

Appendix: Statistics

Contents

Brain	38
Cerebellum	38
Cerebrum	38
Brain Stem	38
Medulla Oblangata	39
Spinal Cord	39
Sciatic Nerve	39
Optic Nerves	40
Eyes	40
Harderian Glands	41
Exorbital Lacrimal Glands	41
Aorta	42
Heart	42
Nasopharyngeal Duct	42
Nasal Cavities	43
Nasal Cavity, Level 1	43
Nasal Cavity, Level 2	44
Nasal Cavity, Level 3	45
Nasal Cavity, Level 4	45
Larynx	46
Larynx, Level 1	46
Larynx, Level 2	46
Larynx, Level 3	47
Larynx, Level 4	47
Larynx, Level 5	48
Larynx, Level 6	48
Trachea	49
Tracheal bifurction, carina & mainstem bronchi	49
Lungs	50
Pituitary Gland	51
Adrenal Cortex	51
Adrenal Medulla	52
Thyroid Glands	52
Parathyroid Glands	52
Pancreas	53
Liver	54
Tongue	54
Esophagus	55
Stomach	56
Duodenum	57
Jejunum	57
Ileum	57
Peyer's Patches	57
Cecum	58
Colon	58
Rectum	58

Salivary Glands	59
Parotid Salivary Glands	59
Sublingual Salivary Glands	60
Submandibular Salivary Glands	60
Urinary Bladder	60
Ureters	61
Kidneys	62
Skin and Subcutis	63
Lesions of the Testes	63
Lesions of the Epididymides	63
Lesions of the Prostate	63
Lesions of the Seminal Vesicles	64
Mammary Glands	64
Ovaries	64
Oviducts	64
Uterus	65
Cervix	65
Vagina	65
Bone Marrow	66
Bone Marrow - Sternal	66
Bone Marrow - Femur	66
Mesentric Lymph Node	67
Mandibular Lymph Node	67
Mediastinal Lymph Node	68
Thymus	68
Spleen	69
Joint - Femorotibial	69
Bone (Femur, Sternum, Others)	69
Skeletal Muscle	70

Brain

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Brain						
Numbers of rats examined	75					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Brain						
Numbers of rats examined	75					

Cerebellum

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Cerebellum						
Numbers of rats examined	15					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Cerebellum						
Numbers of rats examined	15					

Cerebrum

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Cerebrum						

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Cerebrum						
Numbers of rats examined	15					

Brain Stem

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Brain Stem						
Numbers of rats examined	5					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Brain Stem						
Numbers of rats examined	5					

Medulla Oblangata

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Medulla Oblangata						
Numbers of rats examined	20					
Nerve fiber deg.	5	25.00	25.00	35.36	0.00	50.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Medulla Oblangata						
Numbers of rats examined	20					
Nerve fiber deg.	4	20.00	20.00	20.00	20.00	20.00

Spinal Cord

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Spinal Cord						
Numbers of rats examined	70					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Spinal Cord						
Numbers of rats examined	70					

Sciatic Nerve

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Sciatic Nerve						
Numbers of rats examined	65					
Nerve fiber Degeneration	4	6.15	5.71	15.12	0.00	40.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Sciatic Nerve						
Numbers of rats examined	65					
Nerve fiber Degeneration	2	3.08	2.86	7.56	0.00	20.00

Optic Nerves

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Optic Nerves						
Numbers of rats examined	75					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Optic Nerves						
Numbers of rats examined	75					

Eyes

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Eyes						
Numbers of rats examined	55					
Retinal rosette	1	1.82	1.67	4.08	0.00	10.00
Hemorrhage	12	21.82	20.00	31.62	0.00	70.00
Periorbital inflammation	1	1.82	1.67	4.08	0.00	10.00
Periorbital fibrosis	0	0.00	0.00	0.00	0.00	0.00
Retinal degeneration	3	5.45	5.00	12.25	0.00	30.00
Inflammation, orbit.	1	1.82	1.67	4.08	0.00	10.00
Peribulbar hemorrhage	11	20.00	13.33	32.66	0.00	80.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Eyes						
Numbers of rats examined	55					
Retinal rosette	0	0.00	0.00	0.00	0.00	0.00
Hemorrhage	15	27.27	25.00	39.87	0.00	90.00
Periorbital inflammation	0	0.00	0.00	0.00	0.00	0.00
Periorbital fibrosis	10	18.18	16.67	40.82	0.00	100.00
Retinal degeneration	1	1.82	1.67	4.08	0.00	10.00
Inflammation, orbit.	5	9.09	8.33	20.41	0.00	50.00
Peribulbar hemorrhage	7	12.73	6.67	16.33	0.00	40.00

