

**TDMS No.** 20007 - 05

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

**Date Report Requested:** 09/21/2010

**Test Type:** CHRONIC

Kava kava extract

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

**Route:** GAVAGE

**CAS Number:** 9000-38-8

**First Dose M/F:** 08/18/04 / 08/19/04

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

**Lab:** BAT

F2\_R2

**C Number:** C20007  
**Lock Date:** 03/27/2007  
**Cage Range:** ALL  
**Date Range:** ALL  
**Reasons For Removal:** ALL  
**Removal Date Range:** ALL  
**Treatment Groups:** Include ALL  
**Study Gender:** Both  
**TDMSE Version:** 2.2.0

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FISCHER 344 RATS MALE	0.0 G/KG	0.1 G/KG	0.3 G/KG	1.0 G/KG
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**Disposition Summary**

Animals Initially In Study	50	50	50	50
Early Deaths				
Dosing Accident		1	1	3
Moribund Sacrifice	10	10	13	13
Natural Death	5	4	2	3
Survivors				
Natural Death			1	
Terminal Sacrifice	34	35	33	31
Animals Examined Microscopically	49	50	50	50

ALIMENTARY SYSTEM

Esophagus	(49)	(50)	(50)	(50)
Epithelium, Hyperplasia	1 [1.0]			
Epithelium, Necrosis	1 [1.0]			
Muscularis, Degeneration	1 [2.0]			
Intestine Large, Cecum	(49)	(50)	(50)	(50)
Inflammation		1 [1.0]		
Intestine Large, Colon	(49)	(50)	(50)	(50)
Parasite Metazoan	7	2	5	2
Intestine Small, Duodenum	(49)	(50)	(50)	(50)
Ectopic Tissue	1 [2.0]			
Intestine Small, Ileum	(49)	(50)	(50)	(50)
Necrosis	1 [1.0]			
Liver	(49)	(50)	(50)	(50)
Angiectasis		1 [1.0]	2 [1.0]	1 [1.0]
Basophilic Focus	21	30	18	13
Clear Cell Focus	18	25	25	11
Degeneration, Cystic		4 [1.0]	3 [1.3]	5 [1.2]
Eosinophilic Focus	15	18	14	13
Fatty Change, Diffuse	11 [1.8]	8 [1.1]	12 [1.6]	8 [1.5]
Fibrosis				1 [2.0]
Hematopoietic Cell Proliferation	3 [1.0]	3 [1.0]	1 [2.0]	
Hepatodiaphragmatic Nodule	2	7	4	1

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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FISCHER 344 RATS MALE	0.0 G/KG	0.1 G/KG	0.3 G/KG	1.0 G/KG
Inflammation, Chronic Active	36 [1.0]	39 [1.0]	32 [1.0]	34 [1.1]
Mixed Cell Focus	4	5	4	
Necrosis	1 [2.0]	2 [1.5]		1 [3.0]
Pigmentation, Hemosiderin	1 [3.0]		2 [1.5]	2 [1.0]
Tension Lipidosis				1 [2.0]
Bile Duct, Cyst		1 [1.0]		
Bile Duct, Hyperplasia	32 [1.3]	39 [1.3]	40 [1.4]	34 [1.4]
Centrilobular, Degeneration			1 [2.0]	
Centrilobular, Fatty Change	1 [2.0]	7 [1.3]	4 [1.3]	21 [1.7]
Centrilobular, Necrosis		2 [2.0]		1 [3.0]
Hepatocyte, Hyperplasia			1 [2.0]	
Hepatocyte, Hypertrophy		2 [1.0]	2 [1.0]	22 [1.4]
Oval Cell, Hyperplasia		2 [2.0]	1 [1.0]	1 [1.0]
Mesentery	(6)	(8)	(7)	(6)
Hemorrhage	1 [3.0]			
Thrombosis			1 [3.0]	
Fat, Necrosis	4 [2.5]	7 [1.4]	6 [1.7]	5 [1.6]
Oral Mucosa	(1)	(1)	(0)	(1)
Hyperplasia, Squamous		1 [3.0]		
Pancreas	(49)	(50)	(50)	(50)
Atrophy	16 [1.3]	13 [1.0]	18 [1.3]	18 [1.3]
Basophilic Focus		1		
Inflammation			2 [1.0]	1 [2.0]
Acinus, Hyperplasia	6 [1.5]	9 [1.2]	9 [1.6]	2 [2.0]
Acinus, Metaplasia, Hepatocyte				6 [1.5]
Salivary Glands	(49)	(50)	(50)	(50)
Atrophy		1 [2.0]	1 [2.0]	
Stomach, Forestomach	(49)	(50)	(50)	(50)
Erosion			1 [2.0]	4 [1.0]
Inflammation	8 [2.3]	4 [1.5]	9 [2.8]	22 [2.0]
Mineralization		2 [1.0]	1 [1.0]	3 [1.7]
Ulcer	4 [2.5]		6 [3.0]	13 [1.6]
Epithelium, Dysplasia	1 [1.0]		2 [1.0]	1 [4.0]
Epithelium, Hyperplasia	6 [2.2]	4 [1.5]	11 [2.5]	27 [2.3]
Stomach, Glandular	(49)	(50)	(50)	(50)
Hyperplasia				1 [2.0]

