

**TDMS No.** 20009 - 03

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH  
AVERAGE SEVERITY GRADES[b]**

**Date Report Requested:** 05/27/2011

**Test Type:** CHRONIC

beta-Picoline

**Time Report Requested:** 10:09:56

**Route:** DOSED WATER

**CAS Number:** 108-99-6

**First Dose M/F:** 11/18/04 / 11/19/04

**Species/Strain:** RATS/F 344/N

**Lab:** BAT

F2\_R2

**C Number:** C20009  
**Lock Date:** 06/05/2008  
**Cage Range:** ALL  
**Date Range:** ALL  
**Reasons For Removal:** ALL  
**Removal Date Range:** ALL  
**Treatment Groups:** Include ALL  
**Study Gender:** Both  
**TDMSE Version:** 2.4.1.0\_004  
**PWG Approval Date:** 06/29/2010

Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/F 344/N

beta-Picoline  
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 First Dose M/F: 11/18/04 / 11/19/04  
 Lab: BAT

FISCHER 344 RATS MALE	0 mg/l	156.25 mg/l	312.5 mg/l	625 mg/l
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**Disposition Summary**

Animals Initially In Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	9	12	15	23
Natural Death	8	7	3	3
Survivors				
Terminal Sacrifice	33	31	32	24
Animals Examined Microscopically	50	50	50	50

ALIMENTARY SYSTEM

Esophagus	(50)	(50)	(50)	(50)
Hyperplasia, Squamous		1 [1.0]		
Inflammation, Suppurative	1 [1.0]			
Intestine Large, Cecum	(45)	(47)	(48)	(48)
Inflammation, Chronic Active				1 [1.0]
Necrosis	1 [2.0]			
Intestine Large, Colon	(47)	(49)	(49)	(49)
Parasite Metazoan	3 [1.3]	4 [2.0]	7 [1.4]	1 [2.0]
Intestine Large, Rectum	(47)	(49)	(49)	(50)
Infiltration Cellular, Mixed Cell		1 [1.0]		
Parasite Metazoan	2 [1.5]	5 [1.4]	3 [1.7]	5 [1.8]
Intestine Small, Duodenum	(48)	(49)	(49)	(50)
Intestine Small, Ileum	(46)	(47)	(48)	(49)
Inflammation, Chronic Active		1 [1.0]		
Intestine Small, Jejunum	(45)	(47)	(48)	(49)
Inflammation, Chronic Active	1 [1.0]			
Liver	(50)	(50)	(50)	(50)
Angiectasis	1 [2.0]		1 [1.0]	
Atrophy			1 [3.0]	
Basophilic Focus	15	14	16	10
Clear Cell Focus	13	23	20	15
Congestion				1 [1.0]
Degeneration, Cystic	3 [1.0]	6 [1.2]	7 [1.3]	2 [1.0]
Eosinophilic Focus	7	1	2	5

a - Number of animals examined microscopically at site and number of animals with lesion

b-Average severity grade(1-minimal;2-mild;3-moderate;4-marked)

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Species/Strain: RATS/F 344/N