Harderian Glands

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
<u>Harderian Glands</u>						
Numbers of rats examined	50					
Mononuclear cell foci	0	0.00	0.00	0.00	0.00	0.00
Inflammation	6	12.00	12.00	21.68	0.00	50.00
Hemorrhage	12	24.00	24.00	35.78	0.00	80.00
Porphyrin deposition	28	56.00	56.00	51.77	0.00	100.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
<u>Harderian Glands</u>						
Numbers of rats examined	50					
Mononuclear cell foci	3	6.00	6.00	5.48	0.00	10.00
Inflammation	8	16.00	16.00	20.74	0.00	50.00
Hemorrhage	14	28.00	28.00	35.64	0.00	80.00
Porphyrin deposition	26	52.00	52.00	47.64	0.00	90.00

Exorbital Lacrimal Glands

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
<u>Ex. Lacrimal Glands</u>						
Numbers of rats examined	32					
Harderian alteration	4	12.50	44.00	51.77	0.00	100.00
Mononuclear cell foci	1	3.13	2.00	4.47	0.00	10.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
<u>Ex. Lacrimal Glands</u>						
Numbers of rats examined	40					
Harderian alteration	2	5.00	5.00	10.00	0.00	20.00
Mononuclear cell foci	1	2.50	2.50	5.00	0.00	10.00

Aorta

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Aorta						
Numbers of rats examined	55					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Aorta						
Numbers of rats examined	65					

Heart

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Heart						
Numbers of rats examined	65					
Mononuclear cell foci	4	6.15	5.71	11.34	0.00	30.00
Fibrosis	3	4.62	4.29	11.34	0.00	30.00
Cardiomyopathy	3	4.62	4.29	7.87	0.00	20.00
Myocardial necrosis	1	1.54	1.43	3.78	0.00	10.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Heart						
Numbers of rats examined	65					
Mononuclear cell foci	2	3.08	2.86	7.56	0.00	20.00
Fibrosis	0	0.00	0.00	0.00	0.00	0.00
Cardiomyopathy	1	1.54	1.43	3.78	0.00	10.00
Myocardial necrosis	1	1.54	1.43	3.78	0.00	10.00

Nasopharyngeal Duct

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Nasopharyngeal Duct						
Numbers of rats examined	39					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Nasopharyngeal Duct						
Numbers of rats examined	40					

Nasal Cavities

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Nasal cavities						
Numbers of rats examined	50					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Nasal cavities						
Numbers of rats examined	50					

Nasal Cavity, Level 1

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Nasal Cavity, Level 1						
Numbers of rats examined	50					
Goblet cell proliferation	10	20.00	18.75	13.15	0.00	30.00
Hyaline inclusions	0	0.00	0.00	0.00	0.00	0.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Nasal Cavity, Level 1						
Numbers of rats examined	50					
Goblet cell proliferation	20	40.00	35.00	26.46	0.00	60.00
Hyaline inclusions	1	2.00	2.50	5.00	0.00	10.00

Nasal Cavity, Level 2

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Nasal Cavity, Level 2						
Numbers of rats examined	50					
Goblet cell proliferation	5	10.00	6.25	12.50	0.00	25.00
Hyaline inclusions	2	4.00	5.00	10.00	0.00	20.00
Hyaline change/ incl.	2	4.00	2.50	5.00	0.00	10.00
Mononuclear foci	1	2.00	1.25	2.50	0.00	5.00
Epithelial disorg.	0	0.00	0.00	0.00	0.00	0.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Nasal Cavity, Level 2						
Numbers of rats examined	50					
Goblet cell proliferation	1	2.00	1.25	2.50	0.00	5.00
Hyaline inclusions	0	0.00	0.00	0.00	0.00	0.00
Hyaline change/ incl.	1	2.00	1.25	2.50	0.00	5.00
Mononuclear foci	0	0.00	0.00	0.00	0.00	0.00
Epithelial disorg.	1	2.00	2.50	5.00	0.00	10.00

Nasal Cavity, Level 3

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Nasal Cavity, Level 3						
Numbers of rats examined	50					
Hyaline inclusions	1	2.00	2.50	5.00	0.00	10.00
Epithelial disorg.	1	2.00	2.50	5.00	0.00	10.00
Hyaline change/ incl.	2	4.00	2.50	5.00	0.00	10.00
Olfactory epi.disor.	0	0.00	0.00	0.00	0.00	0.00
Olfactory ep.regen.	1	2.00	1.25	2.50	0.00	5.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Nasal Cavity, Level 3						
Numbers of rats examined	50					
Hyaline inclusions	0	0.00	0.00	0.00	0.00	0.00
Epithelial disorg.	0	0.00	0.00	0.00	0.00	0.00
Hyaline change/ incl.	2	4.00	2.50	5.00	0.00	10.00
Olfactory epi.disor.	1	2.00	1.25	2.50	0.00	5.00
Olfactory ep.regen.	0	0.00	0.00	0.00	0.00	0.00