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Lab: BAT

FISCHER 344 RATS MALE	0.0 G/KG	0.1 G/KG	0.3 G/KG	1.0 G/KG
Inflammation	2 [2.0]	3 [1.0]	3 [1.7]	3 [1.7]
Epithelium, Necrosis	2 [1.5]	1 [2.0]	2 [2.0]	3 [2.3]
Tooth	(10)	(6)	(9)	(11)
Malformation	10 [1.0]	6 [1.0]	9 [1.0]	11 [1.1]

## CARDIOVASCULAR SYSTEM

Blood Vessel	(49)	(50)	(50)	(50)
Mineralization				1 [1.0]
Pulmonary Artery, Inflammation, Chronic Active			1 [2.0]	
Heart	(49)	(50)	(50)	(50)
Cardiomyopathy	48 [2.4]	49 [2.4]	48 [2.3]	46 [2.3]
Inflammation, Suppurative				1 [2.0]
Mineralization			1 [1.0]	
Atrium, Thrombosis	2 [2.0]	2 [1.5]	3 [1.7]	1 [2.0]
Coronary Artery, Degeneration			1 [1.0]	
Epicardium, Inflammation			1 [1.0]	

## ENDOCRINE SYSTEM

Adrenal Cortex	(49)	(50)	(50)	(50)
Degeneration, Cystic	1 [3.0]			
Hematopoietic Cell Proliferation		1 [2.0]	1 [1.0]	
Hypertrophy	2 [1.5]	5 [1.4]	3 [1.0]	3 [1.0]
Necrosis	1 [1.0]	1 [1.0]	1 [1.0]	1 [2.0]
Vacuolization Cytoplasmic	1 [3.0]			
Zona Fasciculata, Hyperplasia	8 [1.0]	6 [1.2]	9 [1.0]	13 [1.1]
Adrenal Medulla	(49)	(50)	(50)	(50)
Hemorrhage				1 [3.0]
Hyperplasia	9 [1.7]	11 [1.9]	10 [1.8]	10 [1.9]
Thrombosis				1 [2.0]
Islets, Pancreatic	(49)	(50)	(50)	(50)
Hyperplasia	2 [2.5]	2 [1.0]	2 [1.0]	3 [2.7]
Parathyroid Gland	(49)	(50)	(48)	(50)
Hyperplasia	1 [2.0]		1 [1.0]	10 [1.8]

