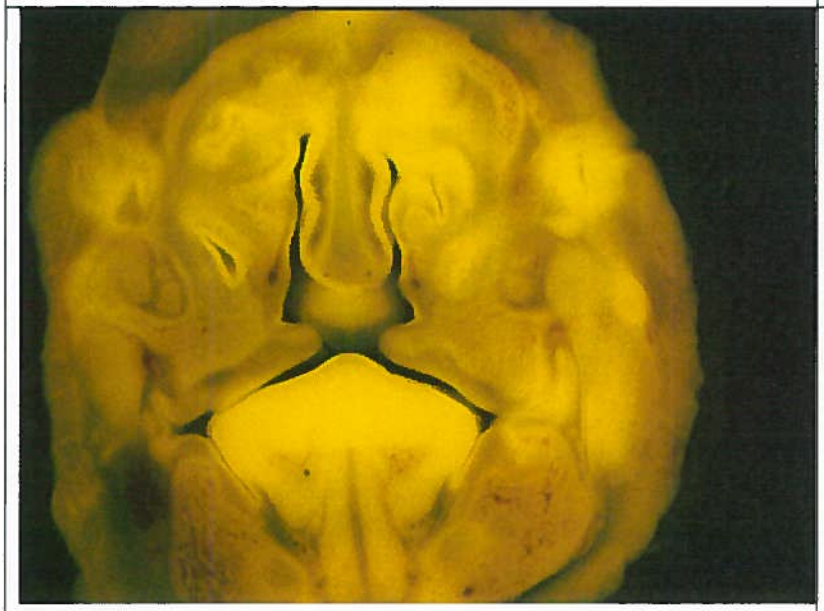
	**What is the observation?**
	• (Secondary) palate cleft
	
	What else might you want to say?
	• Nasal area looks subcutaneous oedematous, is the fetus very small?
	• Was tongue protruding at external?
	
	How would you make sure you were recording the correct finding?
	• Check previous and subsequent sections for evidence of same observation
	• Check for evidence of damage at external examination (obviously not case here)
	• Resection if necessary
	
	What else might be associated with this?
	• Check eyes are formed OK
	• check nasal cavities/conchae formation
	
	• Any other points?
	  • Are cleft palates always this easy to see?
	  • What other defects are often associated with cleft palate?
		cleft lip, single naris

