

Histopathology Findings in 4-26 Week Old Crl:CD(SD) Rats

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charles river

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INTRODUCTION:

Statistical evaluations are conducted on nearly all data from toxicology studies. The results of these evaluations are used to determine whether a group of treated animals varies significantly from the concurrent control group with regard to a particular parameter. Since statistical differences can occur by chance alone, using a positive statistical difference as the definitive evaluation tool could produce a misleading, false positive result. Alternatively, a slight increase in an uncommon finding would be unlikely to achieve statistical significance by the tests typically employed in toxicology studies yet could be biologically meaningful. In both of these instances, historical control data provide a useful tool to evaluate the biological significance of a particular data set (2). In the past we have typically compiled data from carcinogenicity and long-term toxicology studies to provide information regarding the overall incidence of a particular finding at the end of an animal's lifetime. This publication addresses the equally important issue of age at onset of a finding, as early onset of a particular finding could indicate a toxicologically significant alteration in the treated animals. The histopathology data presented here were obtained from young animals from control groups of short-term and juvenile toxicology studies.

The incidence of neoplasms and non-neoplastic lesions and the survival data presented in this publication were gathered from a standard tissue list collected from thirty-four control groups of animals (1). The animals in these studies were approximately four to 26 weeks of age at the time of necropsy. All studies were conducted in accordance with Good Laboratory Practice regulations of the US Food and Drug Administration or the Environmental Protection Agency and/or the Standard Operating Procedures of the participating laboratory. All studies were performed in the United States or Canada by contract laboratories or industrial toxicology facilities. All studies were conducted in support of in-house research or marketing permits. The data presented were provided to us by the individual laboratories.

PURPOSE:

The purpose of this compilation is to offer the study director, reviewing toxicologist, and/or study pathologist information on the reported incidence and time of onset of neoplasms and non-neoplastic lesions and survival data in young Crl:CD(SD) rats maintained as control animals. The animals in this compilation vary in age from approximately 4-26 weeks. This document was prepared for informational purposes only. Diagnoses of the various findings in the compilations are intentionally grouped in a manner to provide the user with a range of reported incidences of similar types of lesions. This compilation is not intended in any way to propose a system of standardized nomenclature, nor does it separately include each and every reported variant of each lesion. For these reasons, care should be taken in using these data that are not intended as a substitute for historical data collected within an institution.

COMMON STUDY PARAMETERS:

The studies included in this publication were initiated between 2002 and 2009 at three different industrial or contract testing facilities in the United States or Canada. All studies used Charles River Crl:CD(SD) rats.

The rats in the reported studies were from control groups of oral gavage, intravenous (IV), intramuscular (IM), subcutaneous (SC), and percutaneous (PC) studies. The animals were treated with an appropriate control agent in a manner identical to that of the corresponding study groups.

Rats included in this publication were housed as appropriate for the animal's age and as described in the individual study protocols. The animal rooms were generally maintained at average temperatures of 72 +/- 5 degrees Fahrenheit with an average relative humidity of 30-70%. A 12hr/12hr light/dark cycle was employed in all studies. Since these studies were conducted in different facilities, there was some variation in environmental conditions. However, the overall environmental conditions were not considered by those performing the studies to have had any effect on the quality or integrity of the studies. Rats were allowed free access to tap water and a commercial diet, such as Purina PMI Certified Rodent Chow 5002 or PMI Nutrition International, Inc. Certified rodent diet 18% 5LG3.

DATA SETS PRESENTED:

Survival data are presented by study as the actual number surviving to terminal sacrifice and as percent survival at terminal sacrifice (Tables 1 and 2). The only deaths recorded were two male animals, one in each of two separate studies. The cause of death for one of these males was accidental while the other was considered to be incidental and undetermined in the absence of any necropsy findings.

The overall incidences of histopathology findings, including neoplastic and non-neoplastic lesions, observed in any organ from all studies are reported and summarized in Tables 3 and 4, and individual study data is presented in Tables 5 and 6. For simplicity, the data included in this publication are grouped by organ/organ system and presented alphabetically. This publication contains positive findings only. Organs and/or organ systems that did not have any findings are not included in this publication.

SUMMARY TABLE CALCULATIONS FOR HISTOPATHOLOGY FINDINGS FROM ALL STUDIES:

The following describes how each of the parameters in the tables were calculated.

Number of Studies (# Studies)

This is the number of studies in which a particular tissue/organ was examined. In this presentation, the number of studies is 34 for males and 34 for females.

Total Number of Organs (Total # Organs)

This number represents the sum of the total number of tissues or organs examined in all control groups from all studies combined. Widespread tumors that showed involvement of multiple organs were listed on the basis of total number of animals examined. Occasionally a tumor would be noticed in a tissue not designated for histological examination by the study protocol. In these instances, the tumor incidence was based on the total number of animals examined as any such tumor or lesion would have been noticed on gross examination of the animal. Autolysis of tissues did not routinely exclude tissues from diagnosis. Some laboratories presented data separately for different regions within an organ (i.e., duodenum, jejunum and ileum) while most presented data by the organ (i.e., small intestine). When data were presented separately by organ region, they were grouped under the organ, and calculations were based on the number of organs examined.

Total Number of Lesions (# Lesions)

This represents the total number of occurrences of this lesion in the specified organ in all studies examined.

Percent of Total

These values represent the percent incidence of a particular lesion/diagnosis in the total number (all studies combined) of a particular organ examined. These values were calculated by dividing the total number of lesions by the total number of organs/animals examined and multiplying by 100 to express the values as a percent. Values are expressed to the second decimal place. Some caution is indicated in using this number, since not all pathologists or institutions will include all diagnoses in their lexicon.

Number of Studies Using This Diagnosis

This is the number of studies in which a particular diagnosis was reported. This number may be useful in interpreting the overall incidence (percent of total) of a particular diagnosis (see above).

Minimum and Maximum Percent Found (Minimum and Maximum % Found)

The range reported is the lowest and highest percent incidence for each lesion from the studies where the diagnosis was made. Therefore, if a study did not include a particular diagnosis, it was excluded from these calculations.

The minimum and maximum percent found values should be considered in conjunction with the Number of Studies Using the Diagnosis.

The individual study percentages, Minimum % Found and Maximum % Found, were calculated by dividing the number of times each diagnosis was made by the total number of organs examined in each study and then multiplying that value by 100 to express it as a percent. Values are expressed to the second decimal place.

NOMENCLATURE:

The terminology in the data tables is taken from the submitting institutions. Where different terms appeared to be used synonymously and where the putative synonyms were never used together within a single study, they were grouped together into a term appearing in the Society of Toxicologic Pathology Standardized System of Nomenclature and Diagnostic Criteria (3, 4).

ACKNOWLEDGEMENTS:

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Table 1: Summary of Individual Study Information and Survival/Males

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12
Study Initiation Date	Jul-02	Oct-04	Oct-06	Oct-07	Oct-07	Dec-07	Dec-07	Jul-09	Oct-07	Mar-04	Sep-07	Oct-08
Total Number on Study	10	10	5	10	5	5	10	15	10	12	8	10
Number Surviving to Termination	10	10	5	10	5	5	10	15	10	12	8	10
% Survival	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Approximate Age at Necropsy in Weeks	4	4	4	4	4	4	4	5	6	7	7	7
Route of Control Article Administration	IV	IM	gavage	gavage	gavage	gavage	gavage	IV	gavage	PC	IV	gavage
Study Identification	13	14	15	16	17	18	19	20	21	22	23	24
Study Initiation Date	Oct-04	Aug-06	Jul-09	May-05	Dec-07	Sep-09	Dec-06	Mar-08	Oct-04	1-Jan	Sep-09	Mar-07
Total Number on Study	10	10	15	10	5	10	20	10	10	10	10	10
Number Surviving to Termination	10	10	14	10	5	10	20	10	10	10	10	10
% Survival	100.0	100.0	93.3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Approximate Age at Necropsy in Weeks	8	8	8	9	9	9	10	10	11	11	12	13
Route of Control Article Administration	IM	gavage	IV	gavage	gavage	IV	gavage	gavage	gavage	gavage	IV	SC/IV
Study Identification	25	26	27	28	29	30	31	32	33	34		
Study Initiation Date	Dec-09	Sep-09	Sep-09	Oct-04	Aug-06	Jan-09	Sep-07	Sep-09	Sep-09	Mar-07		
Total Number on Study	12	5	5	5	11	10	10	5	5	10		
Number Surviving to Termination	12	4	5	5	11	10	10	5	5	10		
% Survival	100.0	80.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
Approximate Age at Necropsy in Weeks	13	14	14	15	17	17	18	19	19	26		
Route of Control Article Administration	gavage	gavage	gavage	gavage	gavage	gavage	IV	gavage	gavage	SC/IV		