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Lab: BAT

FISCHER 344 RATS MALE	0.0 G/KG	0.1 G/KG	0.3 G/KG	1.0 G/KG
Pituitary Gland	(49)	(50)	(50)	(50)
Hemorrhage	1 [2.0]		1 [2.0]	
Pars Distalis, Angiectasis			1 [2.0]	
Pars Distalis, Hyperplasia	17 [1.5]	20 [1.9]	21 [1.4]	11 [1.5]
Thyroid Gland	(49)	(50)	(50)	(50)
Infiltration Cellular, Lymphocyte		1 [2.0]		
C-cell, Hyperplasia	8 [1.9]	12 [1.9]	12 [1.8]	7 [1.4]
Follicular Cell, Hyperplasia		2 [1.5]		1 [2.0]
Follicular Cell, Hypertrophy				1 [1.0]

## GENERAL BODY SYSTEM

Peritoneum	(0)	(0)	(1)	(0)
Tissue NOS	(0)	(1)	(0)	(0)

## GENITAL SYSTEM

Coagulating Gland	(2)	(2)	(0)	(0)
Fibrosis	1 [3.0]			
Inflammation	1 [2.0]	2 [3.0]		
Epididymis	(49)	(50)	(50)	(50)
Inflammation	1 [1.0]	4 [1.3]	3 [1.7]	2 [1.5]
Preputial Gland	(49)	(50)	(49)	(50)
Inflammation			1 [2.0]	2 [4.0]
Duct, Hyperplasia, Atypical				1 [1.0]
Prostate	(49)	(50)	(50)	(50)
Atrophy				1 [2.0]
Inflammation	28 [2.0]	24 [1.8]	21 [1.8]	16 [1.9]
Epithelium, Hyperplasia	9 [1.1]	8 [1.8]	2 [1.0]	3 [1.0]
Seminal Vesicle	(49)	(50)	(50)	(50)
Atrophy				1 [2.0]
Inflammation			1 [2.0]	2 [2.0]
Testes	(49)	(50)	(50)	(50)
Cyst				1 [4.0]
Arteriole, Necrosis	1 [1.0]			

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FISCHER 344 RATS MALE	0.0 G/KG	0.1 G/KG	0.3 G/KG	1.0 G/KG
Germinal Epithelium, Degeneration	3 [1.7]			
Interstitial Cell, Hyperplasia	17 [1.9]	15 [2.1]	10 [2.4]	4 [2.5]

## HEMATOPOIETIC SYSTEM

Bone Marrow	(49)	(50)	(50)	(50)
Hemorrhage		1 [4.0]		
Hyperplasia	16 [2.4]	17 [2.9]	24 [2.1]	29 [2.4]
Necrosis		1 [1.0]		1 [2.0]
Lymph Node	(4)	(3)	(2)	(5)
Mediastinal, Ectasia			1 [2.0]	
Mediastinal, Hyperplasia, Lymphoid	3 [2.0]			1 [2.0]
Mediastinal, Infiltration Cellular, Plasma Cell		1 [2.0]	1 [3.0]	
Lymph Node, Mesenteric	(49)	(50)	(50)	(50)
Atrophy	2 [2.0]	2 [1.0]		5 [1.8]
Spleen	(49)	(50)	(50)	(50)
Accessory Spleen	1			1
Amyloid Deposition		1 [2.0]		
Fibrosis				2 [1.5]
Hematopoietic Cell Proliferation	10 [1.7]	10 [2.2]	7 [1.7]	5 [1.6]
Hemorrhage	1 [3.0]			
Hyperplasia, Histiocytic				1 [2.0]
Inflammation	1 [2.0]			
Necrosis	1 [2.0]			
Pigmentation, Hemosiderin	31 [1.1]	32 [1.0]	35 [1.1]	32 [1.1]
Thrombosis				2 [2.5]
Lymphoid Follicle, Atrophy	2 [3.5]	2 [2.5]	2 [3.0]	1 [2.0]
Lymphoid Follicle, Hyperplasia			1 [3.0]	
Thymus	(48)	(50)	(50)	(50)
Atrophy	47 [3.3]	49 [3.2]	49 [3.3]	46 [3.2]