Nasal Cavity, Level 4

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Nasal Cavity, Level 4						
Numbers of rats examined	40					
Hyaline change/ incl.	1	2.50	1.67	2.89	0.00	5.00
Foreign body	0	0.00	0.00	0.00	0.00	0.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Nasal Cavity, Level 4						
Numbers of rats examined	40					
Hyaline change/ incl.	1	2.50	1.67	2.89	0.00	5.00
Foreign body	1	2.50	0.00	2.89	0.00	5.00

Larynx

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Larynx						
Numbers of rats examined	60					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Larynx						
Numbers of rats examined	60					

Larynx, Level 1

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Larynx, Level 1						
Numbers of rats examined	20					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Larynx, Level 1						
Numbers of rats examined	20					

Larynx, Level 2

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Larynx, Level 2						
Numbers of rats examined	40					
Mineralization	0	0.00	0.00	0.00	0.00	0.00
Dissected secret.	2	5.00	5.00	5.00	0.00	10.00
Inflammation	0	0.00	0.00	0.00	0.00	0.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Larynx, Level 2						
Numbers of rats examined	40					
Mineralization	2	5.00	5.00	5.00	0.00	10.00
Dissected secret.	5	12.50	15.00	8.66	5.00	20.00
Inflammation	2	5.00	6.67	11.55	0.00	20.00

Larynx, Level 3

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Larynx, Level 3						
Numbers of rats examined	36					
Dissected secret.	11	30.56	31.67	16.07	20.00	50.00
Mononuclear foci	2	5.56	5.42	5.05	0.00	10.00
Mineralization	4	11.11	8.33	14.43	0.00	25.00
Inflammation: gland.	1	2.78	2.08	3.61	0.00	6.25
Granuloma	0	0.00	0.00	0.00	0.00	0.00
Inflamm. Ventral gl.	2	5.56	6.67	11.55	0.00	20.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Larynx, Level 3						
Numbers of rats examined	39					
Dissected secret.	5	12.82	13.51	5.63	10.00	20.00
Mononuclear foci	3	7.69	8.42	10.37	0.00	20.00
Mineralization	2	5.13	3.51	6.08	0.00	10.53
Inflammation: gland.	0	0.00	0.00	0.00	0.00	0.00
Granuloma	1	2.56	3.33	5.77	0.00	10.00
Inflamm. Ventral gl.	0	0.00	0.00	0.00	0.00	0.00

Larynx, Level 4

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Larynx, Level 4						
Numbers of rats examined	13					
Mononuclear foci	2	15.38	15.38	0.00	15.38	15.38
Dessicated secretion	4	30.77	30.77	0.00	30.77	30.77

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Larynx, Level 4						
Numbers of rats examined	17					
Mononuclear foci	2	11.76	11.76	0.00	11.76	11.76
Dessicated secretion	2	11.76	11.76	0.00	11.76	11.76

Larynx, Level 5

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Larynx, Level 5						
Numbers of rats examined	10					
Mononuclear foci	2	20.00	20.00	0.00	20.00	20.00
Inflammation: gland.	1	10.00	10.00	0.00	10.00	10.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Larynx, Level 5						
Numbers of rats examined	17					
Mononuclear foci	5	29.41	29.41	0.00	29.41	29.41
Inflammation: gland.	0	0.00	0.00	0.00	0.00	0.00

Larynx, Level 6

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Larynx, Level 6						
Numbers of rats examined	38					
Squamoid epithelium	20	52.63	51.67	28.43	20.00	75.00
Mononuclear foci	3	7.89	6.67	5.77	0.00	10.00
Squamous metaplasia	1	2.63	1.67	2.89	0.00	5.00
Inflammation: gland.	1	2.63	1.67	2.89	0.00	5.00
Blood in lumen	0	0.00	0.00	0.00	0.00	0.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Larynx, Level 6						
Numbers of rats examined	32					
Squamoid epithelium	9	28.13	17.74	21.82	0.00	42.11
Mononuclear foci	2	6.25	3.51	6.08	0.00	10.53
Squamous metaplasia	0	0.00	0.00	0.00	0.00	0.00
Inflammation: gland.	0	0.00	0.00	0.00	0.00	0.00
Blood in lumen	1	3.13	3.70	6.42	0.00	11.11