Table 2: Summary of Individual Study Information and Survival/Females

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12
Study Initiation Date	Jul-02	Oct-04	Oct-06	Oct-07	Dec-07	Dec-07	Oct-07	Jul-09	Oct-07	Mar-04	Sep-07	Oct-08
Total Number on Study	10	10	5	10	5	10	5	15	10	12	9	10
Number Surviving to Termination	10	10	5	10	5	10	5	15	10	12	9	10
% Survival	100	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Approximate Age at Necropsy in Weeks	4	4	4	4	4	4	5	5	6	7	7	7
Route of Control Article Administration	IV	IM	gavage	gavage	gavage	gavage	gavage	IV	gavage	PC	IV	gavage
Study Identification	13	14	15	16	17	18	19	20	21	22	23	24
Study Initiation Date	Oct-04	Aug-06	Jul-09	May-05	Dec-07	Sep-09	Dec-06	Mar-08	Oct-04	Jan-09	Sep-09	Mar-07
Total Number on Study	10	10	15	10	5	10	20	10	10	10	10	10
Number Surviving to Termination	10	10	15	10	5	10	20	10	10	10	10	10
% Survival	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Approximate Age at Necropsy in Weeks	8	8	8	9	9	9	10	10	11	11	12	13
Route of Control Article Administration	IM	gavage	IV	gavage	gavage	IV	gavage	gavage	gavage	gavage	IV	SC/IV
Study Identification	25	26	27	28	29	30	31	32	33	34		
Study Initiation Date	Dec-09	Sep-09	Sep-09	Oct-04	Jan-09	Aug-06	Sep-07	Sep-09	Sep-09	Mar-07		
Total Number on Study	12	5	5	5	10	11	10	5	5	10		
Number Surviving to Termination	12	5	5	5	10	11	10	5	5	10		
% Survival	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
Approximate Age at Necropsy in Weeks	13	14	14	15	16	17	18	19	19	26		
Route of Control Article Administration	gavage	gavage	gavage	gavage	gavage	gavage	IV	gavage	gavage	SC/IV		

Table 3: Summary of Histopathology Findings/Males

		TOTAL		#STUDIES		
		#ORGANS	PERCENT	USING THIS	MINIMUM	MAXIMUM
LOCATION AND FINDING	#STUDIES	#LESIONS	OF TOTAL	DIAGNOSIS	% FOUND	% FOUND
ABDOMINAL CAVITY	34	318				
Necrosis,fat		1	0.31	1	20.00	20.00
ADRENAL	34	318				
Fatty Infiltration:min.		1	0.31	1	10.00	10.00
Hypertrophy,adrenocortical:min.		1	0.31	1	20.00	20.00
Necrosis,focal		1	0.31	1	8.33	8.33
Vacuolation,cortex:min.		16	5.03	4	10.00	80.00
Vacuolation,cortex:mild		4	1.26	3	10.00	20.00
BONE	34	318				
Proliferation,osteochondrous,periosteal,focal		1	0.31	1	20.00	20.00
BRAIN	34	318				
Dilatation,lateral ventricles:min.		2	0.63	2	10.00	20.00
Dilatation,lateral ventricles:mild		2	0.63	2	10.00	20.00
Hemorrhage:min.		2	0.63	2	10.00	10.00
Necrosis,focal:min.		1	0.31	1	10.00	10.00
CECUM	34	318				
Inflammation,mucosa,chronic:min.		6	1.89	5	10.00	20.00
Inflammation,mucosa,chronic:mild		5	1.57	5	10.00	20.00
Inflammation,mucosa,chronic:mod.		3	0.94	2	10.00	20.00
EPIDIDYMIS	34	318				
Exfoliated Spermatogenic Cells:min.		3	0.94	2	10.00	40.00
Hypospermia,duct:marked		2	0.63	2	9.09	10.00
Infiltration,mononuclear cell,focal/multifocal:min.		15	4.72	7	10.00	60.00
Infiltration,mononuclear cell,focal/multifocal:mild		1	0.31	1	10.00	10.00
Infiltration,lymphocytic:min.		13	4.09	3	20.00	70.00
ESOPHAGUS	34	318				
Degeneration,muscularis,focal:min.		1	0.31	1	10.00	10.00
Degeneration,muscularis,focal:mild		1	0.31	1	10.00	10.00
Degeneration,muscularis,focal:mod.		1	0.31	1	8.33	8.33
EYE	34	318				
Hemorrhage,conjunctiva,focal:mod.		1	0.31	1	10.00	10.00
Glaucoma,unilateral:mild		1	0.31	1	8.33	8.33
Mineralization,cornea:min.		1	0.31	1	10.00	10.00

Table 3: Summary of Histopathology Findings/Males (continued)

		TOTAL		#STUDIES		
		#ORGANS	PERCENT	USING THIS	MINIMUM	MAXIMUM
LOCATION AND FINDING	#STUDIES	#LESIONS	OF TOTAL	DIAGNOSIS	% FOUND	% FOUND
Retinopathy,focal:min.		1	0.31	1	20.00	20.00
Retinopathy,focal:mild		1	0.31	1	20.00	20.00
Retinopathy,focal:mod.		1	0.31	1	20.00	20.00
HARDERIAN GLAND	34	318				
Hemorrhage,unilateral,acute:min.		2	0.63	1	20.00	20.00
Infiltration,lymphocytic:min.		1	0.31	1	10.00	10.00
Necrosis,unilateral,focal:min.		2	0.63	1	20.00	20.00
Necrosis,unilateral,focal:mild		2	0.63	1	20.00	20.00
HEART	34	318				
Cardiomyopathy,focal:min.		12	3.77	7	9.09	40.00
Cardiomyopathy,focal:mod.		1	0.31	1	10.00	10.00
Fibrosis,focal:min.		1	0.31	1	6.67	6.67
Hyperplasia,sarcolemma:min.		1	0.31	1	10.00	10.00
Infiltration,lymphocytic:min.		2	0.63	1	20.00	20.00
Infiltration,mononuclear cell:min.		3	0.94	2	6.67	16.67
JOINT	34	318				
Inflammation,chronic-active,periosteum:mild		1	0.31	1	10.00	10.00
KIDNEY	34	318				
Adenoma,renal tubular,benign		1	0.31	1	8.33	8.33
Basophilia,tubule:min.		18	5.66	8	8.33	60.00
Basophilia,tubule:mild		3	0.94	3	10.00	20.00
Congestion		1	0.31	1	10.00	10.00
Cyst		13	4.09	8	6.67	40.00
Degeneration,tubular:min.		3	0.94	1	27.27	27.27
Dilatation,pelvis:min.		12	3.77	11	6.67	20.00
Dilatation,pelvis:mild		18	5.66	12	6.67	40.00
Dilatation,pelvis:mod.		7	2.20	6	8.33	20.00
Dilatation,tubules:min.		5	1.57	1	50.00	50.00
Dilatation,tubules:mod.		1	0.31	1	10.00	10.00
Fibrosis,focal:min.		5	1.57	3	13.33	40.00
Hyaline Droplets,cortical tubules:mild		6	1.89	3	10.00	40.00
Hypoplasia,cortex,focal:min.		1	0.31	1	20.00	20.00
Infiltration,lymphocytic:min.		7	2.20	2	20.00	50.00
Infiltration,mononuclear:min.		19	5.97	4	20.00	90.00
Infiltration,mononuclear:mild		2	0.63	2	10.00	10.00
Inflammation,chronic:mild		2	0.63	2	10.00	10.00
Mineralization:min.		6	1.89	6	6.67	10.00
Mineralization:mild		1	0.31	1	20.00	20.00
Nephropathy,chronic progressive:min.		26	8.18	13	10.00	50.00
Nephropathy,chronic progressive:mild		1	0.31	1	10.00	10.00
Proteinaceous Filtrate,tubule:min.		1	0.31	1	10.00	10.00
Pyelitis:min.		1	0.31	1	6.67	6.67