## INTEGUMENTARY SYSTEM

Mammary Gland	(48)	(50)	(50)	(50)
Hyperplasia	1 [2.0]			

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Lab: BAT

FISCHER 344 RATS MALE	0.0 G/KG	0.1 G/KG	0.3 G/KG	1.0 G/KG
Skin	(49)	(50)	(50)	(50)
Cyst Epithelial Inclusion		1		1 [3.0]
Inflammation		2 [1.0]		1 [2.0]
Epidermis, Hyperplasia, Basal Cell			1 [3.0]	
Subcutaneous Tissue, Fibrosis	1 [4.0]			
<b>MUSCULOSKELETAL SYSTEM</b>				
Bone	(49)	(50)	(50)	(50)
Osteopetrosis				1 [2.0]
Ligament, Mineralization				1 [2.0]
Skeletal Muscle	(1)	(0)	(1)	(1)
<b>NERVOUS SYSTEM</b>				
Brain	(49)	(50)	(50)	(50)
Hemorrhage	1 [1.0]	1 [1.0]		2 [2.0]
Hydrocephalus		1 [1.0]		1 [1.0]
Necrosis	2 [2.0]		2 [3.0]	2 [1.5]
Choroid Plexus, Infiltration Cellular, Lymphocyte			1 [2.0]	
Spinal Cord	(2)	(0)	(0)	(0)
<b>RESPIRATORY SYSTEM</b>				
Lung	(49)	(50)	(50)	(50)
Congestion		1 [2.0]	1 [3.0]	1 [2.0]
Foreign Body				1
Hemorrhage				1 [1.0]
Inflammation, Granulomatous				3 [1.7]
Inflammation, Chronic Active	6 [1.5]	3 [1.0]	9 [1.1]	9 [1.0]
Necrosis	2 [1.5]			
Thrombosis	1 [1.0]		1 [1.0]	
Alveolar Epithelium, Hyperplasia	19 [1.4]	13 [1.7]	20 [1.4]	15 [1.3]

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FISCHER 344 RATS MALE	0.0 G/KG	0.1 G/KG	0.3 G/KG	1.0 G/KG
Alveolar Epithelium, Hypertrophy	2 [1.0]		2 [1.5]	1 [1.0]
Alveolar Epithelium, Metaplasia			1 [2.0]	
Alveolar Epithelium, Metaplasia, Squamous	1 [1.0]	1 [2.0]	1 [2.0]	
Alveolus, Infiltration Cellular, Histiocyte	8 [1.0]	3 [1.0]	11 [1.1]	9 [1.6]
Arteriole, Hyperplasia				1 [1.0]
Serosa, Inflammation, Acute				1 [2.0]
Nose	(49)	(50)	(50)	(50)
Foreign Body	1	4	1	2
Inflammation	18 [1.7]	14 [1.8]	10 [1.6]	18 [1.3]
Olfactory Epithelium, Metaplasia	2 [2.0]	1 [2.0]	3 [1.3]	5 [1.6]
Respiratory Epithelium, Hyperplasia	1 [2.0]	3 [2.3]	1 [1.0]	4 [1.0]

## SPECIAL SENSES SYSTEM

Ear	(0)	(2)	(1)	(0)
Eye	(49)	(50)	(50)	(50)
Anterior Chamber, Inflammation				1 [2.0]
Cornea, Fibrosis	1 [2.0]			
Cornea, Inflammation			1 [3.0]	
Iris, Inflammation				2 [1.0]
Iris, Synechia	1 [4.0]			
Lens, Cataract	2 [1.5]	1 [1.0]	2 [2.0]	
Retina, Degeneration	6 [1.5]	6 [1.0]	10 [1.5]	16 [1.6]
Retina, Retinal Detachment	1 [4.0]			
Harderian Gland	(49)	(50)	(50)	(50)
Zymbal's Gland	(0)	(0)	(1)	(0)