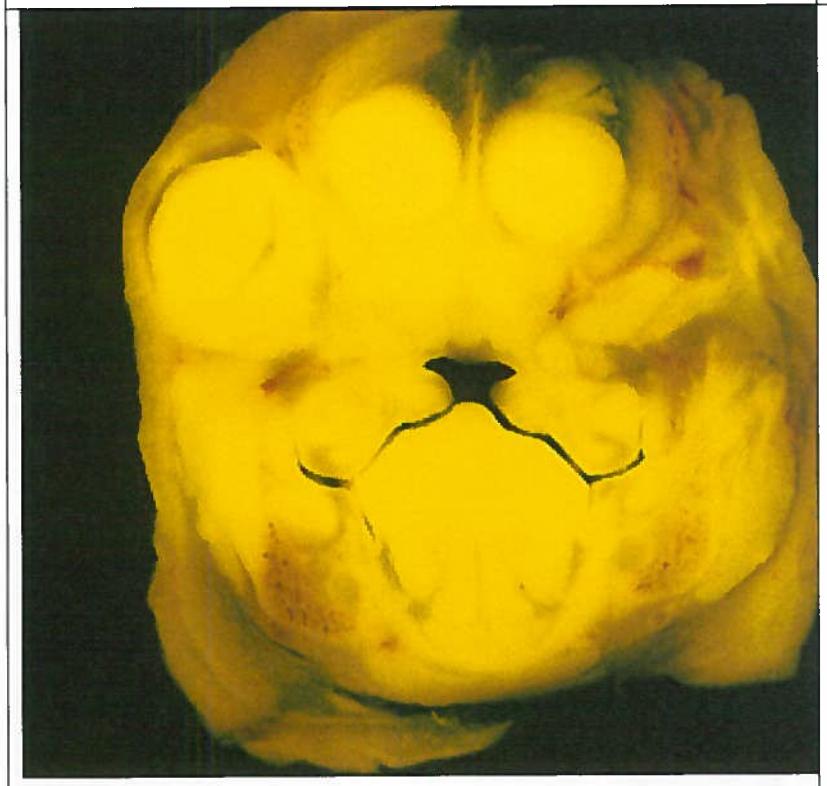
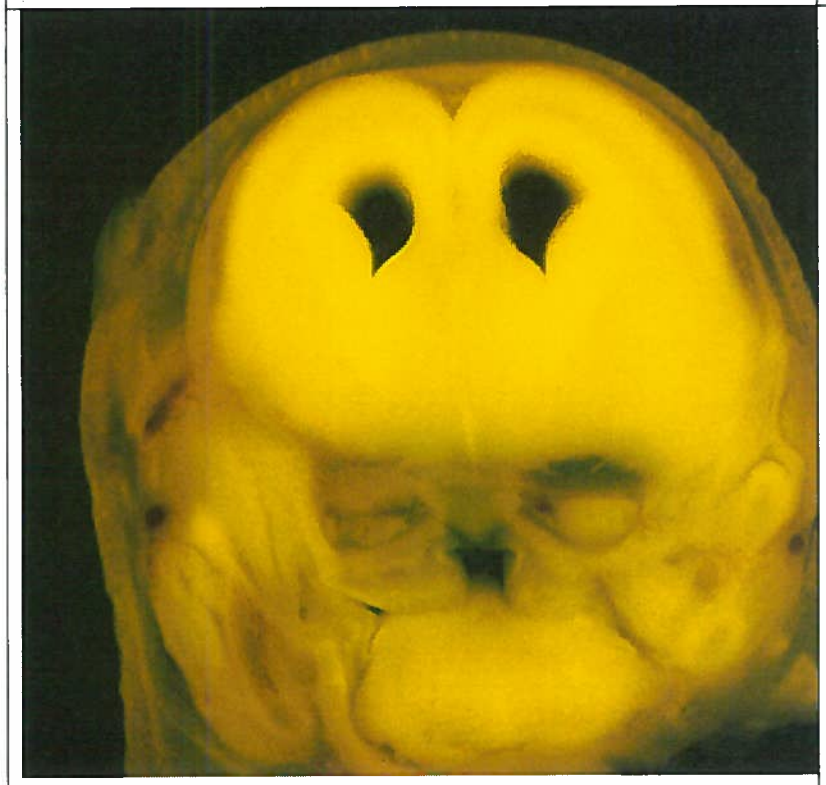
Image 2	Questions	Answers given
	**What is the observation?** • Unilateral anophthalmia (right side?) • (secondary) palate cleft **What else might you want to say?** • Artefactual damage to (right?) side of skull, above olfactory bulbs and neck region. • Was tongue protruding at external examination **How would you make sure you were recording the correct finding?** • Piece back together to check laterality • Check laterality against other sections • Check for symmetry of sections (eye is not in another section) • Check for real misalignment of eyes • Check previous and subsequent sections for evidence of same observation (palate) • Check for evidence of damage at external examination (obviously not case here) • Check external for eye bulge observation/eyelid fusion or slit	

Image 3	Questions	Answers given
	**What is the observation?** • Cerebral hemispheres lateral ventricle dilatation (bilateral) • Soft palate cleft **What else might you want to say?** • Severity • Were olfactory bulbs affected (is fetus very small?) **How would you make sure you were recording the correct finding?** • Check previous and subsequent sections for evidence of same observation • Check for evidence of damage at external examination (obviously not case here) **What else might be associated with this?** • Dilatation of 3rd/4th ventricle • Low fetal weight	No severities given to Head obs. Lower jaw tongue protruding eye bulge more prominent shiny skin Non erupted incisors.

	What else might be associated with this? • check nasal cavities/conchae formation • Are cleft palates always this easy to see? • What other defects are often associated with cleft palate?	