Table 3: Summary of Histopathology Findings/Males (continued)

		TOTAL		#STUDIES		
		#ORGANS	PERCENT	USING THIS	MINIMUM	MAXIMUM
LOCATION AND FINDING	#STUDIES	#LESIONS	OF TOTAL	DIAGNOSIS	% FOUND	% FOUND
LACRIMAL GLAND	34	318				
Degeneration,vacuolar:min.		1	0.31	1	10.00	10.00
Infiltration,lymphocytic:min.		5	1.57	2	20.00	30.00
Infiltration,lymphocytic:mild		1	0.31	1	10.00	10.00
Infiltration,mononuclear:min.		1	0.31	1	10.00	10.00
LARGE INTESTINE/ANUS	34	318				
Dilatation,glandular:min		1	0.31	1	10.00	10.00
Hyperplasia,lymphocytic:min.		1	0.31	1	10.00	10.00
LARYNX	34	318				
Infiltration,lymphocytic:min.		4	1.26	2	10.00	30.00
Infiltration,lymphocytic:mild		1	0.31	1	10.00	10.00
Inflammation,acute:min.		4	1.26	2	10.00	30.00
LIVER	34	318				
Altered cell foci		1	0.31	1	10.00	10.00
Congestion:min.		1	0.31	1	10.00	10.00
Deformity		1	0.31	1	10.00	10.00
Degeneration,vacuolar:min.		1	0.31	1	10.00	10.00
Ectasia,sinusoidal		1	0.31	1	8.33	8.33
Erythropoiesis		1	0.31	1	10.00	10.00
Fibrosis,capsule:min.		1	0.31	1	10.00	10.00
Hematopoiesis:min.		2	0.63	2	10.00	10.00
Hematopoiesis:mild		8	2.52	4	10.00	50.00
Inflammation		3	0.94	2	10.00	16.67
Inflammation,chronic,focal/multifocal:min.		15	4.72	6	20.00	50.00
Inflammation,subacute:min.		2	0.63	2	10.00	10.00
Inflammation,subacute,periportal:min.		2	0.63	2	10.00	10.00
Inflammation,subacute,necrotizing, subcapsular:mild		1	0.31	1	10.00	10.00
Infiltration,fatty,hepatocellular		1	0.31	1	20.00	20.00
Infiltration,mixed cell:min.		5	1.57	1	50.00	50.00
Infiltration,mononuclear:min.		25	7.86	4	25.00	100.00
Infiltration,mononuclear:mild		1	0.31	1	10.00	10.00
Leukocytosis,sinusoidal,focal:mild		1	0.31	1	20.00	20.00
Microgranuloma,foreign body		1	0.31	1	10.00	10.00
Necrosis,single cell:min.		4	1.26	2	20.00	20.00
Necrosis,focal:min		6	1.89	5	6.67	20.00
Vacuolation,hepatocellular:min.		6	1.89	3	10.00	30.00
Vacuolation,hepatocellular:mild		1	0.31	1	10.00	10.00
LUNG	34	318				
Congestion:min.		2	0.63	2	10.00	10.00
Edema,perivascular:min.		3	0.94	2	10.00	20.00
Edema,perivascular:mild		5	1.57	2	10.00	40.00
Emblous,foreign body/hair shaft:min.		8	2.52	2	10.00	46.67
Fibrosis,pleura:mild		1	0.31	1	10.00	10.00
Hemorrhage,acute,focal/multifocal:mild		1	0.31	1	20.00	20.00

Table 3: Summary of Histopathology Findings/Males (continued)

		TOTAL		#STUDIES		
		#ORGANS	PERCENT	USING THIS	MINIMUM	MAXIMUM
LOCATION AND FINDING	#STUDIES	#LESIONS	OF TOTAL	DIAGNOSIS	% FOUND	% FOUND
Hemorrhage:min.		11	3.46	5	6.67	40.00
Hemorrhage:mild		5	1.57	4	6.67	20.00
Histiocytosis,pulmonary:min.		2	0.63	1	20.00	20.00
Hyperplasia,bronchiolo-alveolar:min.		1	0.31	1	10.00	10.00
Hyperplasia,lymphoid,peribronchial:mild		2	0.63	2	10.00	10.00
Infiltration,histiocytic,alveolus:min.		5	1.57	2	10.00	40.00
Infiltration,eosinophilc,periarterial		2	0.63	1	20.00	20.00
Infiltration,lymphocytic,subpleural:min.		2	0.63	2	10.00	10.00
Infiltration,macrophage,alveolus:mild		1	0.31	1	10.00	10.00
Infiltration,neutrophilic,perivascular:min		8	2.52	4	6.67	50.00
Inflammation,acute:min.		2	0.63	2	10.00	10.00
Inflammation,interstitial,focal/multifocal:min.		1	0.31	1	10.00	10.00
Inflammation,subacute:min.		4	1.26	2	10.00	30.00
Metaplasia,osseus,focal:min.		1	0.31	1	10.00	10.00
Mineralization,multifocal:min.		1	0.31	1	10.00	10.00
LYMPH NODES	34	318				
Congestion:min.		4	1.26	3	10.00	20.00
Edema:min.		1	0.31	1	10.00	10.00
Edema:mild		2	0.63	2	10.00	10.00
Erythrophagocytosis:min.		2	0.63	1	20.00	20.00
Erythrophagocytosis:mild		4	1.26	1	40.00	40.00
Erythrophagocytosis:mod.		2	0.63	2	10.00	10.00
Hemorrhage:min.		3	0.94	2	10.00	20.00
Hemosiderosis:mild		1	0.31	1	10.00	10.00
Hyperplasia,lymphocytic/plasmacytic:min.		9	2.83	5	10.00	20.00
Hyperplasia,lymphocytic/plasmacytic:mild		12	3.77	4	10.00	60.00
Hyperplasia,lymphocytic/plasmacytic:mod.		1	0.31	1	10.00	10.00
Infiltration,inflammatory cell,sinus:min.		1	0.31	1	6.67	6.67
Infiltration,histiocytic:min.		1	0.31	1	10.00	10.00
Plasmacytosis:mild		2	0.63	2	8.33	10.00
Plasmacytosis:mod.		4	1.26	2	10.00	30.00
PANCREAS	34	318				
Apoptosis,acinar cell:min.		4	1.26	3	8.33	20.00
Apoptosis,acinar cell:mild		1	0.31	1	8.33	8.33
Atrophy,acinar cell,focal:mild		5	1.57	4	10.00	20.00
Atrophy,acinar cell,focal:marked		1	0.31	1	10.00	10.00
Fibrosis,islet cell,focal/multifocal:min.		1	0.31	1	20.00	20.00
Fibrosis,islet cell,focal/multifocal:mild		2	0.63	2	10.00	20.00
Hemorrhage:min.		1	0.31	1	10.00	10.00
Necrosis,fat:marked		1	0.31	1	10.00	10.00
Infiltration,lymphocytic:min.		3	0.94	1	30.00	30.00
Infiltration,mononuclear cell,focal:min.		3	0.94	3	8.33	10.00
Inflammation,chronic-active,islet cell:min.		3	0.94	1	30.00	30.00
Inflammation,chronic-active,islet cell:mod.		1	0.31	1	10.00	10.00
Inflammation,subacute:min.		2	0.63	2	9.09	10.00
Inflammation,subacute:marked		1	0.31	1	10.00	10.00