Lab: BAT

FISCHER 344 RATS MALE	0 mg/l	156.25 mg/l	312.5 mg/l	625 mg/l
Fatty Change	7 [2.7]	6 [1.5]	7 [1.1]	9 [2.1]
Fibrosis			1 [2.0]	
Hepatodiaphragmatic Nodule	4	3	2	6
Inflammation, Chronic Active		3 [1.3]	3 [1.3]	1 [1.0]
Mixed Cell Focus	6	3	6	3
Necrosis	2 [1.0]	3 [2.3]		2 [1.5]
Vacuolization Cytoplasmic	15 [1.5]	12 [1.8]	12 [1.5]	16 [1.3]
Bile Duct, Hyperplasia	40 [2.3]	36 [2.8]	44 [2.8]	42 [2.0]
Centrilobular, Atrophy		1 [3.0]		
Centrilobular, Necrosis	1 [2.0]		1 [2.0]	
Periportal, Fibrosis		1 [3.0]		
Periportal, Inflammation	1 [2.0]		1 [2.0]	
Vein, Dilatation		1 [2.0]		
Mesentery	(4)	(8)	(4)	(6)
Fat, Necrosis	1 [2.0]	6 [1.3]	3 [1.3]	5 [1.8]
Pancreas	(49)	(50)	(50)	(48)
Cyst	1 [2.0]		2 [2.5]	
Hyperplasia	2 [1.5]			1 [1.0]
Infiltration Cellular		1 [1.0]	1 [2.0]	
Lipomatosis				1 [1.0]
Acinus, Atrophy	18 [1.3]	31 [1.6]	31 [1.4]	25 [1.7]
Salivary Glands	(50)	(50)	(50)	(50)
Atrophy			1 [2.0]	
Infiltration Cellular		1 [1.0]		
Duct, Inflammation		1 [2.0]		
Stomach, Forestomach	(50)	(50)	(50)	(50)
Angiectasis		1 [2.0]		
Edema			1 [3.0]	
Erosion	1 [3.0]			
Fibrosis	1 [2.0]	6 [2.2]	2 [2.5]	1 [3.0]
Hyperplasia, Squamous	15 [2.2]	18 [2.0]	7 [1.9]	17 [2.7]
Inflammation		1 [1.0]		2 [1.5]
Ulcer	2 [3.5]	5 [2.6]	2 [2.5]	2 [2.5]
Stomach, Glandular	(50)	(50)	(50)	(50)
Angiectasis		1 [3.0]		
Erosion	1 [1.0]	3 [1.3]		

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Species/Strain: RATS/F 344/N

Lab: BAT

FISCHER 344 RATS MALE	0 mg/l	156.25 mg/l	312.5 mg/l	625 mg/l
Fibrosis	1 [2.0]			
Hyperplasia	1 [2.0]			
Inflammation, Chronic Active	4 [1.5]	6 [1.2]	4 [1.8]	3 [1.0]
Metaplasia, Squamous		1 [1.0]		
Ulcer				2 [1.5]
Tongue	(0)	(0)	(2)	(1)

## CARDIOVASCULAR SYSTEM

Blood Vessel	(50)	(50)	(50)	(50)
Aorta, Mineralization		1 [2.0]		
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	49 [2.5]	50 [2.8]	50 [2.9]	49 [2.6]
Mineralization		1 [2.0]		
Atrium, Thrombosis	5 [2.2]	5 [2.4]		
Epicardium, Inflammation, Chronic Active				1 [1.0]
Valve, Inflammation, Chronic Active		1 [4.0]		

## ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(50)	(50)	(50)
Accessory Adrenal Cortical Nodule	2 [1.0]			2 [1.0]
Hyperplasia	20 [1.3]	31 [1.5]	27 [1.4]	21 [1.3]
Necrosis	1 [2.0]		1 [1.0]	
Vacuolization Cytoplasmic	3 [1.7]			1 [3.0]
Adrenal Medulla	(50)	(49)	(49)	(50)
Hyperplasia	12 [1.3]	18 [1.4]	13 [1.3]	7 [1.6]
Islets, Pancreatic	(50)	(50)	(50)	(50)
Hyperplasia	1 [2.0]	1 [1.0]	1 [2.0]	1 [2.0]
Parathyroid Gland	(50)	(47)	(48)	(48)
Hyperplasia	1 [1.0]			
Pituitary Gland	(50)	(49)	(50)	(49)
Cyst	2 [1.5]		2 [2.0]	
Metaplasia, Osseous	1 [1.0]			1 [1.0]
Necrosis				1 [3.0]

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Pars Distalis, Hyperplasia	16 [1.8]	11 [1.5]	19 [1.8]	12 [2.0]
Pars Intermedia, Hyperplasia			1 [1.0]	
Pars Nervosa, Hyperplasia			1 [1.0]	
Thyroid Gland	(50)	(50)	(50)	(50)
Congestion	1 [1.0]			
C-cell, Hyperplasia	6 [1.3]	4 [2.0]	11 [1.1]	7 [1.9]
Follicle, Cyst		1 [1.0]		1 [2.0]
Follicular Cell, Hyperplasia		1 [1.0]	1 [1.0]	