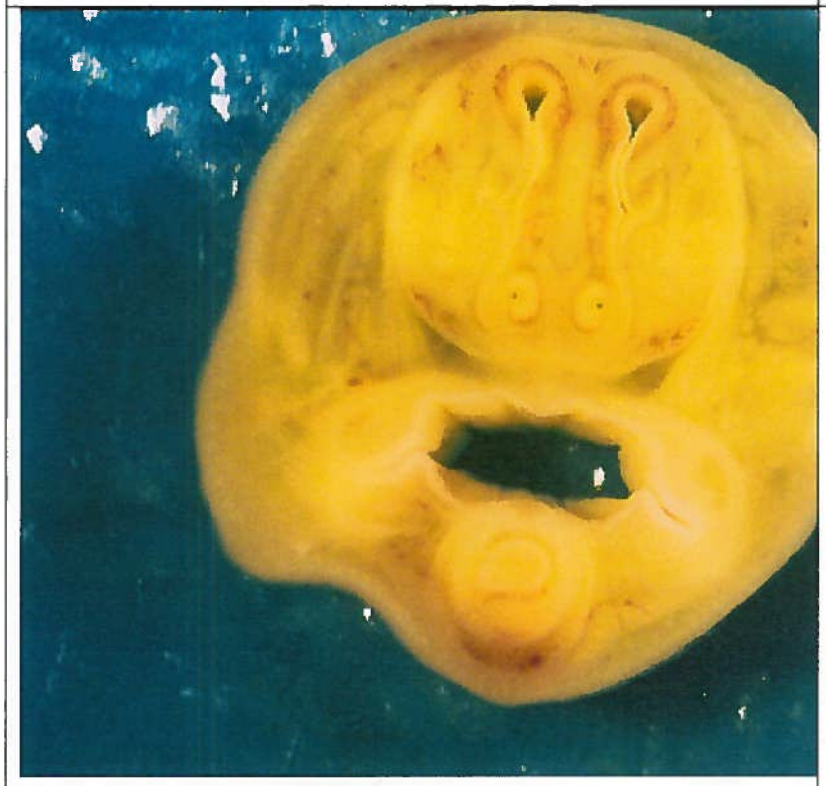
Image 4	Questions	Answers given
	**What is the observation?** • Single incisor, lower jaw/mandible • Incisors fused, lower jaw/mandible • Single incisor socket/fused incisor sockets	Not used to seeing Sections in this plane
	What else might you want to say? • Describe location of single tooth • Describe size of tooth (is it size of 2 teeth or 1?) • Is mandible also fused	? narrow septum
	How would you make sure you were recording the correct finding?	No tongue.
	What else might be associated with this? • Pointed lower jaw at external examination • Short lower jaw at external examination • Mandible fusion at mandibular symphysis	

Image 5	Questions	Answers given
	**What is the observation?** • Something going on with junction between primary palate/incisive foramen and anterior palate foramen secondary palate shelves **What else might you want to say?** • Words for level of removal of lower jaw, cut through mouth not straight • Check for forceps damage from external examination of palate **How would you make sure you were recording the correct finding?** **What else might be associated with this?** • Possible effect on nasal septum	