Table 3: Summary of Histopathology Findings/Males (continued)

		TOTAL		#STUDIES		
		#ORGANS	PERCENT	USING THIS	MINIMUM	MAXIMUM
LOCATION AND FINDING	#STUDIES	#LESIONS	OF TOTAL	DIAGNOSIS	% FOUND	% FOUND
PARATHYROID	34	318				
Ectopia,min.		1	0.31	1	10.00	10.00
PERIPHERAL NERVE	34	318				
Degeneration:min.		1	0.31	1	10.00	10.00
Infiltration,lymphocytic:min		1	0.31	1	10.00	10.00
PITUITARY	34	318				
Cyst		3	0.94	3	10.00	10.00
PROSTATE	34	318				
Atrophy,focal:min.		2	0.63	2	10.00	20.00
Atrophy,focal:mild		1	0.31	1	20.00	20.00
Infiltration,lymphocytic:mild		6	1.89	2	20.00	40.00
Infiltration,lymphocytic:mild		1	0.31	1	10.00	10.00
Infiltration,mononuclear:min.		6	1.89	3	6.67	30.00
Infiltration,mononuclear:mod.		2	0.63	1	20.00	20.00
Inflammation,acute:min.		2	0.63	2	10.00	10.00
Inflammation,acute:mild		2	0.63	2	10.00	10.00
Inflammation,chronic,multifocal:min.		8	2.52	5	9.09	40.00
Inflammation,chronic,multifocal:mild		7	2.20	5	10.00	40.00
Inflammation,chronic,multifocal:mod.		3	0.94	3	10.00	20.00
SEMINAL VESICLE	34	318				
Accumulation,purulent,bilateral:mod.		1	0.31	1	8.33	8.33
Inflammation,acute,bilateral:mild		1	0.31	1	8.33	8.33
SKELETAL MUSCLE	34	318				
Inflammation,chronic:mild		1	0.31	1	10.00	10.00
SKIN	34	318				
Inflammation,acute,focal:min.		1	0.31	1	10.00	10.00
SMALL INTESTINE	34	318				
Diverticulum:min.		1	0.31	1	8.33	8.33
Infiltration,neutrophilic:min.		1	0.31	1	10.00	10.00
Infiltration,lymphocytic,lymphatic,multifocal:min.		2	0.63	2	8.33	10.00
Mineralization,Peyer's patches:min.		1	0.31	1	10.00	10.00
SPLEEN	34	318				
Atrophy:min.		1	0.31	1	20.00	20.00
Erythropoiesis,increased:min.		2	0.63	1	20.00	20.00
Hematopoiesis,extramedullary,increased:min.		7	2.20	4	5.00	40.00
Hematopoiesis,extramedullary,increased:mild		3	0.94	2	10.00	20.00

Table 3: Summary of Histopathology Findings/Males (continued)

		TOTAL		#STUDIES		
		#ORGANS	PERCENT	USING THIS	MINIMUM	MAXIMUM
LOCATION AND FINDING	#STUDIES	#LESIONS	OF TOTAL	DIAGNOSIS	% FOUND	% FOUND
Hematopoiesis,extramedullary,increased:mod.		5	1.57	1	50.00	50.00
Pigmentation,increased:min.		1	0.31	1	10.00	10.00
STOMACH	34	318				
Cyst,glandular		1	0.31	1	10.00	10.00
Degeneration,vacuolar,non-glandular:min.		1	0.31	1	10.00	10.00
Dilatation,mucosal glands:min.		4	1.26	4	9.09	20.00
Edema,submucosa:mild		2	0.63	2	10.00	10.00
Inflammation,acute,granular:min.		2	0.63	2	10.00	10.00
Inflammation,subacute:mild		1	0.31	1	10.00	10.00
Mineralization,glandular:min.		2	0.63	1	20.00	20.00
TAIL	34	318				
Degeneration,intervertebral disk:mod.		1	0.31	1	10.00	10.00
Exostosis,intervertebral disk		1	0.31	1	10.00	10.00
Ossification,intervertebral disk		1	0.31	1	10.00	10.00
Ankylosis		1	0.31	1	5.00	5.00
TESTIS	34	318				
Inflammation,subacute,arteriole:min		1	0.31	1	10.00	10.00
Dilatation,tubular,focal:mild		1	0.31	1	20.00	20.00
Necrosis,multifocal:min.		1	0.31	1	20.00	20.00
THYMUS	34	318				
Congestion,multifocal:min.		2	0.63	2	10.00	20.00
Hemorrhage:min.		34	10.69	10	10.00	80.00
Hemorrhage:mild		5	1.57	3	10.00	16.67
Necrosis,multifocal:min.		3	0.94	2	12.50	20.00
THYROID	34	318				
Cyst		22	6.92	7	8.33	60.00
Depletion,colloidal:min		1	0.31	1	10.00	10.00
Ectopic Tissue,thymus		1	0.31	1	10.00	10.00
Hypertrophy/Hyperplasia,follicular epithelium:mild		3	0.94	2	10.00	20.00
TRACHEA	34	318				
Infiltration,lymphocytic:min.		3	0.94	1	30.00	30.00
Infiltration,mononuclear:min.		1	0.31	1	10.00	10.00
Inflammation,chronic,focal:min.		1	0.31	1	10.00	10.00
URETER	34	318				
Infiltration,inflammatory cell:mod.		1	0.31	1	6.67	6.67

Table 3: Summary of Histopathology Findings/Males (continued)

		TOTAL		#STUDIES		
		#ORGANS	PERCENT	USING THIS	MINIMUM	MAXIMUM
LOCATION AND FINDING	#STUDIES	#LESIONS	OF TOTAL	DIAGNOSIS	% FOUND	% FOUND
URINARY BLADDER	34	318				
Calculus		1	0.31	1	8.33	8.33
Cystitis:mod.		1	0.31	1	6.67	6.67
Hyperplasia,epithelial,diffuse:mild		1	0.31	1	5.00	5.00
Infiltration,lymphocytic:min.		1	0.31	1	10.00	10.00
Inflammation,subacute,diffuse:min.		1	0.31	1	5.00	5.00

Table 4: Summary of Histopathology Findings /Females

		TOTAL		#STUDIES		
		#ORGANS	PERCENT	USING THIS	MINIMUM	MAXIMUM
LOCATION AND FINDING	#STUDIES	#LESIONS	OF TOTAL	DIAGNOSIS	% FOUND	% FOUND
ADRENAL	34	319				
Accessory cortical tissue		1	0.31	1	20.00	20.00
Ectasia,vascular:mild		2	0.63	2	10.00	20.00
Fatty Infiltration:min.		1	0.31	1	10.00	10.00
BONE MARROW	34	319				
Ectasia,vascular:mild		1	0.31	1	10.00	10.00
BRAIN	34	319				
Dilatation,lateral ventricles:min.		1	0.31	1	10.00	10.00
Hemorrhage:min.		1	0.31	1	10.00	10.00
CECUM	34	319				
Inflammation,mucosa,chronic:min.		6	1.88	2	30.00	30.00
Inflammation,mucosa,chronic:mild		9	2.82	6	10.00	40.00
Inflammation,mucosa,chronic:mod.		1	0.31	1	10.00	10.00
ESOPHAGUS	34	319				
Degeneration,muscularis,focal:min.		2	0.63	2	8.33	10.00
Degeneration,muscularis,focal:mild		1	0.31	1	8.33	8.33
EYE	34	319				
Infiltration,mixed cell,conjunctiva,focal		1	0.31	1	10.00	10.00
Phthisis Bulbi:marked		1	0.31	1	10.00	10.00
Retinal Dysplasia,unilateral		1	0.31	1	10.00	10.00
HARDERIAN GLAND	34	319				
Hemorrhage,unilateral,acute:min.		5	1.57	1	50.00	50.00
Infiltration,lymphocytic:min.		1	0.31	1	10.00	10.00
Infiltration,lymphocytic:mild		1	0.31	1	10.00	10.00
Infiltration,mononuclear cell:min.		1	0.31	1	10.00	10.00
Inflammation,chronic,focal:min.		3	0.94	3	10.00	10.00
Necrosis,unilateral,focal:min.		4	1.25	1	40.00	40.00
HEART	34	319				
Cardiomyopathy,focal:min.		2	0.63	2	9.09	10.00
Infiltration,lymphocytic:min.		1	0.31	1	10.00	10.00
Infiltration,mononuclear:min.		2	0.63	2	8.33	10.00
Inflammation,subacute,epicardium:min.		1	0.31	1	10.00	10.00
Inflammation,chronic,focal:min.		1	0.31	1	10.00	10.00