## URINARY SYSTEM

Kidney	(49)	(50)	(50)	(50)
Accumulation, Hyaline Droplet	1 [1.0]		1 [1.0]	2 [1.0]
Hyperplasia, Oncocytic				1 [1.0]
Infarct	1 [2.0]		1 [1.0]	
Inflammation, Acute			1 [2.0]	
Mineralization	38 [1.0]	43 [1.0]	41 [1.0]	34 [1.0]

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FISCHER 344 RATS MALE	0.0 G/KG	0.1 G/KG	0.3 G/KG	1.0 G/KG
Nephropathy	46 [1.4]	47 [1.2]	48 [1.8]	48 [3.1]
Cortex, Cyst	1 [2.0]			1 [2.0]
Papilla, Necrosis	1 [4.0]			
Pelvis, Dilatation		1 [2.0]		
Pelvis, Inflammation	1 [3.0]			1 [1.0]
Pelvis, Transitional Epithelium, Hyperplasia		1 [1.0]	1 [2.0]	15 [1.3]
Ureter	(1)	(1)	(0)	(0)
Inflammation	1 [4.0]			
Urethra	(1)	(0)	(0)	(0)
Inflammation	1 [4.0]			
Urinary Bladder	(49)	(50)	(50)	(50)
Inflammation	2 [2.5]		1 [2.0]	2 [2.5]
Transitional Epithelium, Hyperplasia	1 [2.0]			

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

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FISCHER 344 RATS FEMALE	0.0 G/KG	0.1 G/KG	0.3 G/KG	1.0 G/KG
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**Disposition Summary**

Animals Initially In Study	50	50	50	50
Early Deaths				
Dosing Accident	1	1	2	2
Moribund Sacrifice	12	12	13	6
Natural Death	3	2	11	8
Survivors				
Natural Death		1		
Terminal Sacrifice	34	34	24	34
Animals Examined Microscopically	50	50	50	50

ALIMENTARY SYSTEM

Esophagus	(50)	(50)	(50)	(50)
Hyperplasia		1 [1.0]		
Inflammation		1 [2.0]	1 [3.0]	
Perforation			1 [4.0]	
Intestine Large, Cecum	(50)	(50)	(50)	(50)
Inflammation			1 [4.0]	
Necrosis			1 [4.0]	
Intestine Large, Colon	(50)	(50)	(50)	(50)
Parasite Metazoan	3	1	8	6
Liver	(50)	(50)	(50)	(50)
Angiectasis	1 [2.0]	2 [1.5]		3 [1.3]
Basophilic Focus	44	42	41	11
Clear Cell Focus	12	14	11	8
Degeneration, Cystic				1 [1.0]
Eosinophilic Focus	23	31	24	23
Fatty Change, Focal	1 [1.0]			
Fatty Change, Diffuse	9 [1.3]	10 [1.4]	10 [1.5]	11 [1.1]
Hematopoietic Cell Proliferation	1 [1.0]	3 [1.0]		
Hepatodiaphragmatic Nodule	5	6	1	2
Inflammation, Chronic Active	43 [1.0]	40 [1.0]	38 [1.0]	35 [1.0]
Mixed Cell Focus	15	10	9	3
Necrosis	2 [3.0]	1 [1.0]		