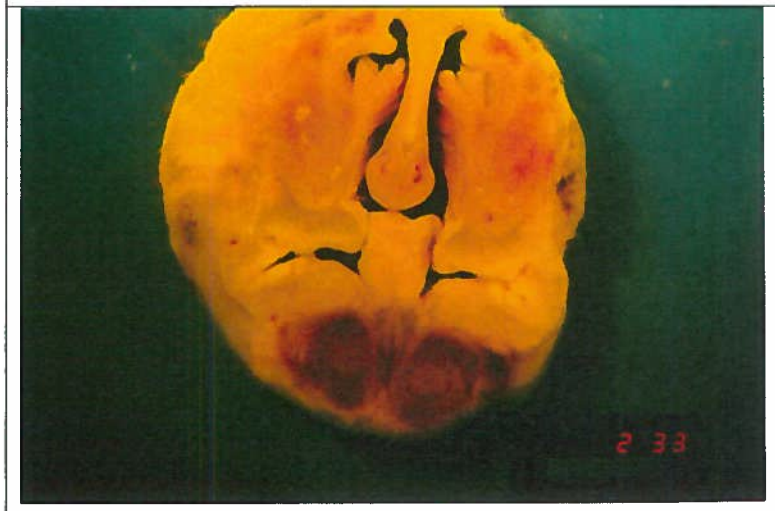
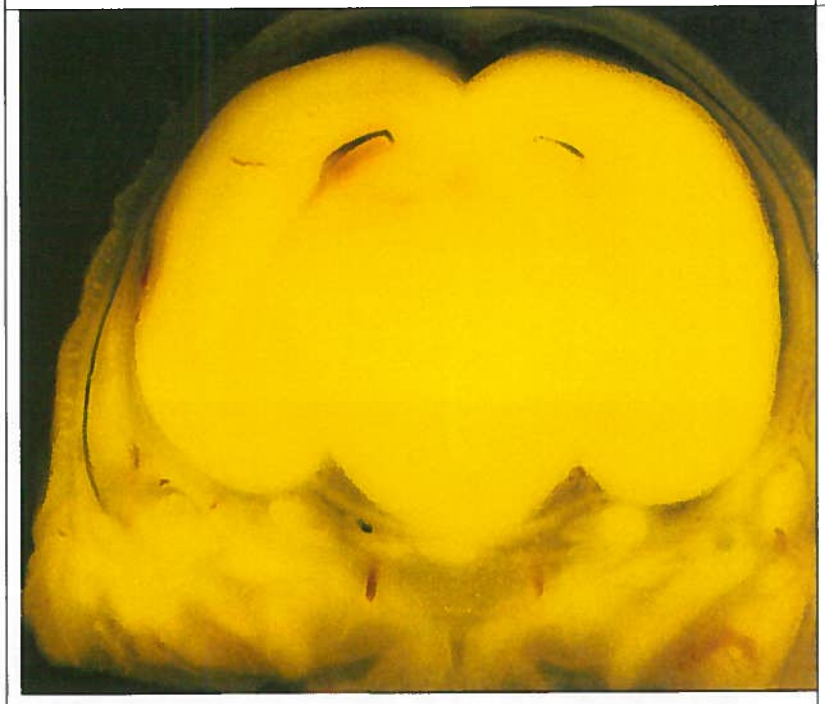
Image 6	Questions	Answers given
	**What is the observation?** • (Secondary) palate cleft **What else might you want to say?** • Was tongue protruding at external? • Nasal septum looks misshapen, bulbous • Discolouration around lower jaw teeth **How would you make sure you were recording the correct finding?** • Check previous and subsequent sections for evidence of same observation • Check for evidence of damage at external examination (obviously not case here) **What else might be associated with this?** • check nasal cavities/conchae formation	

Image 7	Questions	Answers given
	**What is the observation?** • Small pituitary **What else might you want to say?** • Severity • No apparent distinction between anterior and posterior portions of pituitary • Damage to left side of head externally **How would you make sure you were recording the correct finding?** • Check previous and subsequent sections for evidence of same observation • Check other sections for displacement of pituitary • Check for symmetry of sections • Resection to clarify **What else might be associated with this?**	Maybe compare with normal.