Table 4: Summary of Histopathology Findings /Females (continued)

		TOTAL		#STUDIES		
		#ORGANS	PERCENT	USING THIS	MINIMUM	MAXIMUM
LOCATION AND FINDING	#STUDIES	#LESIONS	OF TOTAL	DIAGNOSIS	% FOUND	% FOUND
KIDNEY	34	319				
Basophilia,tubule:min		9	2.82	5	10.00	30.00
Cyst		15	4.70	9	6.67	40.00
Degeneration,tubular:min.		1	0.31	1	10.00	10.00
Degeneration,tubular:mild		1	0.31	1	10.00	10.00
Dilatation,pelvis:min		9	2.82	9	6.67	20.00
Dilatation,pelvis:mild		11	3.45	11	6.67	20.00
Dilatation,pelvis:mod.		3	0.94	3	10.00	20.00
Dilatation,tubular:min:		5	1.57	2	20.00	30.00
Dilatation,tubular,focal:min.		2	0.63	2	20.00	20.00
Fibrosis,focal:min.		3	0.94	2	6.67	20.00
Fibrosis,focal:mild		1	0.31	1	6.67	6.67
Hyperplasia,mesenchymal,focal:min:		1	0.31	1	10.00	10.00
Hyperplasia,pelvic/papillary urothelium:min.		1	0.31	1	10.00	10.00
Infiltration,inflammatory cell:min.		1	0.31	1	10.00	10.00
Infiltration,lymphocytic:min.		6	1.88	3	10.00	40.00
Infiltration,mononuclear cell:mild		7	2.19	3	10.00	30.00
Inflammation,subacute:mild		1	0.31	1	10.00	10.00
Mineralization:min.		22	6.90	7	10.00	50.00
Mineralization:mild		7	2.19	3	10.00	40.00
Nephritis,chronic,focal:min.		2	0.63	1	22.22	22.22
Nephroblastoma,embryonal		1	0.31	1	10.00	10.00
Nephroblastoma,malignant		1	0.31	1	5.00	5.00
Nephropathy,chronic,progressive:min.		26	8.15	10	20.00	60.00
Nephropathy,chronic,progressive:mod.		4	1.25	3	10.00	20.00
Proteinaceous Filtrate,tubule:min.		1	0.31	1	10.00	10.00
Pyelitis,chronic:mod.		1	0.31	1	10.00	10.00
LACRIMAL GLAND	34	319				
Infiltration,lymphocytic:min.		1	0.31	1	10.00	10.00
LARGE INTESTINE/ANUS	34	319				
Infiltration,lymphocytic,lymphatic,multifocal:mild		1	0.31	1	8.33	8.33
Infiltration,lymphocytic,lymphatic,multifocal:mod.		1	0.31	1	8.33	8.33
LARYNX	34	319				
Hyperplasia,epithelial:mild		1	0.31	1	10.00	10.00
Infiltration,lymphocytic:min.		6	1.88	2	20.00	40.00
Inflammation,acute,glands:min.		1	0.31	1	10.00	10.00
LIVER	34	319				
Altered cell foci		1	0.31	1	10.00	10.00
Erythropoiesis:min.		1	0.31	1	10.00	10.00
Fatty Infiltration,hepatocellular,focal:mild		1	0.31	1	20.00	20.00
Fibrosis,capsule:min.		1	0.31	1	10.00	10.00
Hematopoiesis		7	2.19	3	10.00	40.00
Infiltration,lymphocytic,focal:min.		1	0.31	1	8.33	8.33

Table 4: Summary of Histopathology Findings /Females (continued)

		TOTAL		#STUDIES		
		#ORGANS	PERCENT	USING THIS	MINIMUM	MAXIMUM
LOCATION AND FINDING	#STUDIES	#LESIONS	OF TOTAL	DIAGNOSIS	% FOUND	% FOUND
Infiltration,mononuclear cell:min.		22	6.90	6	8.33	100.00
Infiltration,mixed cell:min.		6	1.88	1	60.00	60.00
Inflammation,chronic,focal/multifocal:min.		12	3.76	4	10.00	50.00
Inflammation,perivascular:min.		3	0.94	1	30.00	30.00
Necrosis,focal,subcapsular:min.		9	2.82	4	6.67	41.67
Vacuolation,hepatocellular:min.		15	4.70	5	10.00	60.00
LUNG	34	319				
Congestion:min.		1	0.31	1	10.00	10.00
Edema,perivascular:min.		1	0.31	1	10.00	10.00
Edema,perivascular:mild		5	1.57	1	50.00	50.00
Embolus,foreign body/hair shaft:min.		12	3.76	2	33.33	70.00
Fibrosis,alveolar,multifocal:mild		1	0.31	1	20.00	20.00
Hemorrhage:min.		3	0.94	2	10.00	20.00
Hemorrhage:mod.		3	0.94	3	10.00	20.00
Hyperplasia,bronchiolo-alveolar:min		1	0.31	1	10.00	10.00
Infiltration,eosinophilic,periarterial:min.		5	1.57	2	9.09	40.00
Infiltration,lymphocytic,subpleural:min.		1	0.31	1	10.00	10.00
Infiltration,lymphohistiocytic,peribronchiolar		2	0.63	1	20.00	20.00
Infiltration,macrophage,alveolar:min		1	0.31	1	10.00	10.00
Infiltration,neutrophilic,perivascular:min.		5	1.57	3	10.00	20.00
Inflammation,interstitial,focal/multifocal:mild		4	1.25	3	10.00	20.00
Inflammation,chronic-active,multifocal:mild		4	1.25	3	10.00	20.00
Pleuritis,chronic,focal:min.		1	0.31	1	10.00	10.00
LYMPH NODES	34	319				
Erythrophagocytosis:min.		10	3.13	2	10.00	90.00
Hemorrhage:min.		3	0.94	2	10.00	20.00
Hyperplasia,lymphocytic/plasmacytic:min		10	3.13	6	10.00	30.00
Hyperplasia,lymphocytic/plasmacytic:mild		11	3.45	5	10.00	40.00
Hyperplasia,lymphocytic/plasmacytic:mod.		1	0.31	1	10.00	10.00
Plasmacytosis,medullary:min.		1	0.31	1	10.00	10.00
Plasmacytosis,medullary:mild		3	0.94	1	30.00	30.00
MAMMARY GLAND	34	319				
Hyperplasia,acinar cell,focal:mod.		1	0.31	1	20.00	20.00
OVARY	34	319				
Atrophy:marked		1	0.31	1	10.00	10.00
Corpus luteum,cyst		2	0.63	1	20.00	20.00
Mineralization:min.		1	0.31	1	10.00	10.00
PANCREAS	34	319				
Atrophy,acinar cell,focal:min.		1	0.31	1	10.00	10.00
Infiltration,lymphocytic:min.		1	0.31	1	10.00	10.00
Infiltration,mononuclear cell:min.		3	0.94	1	30.00	30.00