## GENERAL BODY SYSTEM

Peritoneum	(2)	(1)	(1)	(2)
Inflammation, Chronic Active				1 [1.0]

## GENITAL SYSTEM

Epididymis	(50)	(50)	(50)	(50)
Degeneration, Fatty		1 [2.0]		
Inflammation, Chronic Active			2 [3.0]	2 [1.0]
Preputial Gland	(50)	(50)	(50)	(50)
Cyst		1 [2.0]	1 [2.0]	
Hyperplasia, Squamous		1 [3.0]		
Inflammation	15 [1.7]	10 [1.4]	10 [1.3]	13 [1.6]
Prostate	(49)	(50)	(50)	(50)
Hyperplasia	1 [1.0]			1 [2.0]
Hyperplasia, Adenomatous	1 [2.0]			1 [1.0]
Inflammation	31 [1.7]	45 [1.6]	45 [1.7]	35 [1.6]
Seminal Vesicle	(50)	(50)	(50)	(50)
Dilatation		1 [3.0]		
Inflammation			2 [2.0]	1 [1.0]
Testes	(50)	(50)	(50)	(50)
Atrophy	3 [3.3]	9 [2.9]	5 [2.4]	3 [3.3]
Inflammation, Chronic Active	1 [2.0]			
Interstitial Cell, Hyperplasia	12 [1.3]	18 [1.1]	17 [1.1]	13 [1.1]

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## HEMATOPOIETIC SYSTEM

Bone Marrow	(50)	(50)	(50)	(50)
Lymph Node	(9)	(11)	(11)	(8)
Congestion	1 [3.0]			
Hyperplasia, Lymphoid	1 [3.0]			
Deep Cervical, Ectasia				1 [2.0]
Deep Cervical, Hemorrhage		1 [2.0]		
Deep Cervical, Infiltration Cellular				1 [2.0]
Mediastinal, Congestion	1 [3.0]			
Mediastinal, Ectasia	1 [4.0]	1 [3.0]	4 [3.3]	3 [2.3]
Mediastinal, Hemorrhage			1 [2.0]	
Mediastinal, Hyperplasia	1 [3.0]	1 [2.0]	1 [3.0]	
Mediastinal, Infiltration Cellular, Mixed Cell		1 [2.0]		
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Congestion	1 [3.0]			
Ectasia		2 [1.5]	2 [1.0]	
Inflammation, Granulomatous			1 [1.0]	
Spleen	(50)	(50)	(50)	(50)
Hematopoietic Cell Proliferation	1 [3.0]			
Hyperplasia, Lymphoid		1 [3.0]		
Inflammation, Granulomatous			1 [3.0]	
Necrosis				1 [2.0]
Capsule, Hemorrhage		1 [2.0]		
Capsule, Hyperplasia				1 [1.0]
Lymphoid Follicle, Depletion Cellular		1 [3.0]		
Lymphoid Follicle, Hyperplasia	1 [4.0]			
Thymus	(49)	(49)	(45)	(50)

## INTEGUMENTARY SYSTEM

Mammary Gland	(50)	(49)	(50)	(50)
Galactocele	12 [1.4]	7 [1.1]	9 [1.7]	12 [1.4]
Hyperplasia	3 [1.3]	6 [1.2]		5 [1.4]

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Inflammation		1 [1.0]		
Skin	(50)	(50)	(50)	(50)
Cyst Epithelial Inclusion	1 [2.0]			
Hyperplasia, Squamous	2 [2.5]			
Inflammation, Suppurative	1 [2.0]			
Inflammation, Chronic Active	1 [3.0]	1 [3.0]		
Subcutaneous Tissue, Infiltration Cellular, Mixed Cell		1 [1.0]		
Subcutaneous Tissue, Inflammation, Chronic Active				1 [3.0]