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1	3	7	4		

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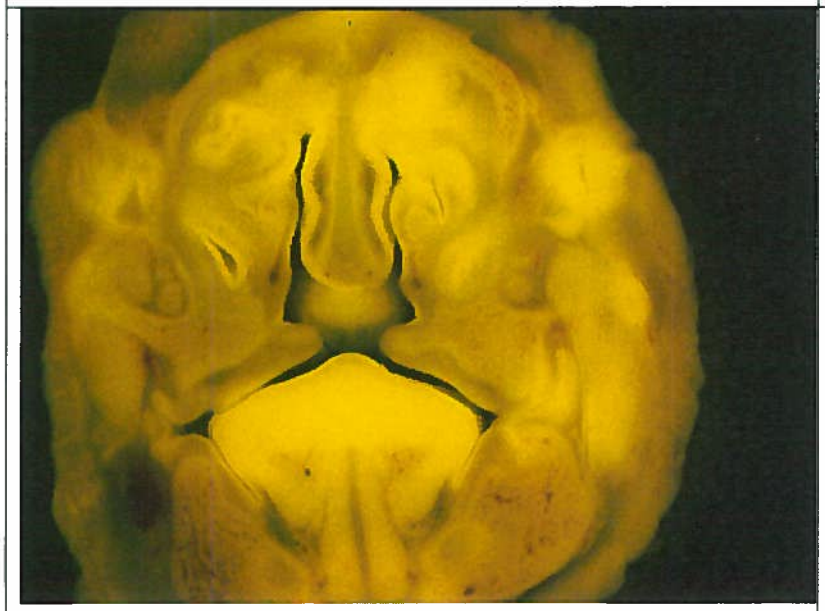	**What is the observation?**
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	What else might you want to say?
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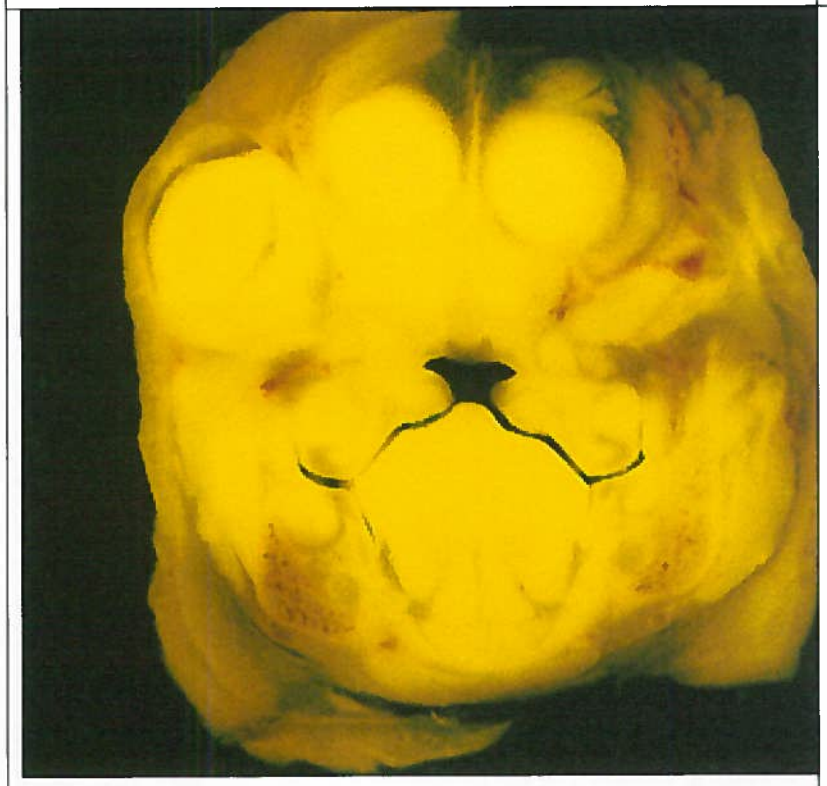
	What else might be associated with this?
	• Check eyes are formed OK
	• check nasal cavities/conchae formation
	
	• Any other points?
	  • Are cleft palates always this easy to see?
	  • What other defects are often associated with cleft palate?
		cleft lip?
		single nares?

Image 2	Questions	Answers given
	**What is the observation?** • Unilateral anophthalmia (right side?) • (secondary) palate cleft **What else might you want to say?** • Artefactual damage to (right?) side of skull, above olfactory bulbs and neck region. • Was tongue protruding at external examination **How would you make sure you were recording the correct finding?** • Piece back together to check laterality • Check laterality against other sections • Check for symmetry of sections (eye is not in another section) • Check for real misalignment of eyes • Check previous and subsequent sections for evidence of same observation (palate) • Check for evidence of damage at external examination (obviously not case here) • Check external for eye bulge observation/eyelid fusion or slit	