Table 4: Summary of Histopathology Findings /Females (continued)

		TOTAL		#STUDIES		
		#ORGANS	PERCENT	USING THIS	MINIMUM	MAXIMUM
LOCATION AND FINDING	#STUDIES	#LESIONS	OF TOTAL	DIAGNOSIS	% FOUND	% FOUND
PERIPHERAL NERVE	34	319				
Inflammation,subacute,focal:min.		1	0.31	1	10.00	10.00
PHARYNX	34	319				
Inflammation,subacute,muscle:min.		1	0.31	1	10.00	10.00
PITUITARY	34	319				
Cyst		3	0.94	1	30.00	30.00
Malformation/Anomaly		1	0.31	1	9.09	9.09
SALIVARY GLAND	34	319				
Hemorrhage,acute:mild.		1	0.31	1	10.00	10.00
Inflammation,chronic,focal:min.		2	0.63	2	10.00	10.00
Necrosis,focal:mild		1	0.31	1	10.00	10.00
SKIN	34	319				
Inflammation,acute,focal:mild		1	0.31	1	10.00	10.00
Microgranuloma:min.		1	0.31	1	20.00	20.00
SMALL INTESTINE	34	319				
Granuloma,focal:mild		2	0.63	1	18.18	18.18
Mineralization,Peyer's patches		3	0.94	1	30.00	30.00
SPINAL CORD	34	319				
Cyst,epidermal		1	0.31	1	10.00	10.00
SPLEEN	34	319				
Accessory splenic tissue		2	0.63	2	10.00	10.00
Hematopoiesis,extramedullary,increased:mild		2	0.63	2	10.00	10.00
Hematopoiesis,extramedullary,increased:mod.		1	0.31	1	10.00	10.00
Hyperplasia,lymphoid		1	0.31	1	10.00	10.00
Irregular capsule		2	0.63	2	10.00	10.00
STOMACH	34	319				
Cyst,glands		1	0.31	1	10.00	10.00
Degeneration,vacuolar,non-glandular:min.		1	0.31	1	10.00	10.00
Dilatation,mucosal glands:min.		3	0.94	3	10.00	20.00
Hyperplasia,tunica muscularis,focal:mild		1	0.31	1	10.00	10.00
Necrosis,single cell,glandular:min.		2	0.63	1	20.00	20.00
TAIL	34	319				
Inflammation,neutrophilic:marked		2	0.63	2	10.00	10.00
Necrosis,soft tissue:mod.		1	0.31	1	10.00	10.00

Table 4: Summary of Histopathology Findings /Females (continued)

		TOTAL		#STUDIES		
		#ORGANS	PERCENT	USING THIS	MINIMUM	MAXIMUM
LOCATION AND FINDING	#STUDIES	#LESIONS	OF TOTAL	DIAGNOSIS	% FOUND	% FOUND
THYMUS	34	319				
Congestion,multifocal:min.		4	1.25	4	10.00	20.00
Hemorrhage:min.		24	7.52	9	6.67	60.00
Hemorrhage:mild		7	2.19	4	8.33	30.00
Necrosis,multifocal:min.		7	2.19	3	20.00	33.33
THYROID	34	319				
Cyst		18	5.64	5	10.00	70.00
Ectopic Tissue,thymus:min.		1	0.31	1	10.00	10.00
TRACHEA	34	319				
Infiltration,lymphocytic:min.		1	0.31	1	10.00	10.00
Inflammation,chronic,focal:min.		2	0.63	2	10.00	10.00
URINARY BLADDER	34	319				
Infiltration,lymphocytic:min.		1	0.31	1	10.00	10.00
UTERUS	34	319				
Dilatation:min.		3	0.94	2	10.00	40.00
Dilatation:mild		2	0.63	1	20.00	20.00
Dilatation:mod.		13	4.08	7	10.00	30.00

Table 5: Incidence of Histopathology Findings by Study/Male

Studies 1-17:

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Approximate Age at Necropsy in Weeks	4	4	4	4	4	4	4	5	6	7	7	7	8	8	8	9	9
ABDOMINAL CAVITY																	
Necrosis,fat	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
ADRENAL																	
Fatty Infiltration:min.	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Hypertrophy,adrenocortical:min.																1	
Necrosis,focal										1							
Vacuolation,cortex:min.																	
Vacuolation,cortex:mild																	1
BONE																	
Proliferation,osteochondrous,periosteal,focal	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
			1														
BRAIN																	
Dilatation,lateral ventricles:min.	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Dilatation,lateral ventricles:mild													1				
Hemorrhage:min.																	
Necrosis,focal:min.																	
CECUM																	
Inflammation,mucosa,chronic:min.	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Inflammation,mucosa,chronic:mild				1			2										1
Inflammation,mucosa,chronic:mod.				1			1										1
		1		2													

Table 5: Incidence of Histopathology Findings by Study/Male (continued)

Studies 1-17:

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Approximate Age at Necropsy in Weeks	4	4	4	4	4	4	4	5	6	7	7	7	8	8	8	9	9
EPIDIDYMIS	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Exfoliated Spermatogenic Cells:min.	1																2
Hypospermia,duct:marked																	
Infiltration,mononuclear cell,focal/multifocal:min.	1			1				2					2				1
Infiltration,mononuclear cell,focal/multifocal:mild				1													
Infiltration,lymphocytic:min.																2	
ESOPHAGUS	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Degeneration,muscularis,focal:min.														1			
Degeneration,muscularis,focal:mild														1			
Degeneration,muscularis,focal:mod.																	
EYE	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Hemorrhage,conjunctiva,focal:mod.																	
Glaucoma,unilateral:mild																	
Mineralization,cornea:min.																	
Retinopathy,focal:min.																	
Retinopathy,focal:mild																	
Retinopathy,focal:mod.																	
HARDERIAN GLAND	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Hemorrhage,unilateral,acute:min.																	
Infiltration,lymphocytic:min.																	
Necrosis,unilateral,focal:min.																	
Necrosis,unilateral,focal:mild																	

Table 5: Incidence of Histopathology Findings by Study/Male (continued)

Studies 1-17:

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Approximate Age at Necropsy in Weeks	4	4	4	4	4	4	4	5	6	7	7	7	8	8	8	9	9
HEART	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Cardiomyopathy, focal:min.													1				
Cardiomyopathy, focal:mod.																	
Fibrosis, focal:min.								1									
Hyperplasia,sarcolemma:min.																	
Infiltration,lymphocytic:min.																	
Infiltration,mononuclear cell:min.								1									
JOINT	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Inflammation,chronic-active,periosteum:mild																	
KIDNEY	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Adenoma,renal tubular,benign																	
Basophililia,tubule:min.	1																
Basophililia,tubule:mild																	
Congestion																	
Cyst	4		2				1	1	2				1				
Degeneration,tubular:min.																	
Dilatation,pelvis:min.		1				1		1					1		1		1
Dilatation,pelvis:mild							2		1					2	1		
Dilatation,pelvis:mod.	1										1						
Dilatation,tubules:min.																	
Dilatation,tubules:mod.																	
Fibrosis,focal:min.								2									
Hyaline Droplets,cortical tubules:mild											1						
Hypoplasia,cortex,focal:min.						1											
Infiltration,lymphocytic:min.																	1
Infiltration,mononuclear:min.																	
Infiltration,mononuclear:mild																	
Inflammation,chronic:mild														1			
Mineralization:min.	1							1	1								
Mineralization:mild																	

Table 5: Incidence of Histopathology Findings by Study/Male (continued)

Studies 1-17:

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Approximate Age at Necropsy in Weeks	4	4	4	4	4	4	4	5	6	7	7	7	8	8	8	9	9
Nephropathy,chronic progressive:min.			1	1	1			1	2							5	2
Nephropathy,chronic progressive:mild																1	
Proteinaceous Filtrate,tubule:min.																	
Pyelitis:min.															1		
LACRIMAL GLAND																	
Degeneration,vacuolar:min.	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Infiltration,lymphocytic:min.																	
Infiltration,lymphocytic:mild																	
Infiltration,mononuclear:min.																	
LARGE INTESTINE/ANUS																	
Dilatation,glandular:min	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Hyperplasia,lymphocytic:min.																1	
																1	
LARYNX																	
Infiltration,lymphocytic:min.	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Infiltration,lymphocytic:mild																	
Inflammation,acute:min.	3																
LIVER																	
Altered cell foci	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Congestion:min.																	
Deformity																1	
Degeneration,vacuolar:min.																	
Ectasia,sinusoidal										1							
Erythropoiesis																	
Fibrosis,capsule:min.																	
Hematopoiesis:min.		1											1				
Hematopoiesis:mild	5		1						1								

Table 5: Incidence of Histopathology Findings by Study/Male (continued)

Studies 1-17:

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Approximate Age at Necropsy in Weeks	4	4	4	4	4	4	4	5	6	7	7	7	8	8	8	9	9
Inflammation										2							
Inflammation,chronic,focal/multifocal:min.		2											5			2	
Inflammation,subacute:min.																	
Inflammation,subacute,periportal:min.															1		
Inflammation,subacute,necrotizing,subcapsular:mild																	
Infiltration,fatty,hepatoce llular																	
Infiltration,mixed cell:min.																5	
Infiltration,mononuclear:min.											2						
Infiltration,mononuclear:mild																	
Leukocytosis,sinusoidal,focal:mild																	
Microgranuloma,foreign body	1																
Necrosis,single cell:min.																	
Necrosis,focal:min								1					2		1		
Vacuolation,hepatoce llular:min.													2				
Vacuolation,hepatoce llular:mild																	
LUNG	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Congestion:min.																1	
Edema-perivascular:min.																	
Edema-perivascular:mild																	
Emblous,foreign body/hair shaft:min.								7									
Fibrosis,pleura:mild																	
Hemorrhage,acute,focal/multifocal:mild																	
Hemorrhage:min.															1	2	
Hemorrhage:mild															1		
Histiocytosis,pulmonary:min.																	
Hyperplasia,bronchiolo-alveolar:min.																	
Hyperplasia,lymphoid,peribronchial:mild																1	
Infiltration,histiocytic,alveolus:min.																	
Infiltration,eosinophilic,periartrial																	
Infiltration,lymphocytic,subpleural:min.																	
Infiltration,macrophage,alveolus:mild																	
Infiltration,neutrophilic,perivascular:min								1									1

Table 5: Incidence of Histopathology Findings by Study/Male (continued)

Studies 1-17:

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Approximate Age at Necropsy in Weeks	4	4	4	4	4	4	4	5	6	7	7	7	8	8	8	9	9
Inflammation,acute:min.																	
Inflammation,interstitial,focal/multifocal:min.																	
Inflammation,subacute:min.																1	
Metaplasia,osseus,focal:min.																	
Mineralization,multifocal:min.																	
LYMPH NODES																	
Congestion:min.	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Edema:min.													2				
Edema:mild																	
Erythrophagocytosis:min.	2																
Erythrophagocytosis:mild	4																
Erythrophagocytosis:mod.	1																
Hemorrhage:min.																	
Hemostiderosis:mild																	
Hyperplasia,lymphocyte/plasmacytic:min.				1					2	2			2				
Hyperplasia,lymphocyte/plasmacytic:mild		2							3				6			1	
Hyperplasia,lymphocyte/plasmacytic:mod.									1								
Infiltration,inflammatory cell,sinus:min.															1		
Infiltration,histiocytic:min.																	
Plasmacytosis:mild																	
Plasmacytosis:mod.																	
PANCREAS																	
Apoptosis,acinar cell:min.	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Apoptosis,acinar cell:mild																	
Atrophy,acinar cell,focal:mild																	2
Atrophy,acinar cell,focal:marked																	
Fibrosis,islet cell,focal/multifocal:min.																	
Fibrosis,islet cell,focal/multifocal:mild																	
Hemorrhage:min.																	
Necrosis,fat:marked																	

Table 5: Incidence of Histopathology Findings by Study/Male (continued)

Studies 1-17:

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Approximate Age at Necropsy in Weeks	4	4	4	4	4	4	4	5	6	7	7	7	8	8	8	9	9
Infiltration,lymphocytic:min.																	
Infiltration,mononuclear cell,focal:min.																	
Inflammation,chronic-active,islet cell:min.																	
Inflammation,chronic-active,islet cell:mod.																	
Inflammation,subacute:min.																	
Inflammation,subacute:marked																	
PARATHYROID	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Ectopia:min.																1	
PERIPHERAL NERVE	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Degeneration:min.																	
Infiltration,lymphocytic:min																	
PITUITARY	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Cyst														1			
PROSTATE	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Atrophy,focal:min.									1								1
Atrophy,focal:mild																	1
Infiltration,lymphocytic:mild																	
Infiltration,lymphocytic:mild								1									
Infiltration,mononuclear:min.																	
Infiltration,mononuclear:mod.																	
Inflammation,acute:min.																	
Inflammation,acute:mild																	1
Inflammation,chronic,multifocal:min.	1			4					1								
Inflammation,chronic,multifocal:mild									1			1					
Inflammation,chronic,multifocal:mod.												1					

Table 5: Incidence of Histopathology Findings by Study/Male (continued)

Studies 1-17:

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Approximate Age at Necropsy in Weeks	4	4	4	4	4	4	4	5	6	7	7	7	8	8	8	9	9
SEMINAL VESICLE																	
Accumulation,purulent,bilateral:mod.	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Inflammation,acute,bilateral:mild																	
SKELETAL MUSCLE																	
Inflammation,chronic:mild	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
												1					
SKIN																	
Inflammation,acute,focal:min.	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
																1	
SMALL INTESTINE																	
Diverticulum:min.	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Infiltration,neutrophilic:min.																	
Infiltration,lymphocytic,lymphatic,multifocal:min.																	
Mineralization,Peyer's patches:min.																	
SPLEEN																	
Atrophy:min.	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Erythropoiesis,increased:min.						1											
Hematopoiesis,extramedullary,increased:min.	3																
Hematopoiesis,extramedullary,increased:mild	2												1				
Hematopoiesis,extramedullary,increased:mod.	5																
Pigmentation,increased:min.																	
STOMACH																	
Cyst,glandular	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Degeneration,vacuolar,non-glandular:min.													1				
Dilatation,mucosal glands:min.		1															

Table 5: Incidence of Histopathology Findings by Study/Male (continued)

Studies 1-17:

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Approximate Age at Necropsy in Weeks	4	4	4	4	4	4	4	5	6	7	7	7	8	8	8	9	9
Edema,submucosa:mild							1										
Inflammation,acute,granular:min.							1										
Inflammation,subacute:mild																	
Mineralization,glandular:min.																	
TAIL																	
Degeneration,intervertebral disk:mod.	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Exostosis,intervertebral disk																	
Ossification,intervertebral disk																	
Ankylosis																	
TESTIS																	
Inflammation,subacute,arteriole:min.	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Dilatation,tubular,focal:mild																	
Necrosis,multifocal:min.																	1
THYMUS																	
Congestion,multifocal:min.	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Hemorrhage:min.												1			2		
Hemorrhage:mild																	
Necrosis,multifocal:min.							2				1						
THYROID																	
Cyst	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Depletion,colloidal:min.																2	
Ectopic Tissue,thymus																	
Hypertrophy/Hyperplasia,follicular epithelium:mild									1								

Table 5: Incidence of Histopathology Findings by Study/Male (continued)

Studies 1-17:

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Approximate Age at Necropsy in Weeks	4	4	4	4	4	4	4	5	6	7	7	7	8	8	8	9	9
TRACHEA	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Infiltration,lymphocytic:min.																	
Infiltration,mononuclear:min.																	
Inflammation,chronic,focal:min.																	
URETER	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Infiltration,inflammatory cell:mod.															1		
URINARY BLADDER	10	10	5	10	5	5	10	15	10	12	8	10	10	10	15	10	5
Calculus																	
Cystitis:mod.															1		
Hyperplasia,epithelial,diffuse:mild																	
Infiltration,lymphocytic:min.																	
Inflammation,subacute,diffuse:min.																	