## MUSCULOSKELETAL SYSTEM

Bone	(50)	(50)	(50)	(50)
Hyperostosis	1 [1.0]			1 [1.0]
Inflammation, Chronic Active		1 [3.0]		
Skeletal Muscle	(0)	(0)	(0)	(1)

## NERVOUS SYSTEM

Brain	(50)	(50)	(50)	(50)
Compression	5 [2.6]	9 [2.7]	8 [2.3]	9 [2.6]
Hemorrhage	1 [2.0]		2 [2.0]	3 [2.3]

## RESPIRATORY SYSTEM

Lung	(50)	(50)	(50)	(50)
Foreign Body				1 [1.0]
Inflammation, Suppurative	1 [2.0]			
Inflammation, Granulomatous				1 [2.0]
Alveolar Epithelium, Hyperplasia	12 [1.3]	11 [1.5]	12 [1.0]	8 [1.5]
Alveolar Epithelium, Metaplasia, Squamous		1 [1.0]		
Perivascular, Hemorrhage			1 [2.0]	1 [2.0]
Perivascular, Inflammation, Chronic Active	1 [3.0]			
Nose	(50)	(50)	(50)	(50)

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Edema				1 [2.0]
Foreign Body	10 [1.4]	20 [1.5]	15 [1.5]	10 [1.6]
Inflammation	21 [2.0]	23 [2.0]	16 [1.9]	24 [2.0]
Mineralization		1 [1.0]		
Necrosis	1 [2.0]			
Glands, Cyst				1 [1.0]
Nasolacrimal Duct, Foreign Body			1 [1.0]	
Nasolacrimal Duct, Hyperplasia, Squamous			1 [1.0]	
Nasolacrimal Duct, Inflammation	1 [2.0]		1 [1.0]	
Olfactory Epithelium, Atrophy				1 [1.0]
Olfactory Epithelium, Erosion				1 [2.0]
Olfactory Epithelium, Metaplasia			1 [1.0]	1 [2.0]
Olfactory Epithelium, Necrosis				1 [2.0]
Respiratory Epithelium, Degeneration, Cystic	1 [2.0]			
Respiratory Epithelium, Erosion				1 [3.0]
Respiratory Epithelium, Hyperplasia	14 [1.9]	20 [1.8]	15 [1.6]	17 [1.9]
Respiratory Epithelium, Metaplasia, Squamous		1 [1.0]		
Respiratory Epithelium, Ulcer	2 [2.0]			
Squamous Epithelium, Hyperplasia		1 [2.0]	1 [1.0]	
Trachea	(49)	(50)	(50)	(50)
Amyloid Deposition	1 [2.0]			
Inflammation				1 [1.0]
Glands, Cyst	2 [1.0]			

## SPECIAL SENSES SYSTEM

Ear	(2)	(0)	(0)	(0)
Cyst	1 [1.0]			
Hyperplasia, Squamous	1 [4.0]			
Eye	(50)	(50)	(50)	(50)
Cataract	2 [1.5]	3 [1.3]	1 [4.0]	3 [1.7]
Cornea, Hyperplasia, Squamous			2 [1.5]	
Cornea, Inflammation, Chronic Active	1 [3.0]			1 [1.0]
Retina, Degeneration		1 [1.0]	1 [4.0]	1 [3.0]
Sclera, Inflammation, Chronic Active	1 [3.0]			1 [2.0]

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FISCHER 344 RATS MALE	0 mg/l	156.25 mg/l	312.5 mg/l	625 mg/l
Harderian Gland	(50)	(50)	(50)	(50)
Hyperplasia	1 [1.0]		2 [1.5]	
Zymbal's Gland	(1)	(0)	(1)	(1)