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FISCHER 344 RATS FEMALE	0.0 G/KG	0.1 G/KG	0.3 G/KG	1.0 G/KG
Pigmentation, Hemosiderin	1 [2.0]		1 [1.0]	1 [2.0]
Artery, Necrosis	1 [2.0]			
Bile Duct, Cyst		1 [1.0]		
Bile Duct, Hyperplasia	12 [1.0]	15 [1.5]	10 [1.3]	10 [1.1]
Centrilobular, Fatty Change				2 [2.0]
Centrilobular, Necrosis		1 [3.0]		1 [2.0]
Hepatocyte, Hypertrophy	5 [1.6]	2 [1.0]	3 [1.3]	33 [1.8]
Oval Cell, Hyperplasia		2 [2.0]	2 [1.0]	
Serosa, Fibrosis	1 [3.0]	1 [2.0]		
Mesentery	(10)	(9)	(7)	(9)
Fat, Necrosis	10 [1.5]	9 [1.9]	7 [1.9]	9 [1.7]
Oral Mucosa	(0)	(1)	(2)	(0)
Hyperplasia, Squamous			1 [4.0]	
Pancreas	(50)	(50)	(50)	(50)
Atrophy	13 [1.0]	10 [1.4]	16 [1.3]	17 [1.4]
Basophilic Focus	1			
Inflammation				1 [1.0]
Acinus, Hyperplasia	1 [1.0]	3 [1.3]		
Acinus, Metaplasia, Hepatocyte		1 [1.0]		4 [1.3]
Salivary Glands	(50)	(50)	(50)	(50)
Atrophy				1 [2.0]
Stomach, Forestomach	(50)	(50)	(50)	(50)
Erosion		1 [1.0]	2 [1.0]	
Hyperplasia, Atypical	1 [4.0]			
Inflammation	5 [2.0]	7 [1.7]	7 [2.1]	13 [1.8]
Ulcer	1 [3.0]	1 [4.0]	3 [2.3]	7 [2.3]
Epithelium, Hyperplasia	5 [2.2]	6 [2.3]	8 [1.8]	19 [1.9]
Stomach, Glandular	(50)	(50)	(50)	(50)
Amyloid Deposition			1 [2.0]	
Inflammation		2 [2.0]		
Epithelium, Hyperplasia			1 [3.0]	
Epithelium, Necrosis	1 [1.0]	1 [2.0]		
Tooth	(5)	(3)	(4)	(2)
Malformation	5 [1.0]	3 [1.3]	4 [1.0]	2 [2.0]
Peridontal Tissue, Inflammation				1 [3.0]

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Test Type: CHRONIC

Kava kava extract

Time Report Requested: 09:10:56

Route: GAVAGE

CAS Number: 9000-38-8

First Dose M/F: 08/18/04 / 08/19/04

Species/Strain: RATS/F 344/N

Lab: BAT

FISCHER 344 RATS FEMALE	0.0 G/KG	0.1 G/KG	0.3 G/KG	1.0 G/KG
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## CARDIOVASCULAR SYSTEM

Blood Vessel	(50)	(50)	(50)	(50)
Inflammation	1 [3.0]			
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	42 [1.9]	45 [1.9]	45 [1.9]	47 [1.7]
Atrium, Thrombosis		1 [2.0]		1 [2.0]
Valve, Thrombosis		1 [2.0]		

## ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(50)	(50)	(50)
Amyloid Deposition		1 [2.0]		
Degeneration, Cystic	3 [1.3]	6 [1.2]	7 [1.6]	6 [1.2]
Hemorrhage				1 [4.0]
Hypertrophy	2 [2.5]	3 [1.0]	1 [2.0]	3 [1.0]
Metaplasia, Osseous			1 [2.0]	
Necrosis	2 [3.0]		1 [1.0]	2 [2.0]
Zona Fasciculata, Hyperplasia	6 [1.0]	6 [1.2]	4 [1.3]	9 [1.1]
Adrenal Medulla	(50)	(50)	(50)	(50)
Hyperplasia	3 [1.3]		1 [1.0]	1 [1.0]
Necrosis		1 [4.0]		
Islets, Pancreatic	(50)	(50)	(50)	(50)
Hyperplasia	1 [1.0]		3 [1.3]	1 [1.0]
Parathyroid Gland	(44)	(47)	(44)	(47)
Pituitary Gland	(50)	(50)	(50)	(50)
Cyst			1 [1.0]	
Pars Distalis, Angiectasis	1 [2.0]	1 [1.0]	1 [2.0]	2 [2.5]
Pars Distalis, Hyperplasia	11 [1.7]	20 [2.2]	16 [2.3]	23 [2.0]
Thyroid Gland	(50)	(50)	(50)	(50)
C-cell, Hyperplasia	15 [2.1]	15 [1.9]	6 [2.3]	4 [1.3]
Follicle, Cyst				2 [1.5]
Follicular Cell, Hyperplasia	1 [3.0]	1 [1.0]	4 [2.5]	4 [2.0]