Trachea

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Trachea						
Numbers of rats examined	55					
Distended glands	8	14.55	13.33	32.66	0.00	80.00
Mononuclear cell foci	1	1.82	1.67	4.08	0.00	10.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Trachea						
Numbers of rats examined	65					
Distended glands	2	3.08	2.86	7.56	0.00	20.00
Mononuclear cell foci	2	3.08	2.86	7.56	0.00	20.00

Tracheal bifurction, carina & mainstem bronch

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Tracheal bifurction, carina & mainstem bronchi						
Numbers of rats examined	30					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Tracheal bifurction, carina & mainstem bronchi						
Numbers of rats examined	30					

Lungs

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Lungs						
Numbers of rats examined	56					
Osseous metaplasia	5	8.93	6.67	8.16	0.00	20.00
Congestion	1	1.79	16.67	40.82	0.00	100.00
Emphysema	1	1.79	0.83	2.04	0.00	5.00
Hemorrhage	1	1.79	0.83	2.04	0.00	5.00
Alveolar histiocytosis	13	23.21	17.50	20.92	0.00	50.00
Mononuclear cell foci	1	1.79	0.83	2.04	0.00	5.00
Granuloma	0	0.00	0.00	0.00	0.00	0.00
Alveolitis	3	5.36	5.00	12.25	0.00	30.00
Perivascular inflammation	1	1.79	1.67	4.08	0.00	10.00
Hyperplasia of BALT	5	8.93	8.33	20.41	0.00	50.00
Arterial mineralization	24	42.86	25.00	39.87	0.00	90.00
Hemosiderin: advent.	4	7.14	6.67	16.33	0.00	40.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Lungs						
Numbers of rats examined	65					
Osseous metaplasia	0	0.00	0.00	0.00	0.00	0.00
Congestion	0	0.00	0.00	0.00	0.00	0.00
Emphysema	3	4.62	2.50	6.12	0.00	15.00
Hemorrhage	0	0.00	0.00	0.00	0.00	0.00
Alveolar histiocytosis	12	18.46	15.83	12.81	0.00	30.00
Mononuclear cell foci	2	3.08	1.67	4.08	0.00	10.00
Granuloma	1	1.54	0.83	2.04	0.00	5.00
Alveolitis	1	1.54	0.83	2.04	0.00	5.00
Perivascular inflammation	0	0.00	0.00	0.00	0.00	0.00
Hyperplasia of BALT	3	4.62	5.00	12.25	0.00	30.00
Arterial mineralization	20	30.77	21.67	33.71	0.00	70.00
Hemosiderin: advent.	10	15.38	16.67	40.82	0.00	100.00

Pituitary Gland

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Pituitary						
Numbers of rats examined	45					
Cyst(s)/clefts	6	13.33	14.00	8.94	0.00	20.00
Congestion	0	0.00	0.00	0.00	0.00	0.00
Hyperplasia: anter.	1	2.22	2.00	4.47	0.00	10.00
Adenoma: anterior	1	2.22	2.00	4.47	0.00	10.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Pituitary						
Numbers of rats examined	45					
Cyst(s)/clefts	4	8.89	8.00	13.04	0.00	30.00
Congestion	1	2.22	0.00	0.00	0.00	0.00
Hyperplasia: anter.	0	0.00	0.00	0.00	0.00	0.00
Adenoma: anterior	0	0.00	0.00	0.00	0.00	0.00

Adrenal Cortex

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Adrenal Cortex						
Numbers of rats examined	55					
Vacuolation	10	18.18	16.67	28.75	0.00	70.00
Focal hypertrophy	0	0.00	0.00	0.00	0.00	0.00
Cyst	1	1.82	1.67	4.08	0.00	10.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Adrenal Cortex						
Numbers of rats examined	55					
Vacuolation	1	1.82	1.67	4.08	0.00	10.00
Focal hypertrophy	1	1.82	1.67	4.08	0.00	10.00
Cyst	0	0.00	0.00	0.00	0.00	0.00

Adrenal Medulla

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Adrenal medulla						
Numbers of rats examined	55					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Adrenal medulla						
Numbers of rats examined	55					

Thyroid Glands

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Thyroid Glands						
Numbers of rats examined	65					
Ductal remnant	0	0.00	0.00	0.00	0.00	0.00
Follicular cell hypertrophy	1	1.54	2.86	7.56	0.00	20.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Thyroid Glands						
Numbers of rats examined	65					
Ductal remnant	1	1.54	1.43	3.78	0.00	10.00
Follicular cell hypertrophy	0	0.00	0.00	0.00	0.00	0.00

Parathyroid Glands

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Parathyroid Glands						
Numbers of rats examined	62					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Parathyroid Glands						
Numbers of rats examined	64					