## URINARY SYSTEM

Kidney	(50)	(50)	(50)	(50)
Accumulation, Hyaline Droplet				1 [4.0]
Dilatation		1 [1.0]		
Infarct, Acute		1 [2.0]	1 [3.0]	1 [1.0]
Metaplasia, Osseous		1 [1.0]		
Nephropathy	48 [3.0]	50 [3.3]	50 [3.2]	50 [2.4]
Medulla, Renal Tubule, Necrosis		1 [2.0]		
Pelvis, Inflammation, Chronic Active		1 [1.0]	2 [2.5]	
Renal Tubule, Hyperplasia		1 [2.0]		1 [2.0]
Urinary Bladder	(50)	(50)	(50)	(50)
Hemorrhage		1 [2.0]		
Infiltration Cellular, Mixed Cell, Chronic Active				1 [1.0]
Inflammation, Suppurative		1 [4.0]		
Transitional Epithelium, Hyperplasia		1 [2.0]		

\*\*\* END OF MALE \*\*\*

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FISCHER 344 RATS FEMALE                      0 mg/l                      156.25 mg/l                      312.5 mg/l                      625 mg/l

**Disposition Summary**

<b>Animals Initially In Study</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>50</b>
<b>Early Deaths</b>				
<b>Moribund Sacrifice</b>	<b>15</b>	<b>13</b>	<b>14</b>	<b>15</b>
<b>Natural Death</b>	<b>5</b>	<b>5</b>	<b>3</b>	<b>5</b>
<b>Survivors</b>				
<b>Natural Death</b>	<b>1</b>			
<b>Terminal Sacrifice</b>	<b>29</b>	<b>32</b>	<b>33</b>	<b>30</b>
<b>Animals Examined Microscopically</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>50</b>

ALIMENTARY SYSTEM

Esophagus	(50)	(50)	(50)	(50)
Intestine Large, Cecum	(46)	(45)	(47)	(45)
Inflammation, Chronic Active	1 [1.0]			
Intestine Large, Colon	(47)	(48)	(50)	(49)
Inflammation, Chronic Active		1 [1.0]		
Parasite Metazoan	3 [1.3]	2 [1.5]	2 [1.0]	1 [2.0]
Intestine Large, Rectum	(47)	(48)	(50)	(49)
Inflammation, Chronic Active		1 [1.0]	1 [1.0]	
Parasite Metazoan	3 [2.0]	8 [1.7]	1 [2.0]	7 [1.4]
Intestine Small, Duodenum	(50)	(47)	(50)	(50)
Intestine Small, Ileum	(47)	(46)	(49)	(50)
Inflammation, Chronic Active	1 [1.0]	1 [2.0]	1 [1.0]	
Parasite Metazoan				1 [1.0]
Intestine Small, Jejunum	(48)	(46)	(47)	(48)
Inflammation, Chronic Active	1 [1.0]		2 [2.0]	1 [2.0]
Liver	(50)	(50)	(50)	(50)
Angiectasis		3 [1.3]	1 [1.0]	
Atypia Cellular			1 [2.0]	
Basophilic Focus	37	41	46	45
Clear Cell Focus	10	12	12	10
Congestion	1 [2.0]	1 [1.0]		1 [1.0]
Degeneration, Cystic	1 [2.0]			
Eosinophilic Focus	12	14	12	13