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## GENERAL BODY SYSTEM

None

## GENITAL SYSTEM

Clitoral Gland	(50)	(49)	(50)	(49)
Hyperplasia		3 [2.7]	5 [2.0]	1 [1.0]
Inflammation	1 [3.0]	2 [2.0]		
Ovary	(50)	(50)	(50)	(50)
Cyst	7 [2.6]	9 [2.0]	6 [2.3]	5 [1.6]
Cyst, Multiple	1 [4.0]			
Uterus	(50)	(50)	(50)	(50)
Congestion		1 [4.0]		
Hemorrhage		2 [2.5]		1 [3.0]
Necrosis		1 [3.0]		
Endometrium, Hyperplasia, Adenomatous			1 [2.0]	
Endometrium, Hyperplasia, Cystic	5 [1.6]	5 [1.2]	6 [2.0]	10 [1.5]
Stroma, Hyperplasia			1 [3.0]	

## HEMATOPOIETIC SYSTEM

Bone Marrow	(50)	(50)	(50)	(50)
Hemorrhage	1 [3.0]			
Hyperplasia	26 [2.1]	27 [2.3]	19 [2.2]	23 [2.0]
Inflammation, Histiocytic			1 [2.0]	
Myelofibrosis	2 [1.5]	1 [2.0]	1 [2.0]	1 [1.0]
Necrosis	1 [3.0]			
Lymph Node	(1)	(3)	(3)	(2)
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Atrophy	1 [3.0]	1 [3.0]	1 [3.0]	
Inflammation	2 [2.5]			
Spleen	(50)	(50)	(50)	(50)

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Accessory Spleen			1	
Fibrosis		3 [1.7]		2 [2.5]
Hematopoietic Cell Proliferation	19 [1.3]	18 [1.3]	17 [1.1]	7 [1.3]
Hyperplasia, Histiocytic	1 [3.0]		1 [3.0]	
Pigmentation, Hemosiderin	37 [1.2]	37 [1.1]	41 [1.1]	42 [1.3]
Lymphoid Follicle, Atrophy	1 [2.0]	1 [2.0]	4 [2.3]	2 [2.0]
Lymphoid Follicle, Necrosis	1 [4.0]			
Thymus	(50)	(50)	(49)	(48)
Atrophy	48 [3.0]	43 [3.0]	47 [3.1]	45 [2.9]
Infiltration Cellular, Plasma Cell	1 [2.0]			
Inflammation			1 [2.0]	

## INTEGUMENTARY SYSTEM

Mammary Gland	(50)	(50)	(50)	(50)
Galactoceles			1 [4.0]	
Hyperplasia			2 [3.0]	
Skin	(50)	(50)	(50)	(50)
Epidermis, Hyperkeratosis			1 [2.0]	
Epidermis, Hyperplasia, Basal Cell		1 [2.0]		

## MUSCULOSKELETAL SYSTEM

Bone	(50)	(50)	(50)	(50)
Osteopetrosis	1 [3.0]			
Skeletal Muscle	(1)	(0)	(1)	(0)
Inflammation	1 [3.0]			

## NERVOUS SYSTEM

Brain	(50)	(50)	(50)	(50)
Hemorrhage		2 [3.0]	2 [1.0]	
Infiltration Cellular, Mixed Cell			1 [1.0]	
Necrosis		3 [1.7]	2 [2.0]	

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Lab: BAT

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Peripheral Nerve	(0)	(0)	(1)	(0)
Spinal Cord	(0)	(0)	(1)	(0)
Hemorrhage			1 [3.0]	
Necrosis			1 [2.0]	