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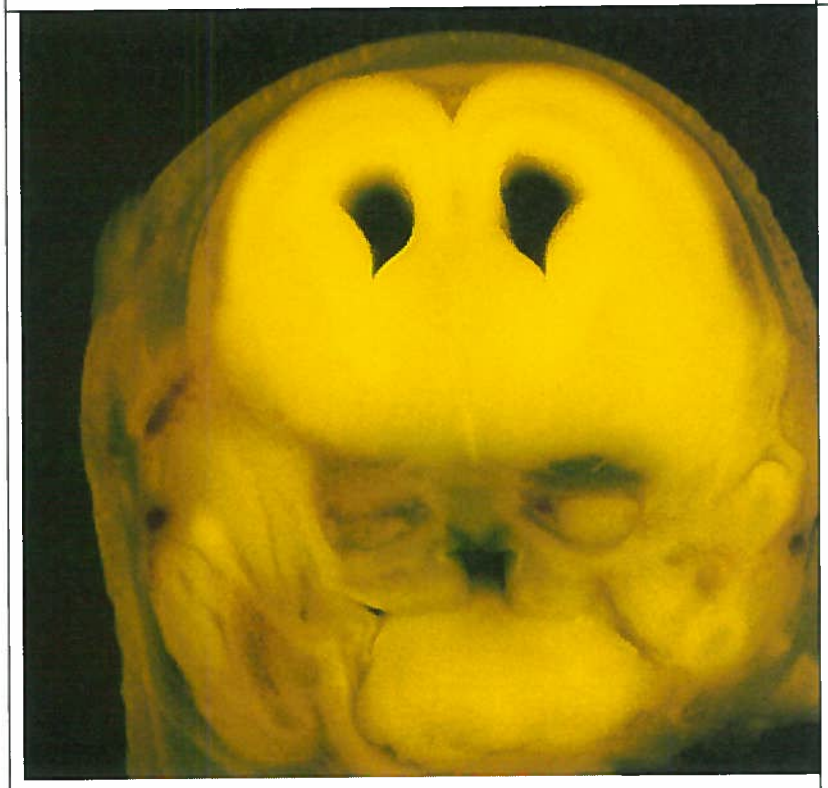	**What is the observation?** • Cerebral hemispheres lateral ventricle dilatation (bilateral) • Soft palate cleft **What else might you want to say?** • Severity • Were olfactory bulbs affected (is fetus very small?) **How would you make sure you were recording the correct finding?** • Check previous and subsequent sections for evidence of same observation • Check for evidence of damage at external examination (obviously not case here) **What else might be associated with this?** • Dilatation of 3rd/4th ventricle • Low fetal weight	not used in lab for fetal - small fetus - protruding tongue - thin skin - small pinna -

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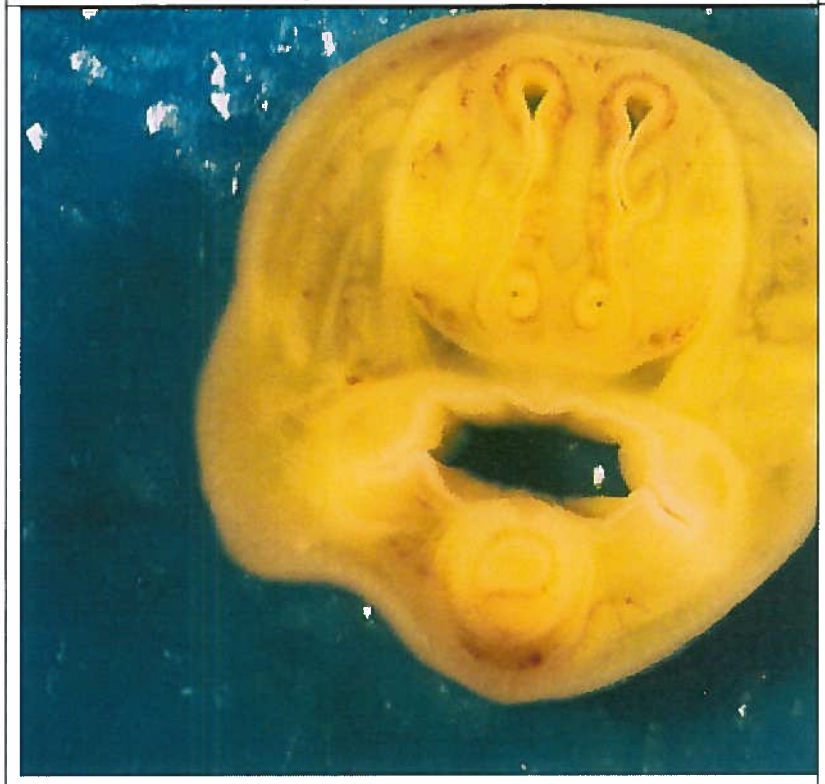	**What is the observation?** • Single incisor, lower jaw/mandible • Incisors fused, lower jaw/mandible • Single incisor socket/fused incisor sockets **What else might you want to say?** • Describe location of single tooth • Describe size of tooth (is it size of 2 teeth or 1?) • Is mandible also fused **How would you make sure you were recording the correct finding?** **What else might be associated with this?** • Pointed lower jaw at external examination • Short lower jaw at external examination • Mandible fusion at mandibular symphysis	nasal cavity small tongue present?