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Fatty Change	8 [1.8]	7 [1.6]	8 [1.4]	11 [1.2]
Fatty Change, Focal	2 [3.5]	13 [2.3]	7 [2.3]	8 [2.4]
Hematopoietic Cell Proliferation	1 [1.0]			
Hepatodiaphragmatic Nodule	2	7	3	1
Inflammation, Chronic Active	2 [1.5]	4 [1.5]	3 [1.0]	
Mixed Cell Focus	1	2	1	3
Necrosis	1 [1.0]		2 [1.5]	
Regeneration	1 [2.0]			
Vacuolization Cytoplasmic	4 [1.5]	1 [2.0]	2 [2.0]	
Bile Duct, Hyperplasia	10 [1.8]	2 [2.0]	9 [1.4]	7 [1.7]
Serosa, Fibrosis			1 [1.0]	2 [1.5]
Vein, Dilatation	1 [2.0]			1 [2.0]
Vein, Infiltration Cellular, Mixed Cell		1 [2.0]		
Mesentery	(4)	(7)	(7)	(8)
Fibrosis				1 [2.0]
Fat, Necrosis	4 [1.8]	6 [1.7]	6 [1.2]	7 [1.1]
Oral Mucosa	(0)	(0)	(1)	(2)
Gingival, Foreign Body			1 [2.0]	1 [2.0]
Gingival, Inflammation, Chronic Active			1 [2.0]	
Pancreas	(50)	(50)	(49)	(50)
Atrophy			1 [3.0]	1 [3.0]
Basophilic Focus	1		2	
Cyst	1 [2.0]	2 [1.5]		
Infiltration Cellular	2 [2.0]			1 [1.0]
Salivary Glands	(50)	(50)	(50)	(50)
Atrophy		1 [2.0]	1 [2.0]	
Stomach, Forestomach	(50)	(50)	(50)	(50)
Edema			1 [2.0]	
Fibrosis	4 [2.0]	1 [2.0]	4 [2.0]	1 [3.0]
Hyperplasia, Basal Cell, Focal			1 [1.0]	
Hyperplasia, Squamous	7 [2.0]	5 [2.2]	6 [1.8]	7 [2.0]
Inflammation	1 [1.0]		1 [2.0]	
Ulcer	1 [2.0]	2 [2.5]	3 [2.3]	
Stomach, Glandular	(50)	(50)	(49)	(50)
Inflammation, Chronic Active	1 [1.0]	1 [1.0]	1 [2.0]	1 [1.0]
Mineralization				2 [2.0]

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Test Type: CHRONIC

beta-Picoline

Time Report Requested: 10:09:56

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: 11/18/04 / 11/19/04

Species/Strain: RATS/F 344/N

Lab: BAT

FISCHER 344 RATS FEMALE	0 mg/l	156.25 mg/l	312.5 mg/l	625 mg/l
Ulcer	1 [2.0]			
Tongue	(0)	(0)	(0)	(1)

## CARDIOVASCULAR SYSTEM

Blood Vessel	(50)	(50)	(50)	(50)
Aorta, Mineralization				1 [2.0]
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	48 [2.3]	50 [2.5]	50 [2.6]	49 [2.6]
Mineralization				2 [4.0]
Artery, Infiltration Cellular, Mononuclear Cell	1 [2.0]			
Atrium, Thrombosis	1 [2.0]	1 [2.0]		
Endocardium, Hyperplasia			1 [3.0]	

## ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(50)	(50)	(50)
Accessory Adrenal Cortical Nodule	1 [1.0]	1 [1.0]		1 [1.0]
Amyloid Deposition		1 [2.0]		
Hyperplasia	26 [1.7]	25 [1.4]	34 [1.4]	22 [1.5]
Necrosis	2 [2.0]	1 [1.0]	1 [2.0]	1 [2.0]
Vacuolization Cytoplasmic	2 [2.0]	1 [2.0]	1 [3.0]	1 [2.0]
Adrenal Medulla	(50)	(50)	(50)	(50)
Hyperplasia	5 [1.0]	3 [1.0]	1 [1.0]	3 [1.0]
Islets, Pancreatic	(50)	(49)	(50)	(50)
Hyperplasia				1 [1.0]
Parathyroid Gland	(47)	(49)	(48)	(48)
Hyperplasia				1 [1.0]
Pituitary Gland	(50)	(49)	(49)	(50)
Angiectasis		1 [2.0]		
Cyst			1 [1.0]	
Pars Distalis, Cyst	1	1		1
Pars Distalis, Hyperplasia	19 [2.3]	19 [1.6]	20 [1.8]	20 [2.0]
Pars Intermedia, Hyperplasia	1 [1.0]			
Thyroid Gland	(50)	(48)	(50)	(50)

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Mineralization				1 [2.0]
C-cell, Hyperplasia	8 [1.5]	6 [1.5]	5 [2.4]	7 [1.6]
Follicle, Cyst		1 [1.0]	1 [1.0]	

## GENERAL BODY SYSTEM

Peritoneum	(0)	(1)	(0)	(0)
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## GENITAL SYSTEM