Pancreas

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Pancreas						
Numbers of rats examined	65					
Mononuclear cell foci	1	1.54	1.43	3.78	0.00	10.00
Exocrine atrophy	1	1.54	1.43	3.78	0.00	10.00
Inflammation	1	1.54	2.86	7.56	0.00	20.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Pancreas						
Numbers of rats examined	65					
Mononuclear cell foci	1	1.54	1.43	3.78	0.00	10.00
Exocrine atrophy	2	3.08	2.86	7.56	0.00	20.00
Inflammation	1	1.54	2.86	7.56	0.00	20.00

Liver

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Liver						
Numbers of rats examined	55					
Lobe torsion	0	0.00	0.00	0.00	0.00	0.00
Fatty change	12	21.82	20.00	31.62	0.00	70.00
Vacuolization	2	3.64	6.67	16.33	0.00	40.00
Pigment deposition	0	0.00	0.00	0.00	0.00	0.00
Hematopoiesis	1	1.82	1.67	4.08	0.00	10.00
Inflammatory cell foci	9	16.36	15.00	32.09	0.00	80.00
Bile duct hyperplasia	2	3.64	3.33	8.16	0.00	20.00
Mononuclear foci	6	10.91	10.00	24.49	0.00	60.00
Mononuclear foci	0	0.00	0.00	0.00	0.00	0.00
Lipid deposits, diffuse	1	1.82	3.33	8.16	0.00	20.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Liver						
Numbers of rats examined	56					
Lobe torsion	1	1.79	14.29	37.80	0.00	100.00
Fatty change	11	19.64	15.71	26.99	0.00	60.00
Vacuolization	1	1.79	2.86	7.56	0.00	20.00
Pigment deposition	0	0.00	0.00	0.00	0.00	0.00
Hematopoiesis	0	0.00	0.00	0.00	0.00	0.00
Inflammatory cell foci	7	12.50	10.00	26.46	0.00	70.00
Bile duct hyperplasia	3	5.36	4.29	11.34	0.00	30.00
Mononuclear foci	2	3.57	2.86	7.56	0.00	20.00
Mononuclear foci	1	1.79	1.43	3.78	0.00	10.00
Lipid deposits, diffuse	1	1.79	2.86	7.56	0.00	20.00

Tongue

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Tongue						
Numbers of rats examined	50					
Mononuclear cell foci	1	2.00	2.00	4.47	0.00	10.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Tongue						
Numbers of rats examined	50					
Mononuclear cell foci	0	0.00	0.00	0.00	0.00	0.00

Esophagus

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Esophagus						
Numbers of rats examined	55					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Esophagus						
Numbers of rats examined	65					

Stomach

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
<u>Stomach</u>						
Numbers of rats examined	65					
Lymphoid follicles	0	0.00	0.00	0.00	0.00	0.00
Vacuolation	4	6.15	5.71	9.76	0.00	20.00
Fibrosis	1	1.54	1.43	3.78	0.00	10.00
Hyperkeratosis	1	1.54	1.43	3.78	0.00	10.00
Basal cell hyperplasia	0	0.00	0.00	0.00	0.00	0.00
Epithelial hyperplasia	1	1.54	1.43	3.78	0.00	10.00
Erosions	3	4.62	4.29	7.87	0.00	20.00
Mononuclear cell foci	0	0.00	0.00	0.00	0.00	0.00
Hyaline inclusions	2	3.08	2.86	7.56	0.00	20.00
Perivascular inflam.	0	0.00	0.00	0.00	0.00	0.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
<u>Stomach</u>						
Numbers of rats examined	65					
Lymphoid follicles	1	1.54	1.43	3.78	0.00	10.00
Vacuolation	2	3.08	2.86	7.56	0.00	20.00
Fibrosis	0	0.00	0.00	0.00	0.00	0.00
Hyperkeratosis	0	0.00	0.00	0.00	0.00	0.00
Basal cell hyperplasia	1	1.54	1.43	3.78	0.00	10.00
Epithelial hyperplasia	0	0.00	0.00	0.00	0.00	0.00
Erosions	1	1.54	1.43	3.78	0.00	10.00
Mononuclear cell foci	1	1.54	1.43	3.78	0.00	10.00
Hyaline inclusions	0	0.00	0.00	0.00	0.00	0.00
Perivascular inflam.	1	1.54	1.43	3.78	0.00	10.00

Duodenum

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Duodenum						
Numbers of rats examined	65					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Duodenum						
Numbers of rats examined	65					

Jejunum

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Jejunum						
Numbers of rats examined	55					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Jejunum						
Numbers of rats examined	55					

Ileum

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Ileum						
Numbers of rats examined	55					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Ileum						
Numbers of rats examined	55					