## RESPIRATORY SYSTEM

Lung	(50)	(50)	(50)	(50)
Atelectasis	1 [4.0]	1 [4.0]		
Congestion	1 [2.0]			1 [2.0]
Hemorrhage				1 [1.0]
Inflammation, Chronic Active	4 [2.0]	5 [1.2]	2 [1.0]	7 [1.0]
Alveolar Epithelium, Hyperplasia	11 [1.1]	14 [1.6]	6 [1.8]	7 [1.6]
Alveolar Epithelium, Hypertrophy	1 [1.0]	1 [2.0]		
Alveolar Epithelium, Metaplasia	1 [2.0]			
Alveolar Epithelium, Metaplasia, Squamous	1 [2.0]	3 [1.7]		
Alveolus, Infiltration Cellular, Histiocyte	12 [1.0]	17 [1.0]	12 [1.1]	16 [1.0]
Mediastinum, Foreign Body	1			
Mediastinum, Inflammation, Chronic Active	1 [4.0]			
Nose	(50)	(50)	(50)	(50)
Cyst	1 [1.0]			
Foreign Body	2			
Inflammation	8 [1.1]	2 [1.0]	9 [1.7]	8 [1.3]
Glands, Dilatation			1 [3.0]	
Olfactory Epithelium, Metaplasia	1 [1.0]		1 [3.0]	
Respiratory Epithelium, Hyperplasia			1 [2.0]	
Pleura	(0)	(0)	(0)	(1)
Mesothelium, Hyperplasia				1 [2.0]
Trachea	(50)	(50)	(50)	(50)
Peritracheal Tissue, Inflammation			1 [3.0]	

## SPECIAL SENSES SYSTEM

Ear	(1)	(0)	(0)	(1)
Eye	(50)	(50)	(50)	(50)

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Lab: BAT

FISCHER 344 RATS FEMALE	0.0 G/KG	0.1 G/KG	0.3 G/KG	1.0 G/KG
Synechia			1 [4.0]	
Cornea, Fibrosis	1 [2.0]			1 [2.0]
Cornea, Inflammation	1 [2.0]		2 [3.0]	2 [2.0]
Lens, Cataract	2 [3.5]	3 [3.0]	1 [4.0]	3 [2.0]
Posterior Chamber, Inflammation				1 [1.0]
Retina, Degeneration	5 [2.6]	5 [3.0]	5 [2.4]	12 [1.7]
Retina, Dysplasia			1 [2.0]	
Retina, Gliosis	1 [2.0]		3 [2.0]	1 [2.0]
Retina, Inflammation		1 [1.0]		
Zymbal's Gland	(0)	(0)	(0)	(1)

## URINARY SYSTEM

Kidney	(50)	(50)	(50)	(50)
Accumulation, Hyaline Droplet		2 [3.0]	1 [2.0]	1 [3.0]
Glomerulosclerosis		1 [1.0]		
Infarct	2 [1.0]	3 [1.7]	4 [2.0]	3 [2.0]
Mineralization	43 [1.0]	43 [1.0]	45 [1.0]	46 [1.0]
Nephropathy	34 [1.0]	35 [1.0]	37 [1.1]	43 [1.2]
Cortex, Cyst	2 [1.5]			
Medulla, Cyst	1 [1.0]			
Papilla, Necrosis			1 [1.0]	1 [1.0]
Pelvis, Inflammation	1 [2.0]	1 [1.0]	5 [1.4]	4 [1.8]
Pelvis, Transitional Epithelium, Hyperplasia			4 [1.5]	6 [1.2]
Pelvis, Transitional Epithelium, Metaplasia			1 [2.0]	
Renal Tubule, Dilatation			1 [2.0]	
Renal Tubule, Necrosis			1 [3.0]	2 [2.0]
Urinary Bladder	(50)	(50)	(50)	(50)

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

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