Clitoral Gland	(50)	(50)	(50)	(50)
Cyst	1 [2.0]	1 [3.0]	2 [2.0]	1 [3.0]
Fibrosis	1 [2.0]		1 [2.0]	1 [2.0]
Hyperplasia	2 [2.0]	4 [2.3]	3 [2.7]	4 [2.8]
Inflammation	9 [2.0]	5 [2.8]	6 [1.8]	6 [2.2]
Duct, Dilatation		1 [4.0]		
Ovary	(50)	(50)	(50)	(50)
Atrophy		1 [3.0]		1 [3.0]
Cyst	4 [1.5]	3 [2.0]		3 [1.3]
Uterus	(50)	(50)	(50)	(50)
Hemorrhage		1 [2.0]		
Inflammation, Suppurative		1 [4.0]		
Cervix, Cyst	4 [2.8]	2 [3.0]	3 [2.7]	3 [2.7]
Endometrium, Hyperplasia, Cystic	1 [3.0]	8 [1.1]	7 [1.6]	8 [2.0]
Vagina	(1)	(1)	(0)	(2)

## HEMATOPOIETIC SYSTEM

Bone Marrow	(50)	(50)	(50)	(50)
Fibrosis		1 [3.0]		
Lymph Node	(5)	(7)	(5)	(2)
Deep Cervical, Ectasia			1 [3.0]	
Deep Cervical, Hemorrhage		1 [3.0]		
Deep Cervical, Infiltration Cellular, Histiocyte			1 [2.0]	

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Lab: BAT

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Mediastinal, Ectasia		1 [2.0]		
Mediastinal, Hemorrhage		1 [1.0]		1 [2.0]
Mediastinal, Hyperplasia		1 [2.0]		
Mediastinal, Infiltration Cellular, Histiocyte				1 [2.0]
Mediastinal, Infiltration Cellular, Mixed Cell			1 [2.0]	
Pancreatic, Ectasia	1 [3.0]			
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Ectasia			1 [2.0]	
Infiltration Cellular, Mast Cell			1 [1.0]	
Infiltration Cellular, Mononuclear Cell			1 [2.0]	
Infiltration Cellular, Plasma Cell				1 [2.0]
Spleen	(50)	(50)	(50)	(50)
Angiectasis			1 [2.0]	
Atrophy			1 [2.0]	2 [3.0]
Degeneration, Cystic, Focal			1 [1.0]	
Hyperplasia, Lymphoid	4 [3.8]	2 [2.0]	1 [3.0]	
Necrosis		1 [2.0]		1 [2.0]
Thymus	(49)	(50)	(50)	(47)
Cyst	1 [2.0]			1 [2.0]
Fibrosis				1 [2.0]
Hyperplasia, Lymphoid	1 [4.0]			
Inflammation, Suppurative				1 [3.0]

## INTEGUMENTARY SYSTEM

Mammary Gland	(50)	(50)	(50)	(50)
Galactocele	12 [1.8]	8 [1.9]	3 [1.3]	4 [1.8]
Hyperplasia	4 [1.3]	4 [1.5]	6 [1.8]	4 [2.0]
Inflammation	1 [1.0]			
Skin	(50)	(50)	(50)	(50)
Fibrosis	1 [1.0]		1 [3.0]	
Hyperplasia, Squamous			1 [1.0]	
Inflammation, Chronic Active		1 [1.0]		
Ulcer		2 [2.5]	2 [3.5]	1 [2.0]
Lip, Inflammation, Suppurative				1 [1.0]

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## MUSCULOSKELETAL SYSTEM

Bone	(50)	(50)	(50)	(50)
Cyst				1 [3.0]
Hyperostosis	1 [3.0]			
Inflammation, Chronic Active	1 [3.0]			1 [3.0]
Skeletal Muscle	(0)	(1)	(0)	(0)

## NERVOUS SYSTEM

Brain	(50)	(50)	(50)	(50)
Compression	13 [2.3]	7 [1.7]	7 [1.9]	9 [2.9]
Hemorrhage		2 [2.5]		1 [3.0]
Inflammation, Chronic Active		1 [3.0]		