Peyer's Patches

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Peyer's patches						
Numbers of rats examined	14					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Peyer's patches						
Numbers of rats examined	14					

Cecum

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
<u>Cecum</u>						
Numbers of rats examined	65					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
<u>Cecum</u>						
Numbers of rats examined	65					

Colon

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
<u>Colon</u>						
Numbers of rats examined	65					
Nematodes in lumen	1	1.54	2.86	7.56	0.00	20.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
<u>Colon</u>						
Numbers of rats examined	65					
Nematodes in lumen	0	0.00	0.00	0.00	0.00	0.00

Rectum

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
<u>Rectum</u>						
Numbers of rats examined	65					
Nematodes in lumen	1	1.54	1.43	3.78	0.00	10.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
<u>Rectum</u>						
Numbers of rats examined	65					
Nematodes in lumen	0	0.00	0.00	0.00	0.00	0.00

Salivary Glands

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Salivary glands						
Numbers of rats examined	65					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Salivary glands						
Numbers of rats examined	65					

Parotid Salivary Glands

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Parotid salivary glands						
Numbers of rats examined	50					
Basophilic acini	1	2.00	2.00	4.47	0.00	10.00
Ectopic mand.remn.	1	2.00	2.00	4.47	0.00	10.00
Acinar hypertrophy	0	0.00	0.00	0.00	0.00	0.00
Mucinous acini	1	2.00	2.00	4.47	0.00	10.00
Azinar atrophy	0	0.00	0.00	0.00	0.00	0.00
Mononuclear foci	3	6.00	6.00	8.94	0.00	20.00
Inflammation	1	2.00	2.00	4.47	0.00	10.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Parotid salivary glands						
Numbers of rats examined	50					
Basophilic acini	14	28.00	28.00	26.83	0.00	60.00
Ectopic mand.remn.	1	2.00	2.00	4.47	0.00	10.00
Acinar hypertrophy	1	2.00	2.00	4.47	0.00	10.00
Mucinous acini	1	2.00	2.00	4.47	0.00	10.00
Azinar atrophy	1	2.00	2.00	4.47	0.00	10.00
Mononuclear foci	3	6.00	6.00	8.94	0.00	20.00
Inflammation	0	0.00	0.00	0.00	0.00	0.00

Sublingual Salivary Glands

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Sublingual salivary glands						
Numbers of rats examined	60					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Sublingual salivary glands						
Numbers of rats examined	60					

Submandibular Salivary Glands

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Submand. salivary glands						
Numbers of rats examined	60					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Submand. salivary glands						
Numbers of rats examined	60					

Urinary Bladder

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Urinary Bladder						
Numbers of rats examined	55					
Mononuclear cell foci	0	0.00	0.00	0.00	0.00	0.00
Congestion	0	0.00	0.00	0.00	0.00	0.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Urinary Bladder						
Numbers of rats examined	56					
Mononuclear cell foci	1	1.79	1.43	3.78	0.00	10.00
Congestion	1	1.79	14.29	37.80	0.00	100.00

Ureters

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Ureters						
Numbers of rats examined	15					
Dilation	10	66.67	0.00	0.00	0.00	0.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Ureters						
Numbers of rats examined	15					
Dilation	11	73.33	10.00	14.14	0.00	20.00

Kidneys

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Kidneys						
Numbers of rats examined	56					
Cortical mineralization	2	3.57	2.86	7.56	0.00	20.00
Pelvic mineralization	0	0.00	0.00	0.00	0.00	0.00
Pelvic dilation	0	0.00	0.00	0.00	0.00	0.00
Hyaline inclusion	16	28.57	35.71	47.56	0.00	100.00
Tubular basophilia	2	3.57	15.71	37.35	0.00	100.00
Cortical cyst	1	1.79	14.29	37.80	0.00	100.00
Lipofuscin	0	0.00	0.00	0.00	0.00	0.00
Mononuclear cell foci	8	14.29	24.29	38.23	0.00	100.00
Pyelitis	1	1.79	1.43	3.78	0.00	10.00
Urothelial hyperplasia	0	0.00	0.00	0.00	0.00	0.00
Tubular Hypertrophy	0	0.00	0.00	0.00	0.00	0.00
Tubular Hyperplasia	0	0.00	0.00	0.00	0.00	0.00
Tubular Adenoma	0	0.00	0.00	0.00	0.00	0.00
Pelvic mineralization	0	0.00	0.00	0.00	0.00	0.00
Pelvic distension	0	0.00	0.00	0.00	0.00	0.00
Cystic tubule (s)	0	0.00	0.00	0.00	0.00	0.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Kidneys						
Numbers of rats examined	48					
Cortical mineralization	14	29.17	21.97	35.49	0.00	81.82
Pelvic mineralization	1	2.08	1.52	3.71	0.00	9.09
Pelvic dilation	2	4.17	11.67	20.41	0.00	50.00
Hyaline inclusion	0	0.00	0.00	0.00	0.00	0.00
Tubular basophilia	1	2.08	1.52	3.71	0.00	9.09
Cortical cyst	0	0.00	0.00	0.00	0.00	0.00
Lipofuscin	8	16.67	12.12	29.69	0.00	72.73
Mononuclear cell foci	4	8.33	6.06	14.85	0.00	36.36
Pyelitis	1	2.08	1.52	3.71	0.00	9.09
Urothelial hyperplasia	1	2.08	1.52	3.71	0.00	9.09
Tubular Hypertrophy	1	2.08	1.52	3.71	0.00	9.09
Tubular Hyperplasia	1	2.08	1.52	3.71	0.00	9.09
Tubular Adenoma	1	2.08	1.52	3.71	0.00	9.09
Pelvic mineralization	1	2.08	1.67	4.08	0.00	10.00
Pelvic distension	1	2.08	8.33	20.41	0.00	50.00
Cystic tubule (s)	1	2.08	8.33	20.41	0.00	50.00