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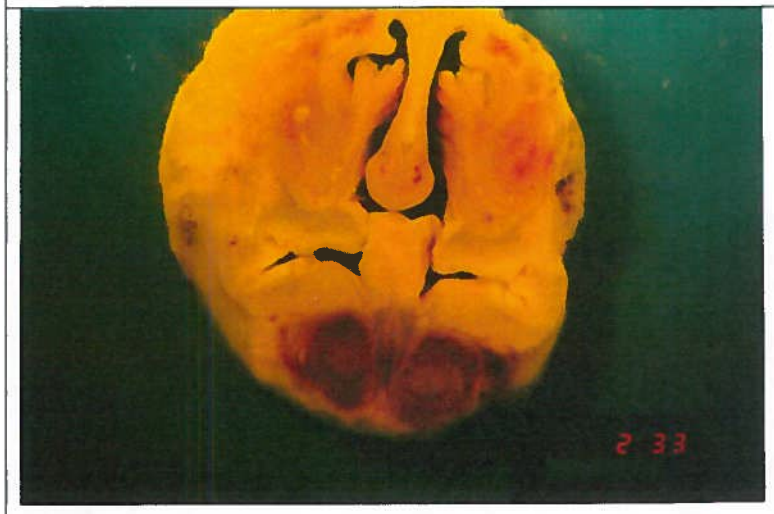	**What is the observation?** • (Secondary) palate cleft **What else might you want to say?** • Was tongue protruding at external? • Nasal septum looks misshapen, bulbous • Discolouration around lower jaw teeth **How would you make sure you were recording the correct finding?** • Check previous and subsequent sections for evidence of same observation • Check for evidence of damage at external examination (obviously not case here) **What else might be associated with this?** • check nasal cavities/conchae formation	

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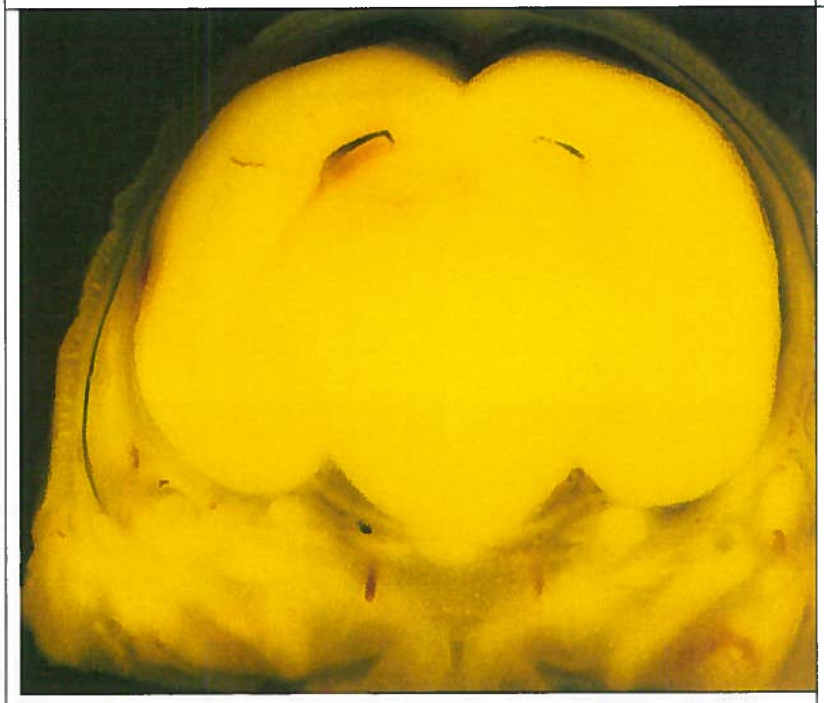	**What is the observation?** • Small pituitary **What else might you want to say?** • Severity • No apparent distinction between anterior and posterior portions of pituitary • Damage to left side of head externally **How would you make sure you were recording the correct finding?** • Check previous and subsequent sections for evidence of same observation • Check other sections for displacement of pituitary • Check for symmetry of sections • Resection to clarify **What else might be associated with this?**	