## RESPIRATORY SYSTEM

Lung	(50)	(50)	(50)	(50)
Fibrosis				1 [2.0]
Foreign Body	1 [1.0]			
Inflammation, Suppurative			1 [1.0]	
Inflammation, Granulomatous	1 [1.0]		1 [2.0]	
Inflammation, Chronic Active	1 [3.0]			
Metaplasia, Squamous	1 [2.0]			
Pigmentation	1 [2.0]			
Thrombosis				1 [2.0]
Alveolar Epithelium, Hyperplasia	7 [1.3]	14 [1.5]	14 [2.1]	11 [1.2]
Alveolar Epithelium, Metaplasia, Squamous		3 [1.3]	1 [2.0]	1 [1.0]
Bronchiole, Inflammation, Suppurative			1 [1.0]	
Bronchiole, Inflammation, Chronic Active			2 [1.0]	
Serosa, Fibrosis		1 [1.0]		2 [1.5]
Serosa, Inflammation, Granulomatous			1 [1.0]	
Nose	(50)	(50)	(50)	(50)

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Foreign Body	2 [1.0]	3 [1.7]	3 [2.3]	2 [1.5]
Inflammation	3 [1.0]	5 [1.4]	4 [2.0]	3 [1.7]
Glands, Hyperplasia		1 [1.0]		
Nasolacrimal Duct, Foreign Body	1 [1.0]			
Nasolacrimal Duct, Inflammation	2 [1.0]			
Olfactory Epithelium, Atrophy		1 [1.0]		
Olfactory Epithelium, Metaplasia		1 [2.0]		
Respiratory Epithelium, Hyperplasia	3 [1.7]	1 [1.0]	1 [2.0]	2 [1.5]
Turbinate, Cyst				2 [2.5]
Trachea	(50)	(50)	(50)	(50)
Infiltration Cellular, Mixed Cell		1 [1.0]		

## SPECIAL SENSES SYSTEM

Eye	(50)	(48)	(48)	(50)
Atrophy	1 [3.0]			
Cataract	8 [2.3]	13 [2.2]	14 [2.1]	10 [2.1]
Anterior Chamber, Inflammation, Suppurative		1 [2.0]		1 [2.0]
Cornea, Edema			1 [1.0]	
Cornea, Hyperplasia		1 [1.0]		
Cornea, Inflammation, Chronic Active	2 [2.5]		1 [4.0]	
Retina, Degeneration	1 [4.0]	2 [3.5]	4 [3.5]	3 [2.7]
Harderian Gland	(50)	(50)	(50)	(50)
Hyperplasia			2 [1.0]	1 [1.0]
Inflammation, Granulomatous	1 [1.0]			
Inflammation, Chronic Active	2 [2.0]	1 [2.0]		
Zymbal's Gland	(0)	(0)	(2)	(1)

## URINARY SYSTEM

Kidney	(49)	(50)	(50)	(50)
Cyst			2 [1.5]	
Degeneration, Fatty	1 [2.0]			
Dilatation				1 [1.0]
Fibrosis	8 [2.1]	7 [2.9]	8 [3.8]	10 [3.1]

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Infarct	7 [1.9]	8 [1.9]	4 [2.0]	5 [1.8]
Mineralization				2 [3.0]
Nephropathy	47 [1.7]	50 [2.0]	48 [2.3]	50 [2.3]
Papilla, Hemorrhage	1 [1.0]		5 [1.4]	1 [2.0]
Pelvis, Inflammation, Chronic Active	8 [2.4]	9 [3.1]	8 [3.4]	10 [3.0]
Pelvis, Metaplasia, Squamous			1 [4.0]	
Urinary Bladder	(50)	(50)	(50)	(50)
Infiltration Cellular, Chronic Active			1 [1.0]	
Transitional Epithelium, Hyperplasia			1 [4.0]	

\*\*\* END OF REPORT \*\*\*

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