Skin and Subcutis

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Skin						
Numbers of rats examined	56					
Auricular chondrop.	1	1.79	1.52	3.71	0.00	9.09

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Skin						
Numbers of rats examined	57					
Auricular chondrop.	2	3.51	2.60	6.87	0.00	18.18

Testes

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Testes						
Numbers of rats examined	57					
Tubular degeneration	3	5.26	16.88	37.27	0.00	100.00
Leydig cell hyperplasia	1	1.75	1.30	3.44	0.00	9.09
Granuloma	1	1.75	14.29	37.80	0.00	100.00

Epididymides

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Epididymides						
Numbers of rats examined	46					
Azoospermia	2	4.35	18.33	40.21	0.00	100.00
Cellular detritus	1	2.17	1.67	4.08	0.00	10.00
Distended tubules / cell debris / secretion-filled	1	2.17	16.67	40.82	0.00	100.00

Prostate

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Prostate						
Numbers of rats examined	65					

Seminal Vesicles

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Seminal Vesicles						
Numbers of rats examined	38					
Congestion	2	5.26	33.33	51.64	0.00	100.00

Mammary Glands

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Mammary glands						
Numbers of rats examined	55					
Adenocarcinoma	0	0.00	0.00	0.00	0.00	0.00

Study identification	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Mammary glands						
Numbers of rats examined	56					
Adenocarcinoma	1	1.79	14.29	37.80	0.00	100.00

Ovaries

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Ovaries						
Numbers of rats examined	65					
Bursa dilation	1	1.54	1.43	3.78	0.00	10.00
Atrophy	4	6.15	5.71	15.12	0.00	40.00
Hemorrhagic C.lutea	1	1.54	1.43	3.78	0.00	10.00

Oviducts

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Oviducts						
Numbers of rats examined	20					

Uterus

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Uterus						
Numbers of rats examined	39					
Cornual dilation	11	28.21	46.21	42.97	0.00	100.00
Cystic hyperplasia	2	5.13	3.03	7.42	0.00	18.18

Cervix

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Cervix						
Numbers of rats examined	10					

Vagina

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Vagina						
Numbers of rats examined	65					
Proestrus	5	7.69	7.14	14.96	0.00	40.00
Estrus	6	9.23	8.57	15.74	0.00	40.00
Metestrus	7	10.77	10.00	22.36	0.00	60.00
Diestrus	2	3.08	2.86	4.88	0.00	10.00

Bone Marrow

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Bone Marrow						
Numbers of rats examined	35					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Bone Marrow						
Numbers of rats examined	35					

Bone Marrow - Sternal

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Bone Marrow – sternal						
Numbers of rats examined	45					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Bone Marrow – sternal						
Numbers of rats examined	45					

Bone Marrow - Femur

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Bone Marrow – femur						
Numbers of rats examined	25					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Bone Marrow – femur						
Numbers of rats examined	25					

Mesenteric Lymph Node

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Mesenteric Lymph Nodes						
Numbers of rats examined	65					
Pigment deposition	5	7.69	7.14	18.90	0.00	50.00
Mastocytosis	6	9.23	8.57	22.68	0.00	60.00
Histiocytosis	7	10.77	10.00	26.46	0.00	70.00
Lymphoid hyperplasia	16	24.62	22.86	40.71	0.00	100.00
Hemangioma	1	1.54	1.43	3.78	0.00	10.00
Hemangiectasis	1	1.54	1.43	3.78	0.00	10.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Mesenteric Lymph Nodes						
Numbers of rats examined	65					
Pigment deposition	3	4.62	4.29	11.34	0.00	30.00
Mastocytosis	6	9.23	8.57	22.68	0.00	60.00
Histiocytosis	10	15.38	14.29	37.80	0.00	100.00
Lymphoid hyperplasia	15	23.08	21.43	39.34	0.00	100.00
Hemangioma	0	0.00	0.00	0.00	0.00	0.00
Hemangiectasis	0	0.00	0.00	0.00	0.00	0.00

Mandibular Lymph Node

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Mandibular Lymph Nodes						
Numbers of rats examined	56					
Sinusoidal dilation	0	0.00	0.00	0.00	0.00	0.00
Congestion	1	1.79	14.29	37.80	0.00	100.00
Plasmacytosis	14	25.00	32.86	44.99	0.00	100.00
Lymphoid hyperplasia	12	21.43	30.00	47.96	0.00	100.00
Hemosiderin	2	3.57	2.86	7.56	0.00	20.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Mandibular Lymph Nodes						
Numbers of rats examined	48					
Sinusoidal dilation	1	2.08	1.39	3.40	0.00	8.33
Congestion	1	2.08	1.39	3.40	0.00	8.33
Plasmacytosis	17	35.42	25.83	40.05	0.00	80.00
Lymphoid hyperplasia	12	25.00	19.44	40.02	0.00	100.00
Hemosiderin	5	10.42	6.94	17.01	0.00	41.67

Mediastinal Lymph Node

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Mediastinal lymph Node						
Numbers of rats examined	20					
Lymphoid hyperplasia	3	15.00	15.00	21.21	0.00	30.00
Congestion	1	5.00	5.00	7.07	0.00	10.00
Hemosiderin	7	35.00	35.00	49.50	0.00	70.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Mediastinal lymph Node						
Numbers of rats examined	20					
Lymphoid hyperplasia	4	20.00	20.00	28.28	0.00	40.00
Congestion	2	10.00	10.00	14.14	0.00	20.00
Hemosiderin	10	50.00	50.00	70.71	0.00	100.00

Thymus

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Thymus						
Numbers of rats examined	56					
Cyst(s)	2	3.57	1.67	4.08	0.00	10.00
Congestion	2	3.57	1.67	4.08	0.00	10.00
Hemorrhage	0	0.00	0.00	0.00	0.00	0.00
Involution/ Atrophy	11	19.64	33.33	51.64	0.00	100.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Thymus						
Numbers of rats examined	40					
Cyst(s)	17	42.50	47.50	44.92	0.00	100.00
Congestion	2	5.00	6.39	13.35	0.00	33.33
Hemorrhage	2	5.00	33.33	51.64	0.00	100.00
Involution/ Atrophy	12	30.00	27.78	44.31	0.00	100.00

Spleen

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
<u>Spleen</u>						
Numbers of rats examined	55					
Extramedillary hematopoiesis	20	36.36	33.33	51.64	0.00	100.00
Hemosiderin pigment	20	36.36	33.33	51.64	0.00	100.00
Lymphoid hyperplasia	10	18.18	16.67	40.82	0.00	100.00
Anomaly	1	1.82	1.67	4.08	0.00	10.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
<u>Spleen</u>						
Numbers of rats examined	55					
Extramedillary hematopoiesis	20	36.36	33.33	51.64	0.00	100.00
Hemosiderin pigment	20	36.36	33.33	51.64	0.00	100.00
Lymphoid hyperplasia	10	18.18	16.67	40.82	0.00	100.00
Anomaly	0	0.00	0.00	0.00	0.00	0.00

Joint - Femorotibial

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
<u>Joint – femorotibial</u>						
Number of rats examined	35					

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
<u>Joint – femorotibial</u>						
Number of rats examined	35					

Bone (Femur, Sternum, Others)

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
<u>Bone</u>						
Number of rats examined	55					
Degenerative arthropathy of knee joint	2	3.64	6.67	16.33	0.00	40.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
<u>Bone</u>						
Number of rats examined	55					
Degenerative arthropathy of knee joint	0	0.00	0.00	0.00	0.00	0.00

Skeletal Muscle

Males	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Skeletal Muscle						
Numbers of rats examined	65					
Mononuclear cell foci	1	1.54	1.43	3.78	0.00	10.00

Females	Total n	Total %	Mean %	STDEV %	MIN %	MAX %
Skeletal Muscle						
Numbers of rats examined	65					
Mononuclear cell foci	1	1.54	1.43	3.78	0.00	10.00
Atrophy	1	1.54	1.43	3.78	0.00	10.00