Table 5: Incidence of Histopathology Findings by Study/Male

Studies 18-34:

Study Identification	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Approximate Age at Necropsy in Weeks	9	10	10	11	11	12	13	13	14	14	15	17	17	18	19	19	26
ABDOMINAL CAVITY																	
Necrosis,fat	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
											1						
ADRENAL	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Fatty Infiltration:min.																	
Hypertrophy,adrenocortical:min.											1						
Necrosis,focal																	
Vacuolation,cortex:min.				1	8						1		6				
Vacuolation,cortex:mild					1								2				
BONE	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Proliferation,osteochondrous,periosteal,focal																	
BRAIN	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Dilatation,lateral ventricles:min.				1							1						
Dilatation,lateral ventricles:mild											1						
Hemorrhage:min.					1								1				
Necrosis,focal:min.					1												
CECUM	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Inflammation,mucosa,chronic:min.				1							1						
Inflammation,mucosa,chronic:mild				1							1						
Inflammation,mucosa,chronic:mod.																	
EPIDIDYMIS	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Exfoliated Spermatogenic Cells:min.																	
Hypospermia,duct:marked												1					1

Table 5: Incidence of Histopathology Findings by Study/Male (continued)

Studies 18-34:

Study Identification	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Approximate Age at Necropsy in Weeks	9	10	10	11	11	12	13	13	14	14	15	17	17	18	19	19	26
Infiltration, mononuclear cell, focal/multifocal:min.				2													6
Infiltration, mononuclear cell, focal/multifocal:mild													4				
Infiltration, lymphocytic:min.					7												
ESOPHAGUS																	
Degeneration, muscularis, focal:min.	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Degeneration, muscularis, focal:mild																	
Degeneration, muscularis, focal:mod.							1										
EYE																	
Hemorrhage, conjunctiva, focal:mod.	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Glaucoma, unilateral:mild				1				1									
Mineralization, cornea:min.					1												
Retinopathy, focal:min.										1							
Retinopathy, focal:mild										1							
Retinopathy, focal:mod.															1		
HARDERIAN GLAND																	
Hemorrhage, unilateral, acute:min.	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Infiltration, lymphocytic:min.				2									1				
Necrosis, unilateral, focal:min.				2													
Necrosis, unilateral, focal:mild				2													
HEART																	
Cardiomyopathy, focal:min.	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Cardiomyopathy, focal:mod.				2	2				2			1	1				3
Fibrosis, focal:min.																	1
Hypertrophy, sarcolemma:min.					1												
Infiltration, lymphocytic:min.																	2
Infiltration, mononuclear cell:min.								2									

Table 5: Incidence of Histopathology Findings by Study/Male (continued)

Studies 18-34:

Study Identification	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Approximate Age at Necropsy in Weeks	9	10	10	11	11	12	13	13	14	14	15	17	17	18	19	19	26
LACRIMAL GLAND	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Degeneration, vacuolar:min.					1												
Infiltration, lymphocytic:min.					3								2				
Infiltration, lymphocytic:mild													1				
Infiltration, mononuclear:min.													1				
LARGE INTESTINE/ANUS	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Dilatation, glandular:min																	
Hyperplasia, lymphocytic:min.																	
LARYNX	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Infiltration, lymphocytic:min.					3								1				
Infiltration, lymphocytic:mild					1												
Inflammation, acute:min.					1												
LIVER	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Altered cell foci						1											
Congestion:min.																	
Deformity					1												
Degeneration, vacuolar:min.													1				
Ectasia, sinusoidal																	
Erythropoiesis					1												
Fibrosis, capsule:min.													1				
Hematopoiesis:min.																	
Hematopoiesis:mild					1												
Inflammation													1				
Inflammation, chronic, focal/multifocal:min.																	
Inflammation, subacute:min.				2	3						1						
Inflammation, subacute, periportal:min.					1												
Inflammation, subacute, necrotizing, subcapsular:mild					1												
Infiltration, fatty, hepatocellular									1								

Table 5: Incidence of Histopathology Findings by Study/Male (continued)

Studies 18-34:

Study Identification	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Approximate Age at Necropsy in Weeks	9	10	10	11	11	12	13	13	14	14	15	17	17	18	19	19	26
Infiltration, mixed cell: min.																	
Infiltration, mononuclear: min.					8								10	5			
Infiltration, mononuclear: mild					1												
Leukocytosis, sinusoidal, focal: mild										1							
Microgranuloma, foreign body																	
Necrosis, single cell: min.					2								2				
Necrosis, focal: min									1					1			
Vacuolation, hepatocellular: min.					3								1				
Vacuolation, hepatocellular: mild																	1
LUNG	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Congestion: min.					1												
Edema, perivascular: min.					2								1				
Edema, perivascular: mild					4								1				
Emblous, foreign body/hair shaft: min.	1																
Fibrosis, pleura: mild														1			
Hemorrhage, acute, focal/multifocal: mild											1						
Hemorrhage: min.					4			2					2				
Hemorrhage: mild					1	2		1									
Histiocytosis, pulmonary: min.																	
Hyperplasia, bronchiolo-alveolar: min.	1																
Hyperplasia, lymphoid, peribronchial: mild				1													
Infiltration, histiocytic, alveolar: min.					1								4				
Infiltration, eosinophilic, periaerial																	
Infiltration, lymphocytic, subpleural: min.					1									1			
Infiltration, macrophage, alveolar: mild																	1
Infiltration, neutrophilic, perivascular: min														1			5
Inflammation, acute: min.														1			
Inflammation, interstitial, focal/multifocal: min.					1												
Inflammation, subacute: min.				3													
Metaplasia, osseous, focal: min.				1													
Mineralization, multifocal: min.				1													

Table 5: Incidence of Histopathology Findings by Study/Male (continued)

Studies 18-34:

Study Identification	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Approximate Age at Necropsy in Weeks	9	10	10	11	11	12	13	13	14	14	15	17	17	18	19	19	26
LYMPH NODES																	
Congestion:min.	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Edema:min.			1	1									1				
Edema:mild					1				1				1				
Erythrophagocytosis:min.																	
Erythrophagocytosis:mild																	
Erythrophagocytosis:mod.																	1
Hemorrhage:min.					2								1				
Hemosiderosis:mild			1														
Hyperplasia,lymphocytic/plasmaeytic:min.				2													
Hyperplasia,lymphocytic/plasmaeytic:mild																	
Hyperplasia,lymphocytic/plasmaeytic:mod.																	
Infiltration,inflammatory cell,sinus:min.																	
Infiltration,histocytic:min.													1				1
Plasmaeytosis:mild							1	1									3
Plasmaeytosis:mod.																	
PANCREAS	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Apoptosis,acinar cell:min.					1			1					2				
Apoptosis,acinar cell:mild								1									
Atrophy,acinar cell,focal:mild							1						1				1
Atrophy,acinar cell,focal:marked																	1
Fibrosis,islet cell,focal/multifocal:min.											1						
Fibrosis,islet cell,focal/multifocal:mild				1												1	
Hemorrhage:min.					1												
Necrosis,fat:marked																	1
Infiltration,lymphocytic:min.																	
Infiltration,mononuclear cell,focal:min.				1			1	1					3				
Inflammation,chronic-active,islet cell:min.																	3
Inflammation,chronic-active,islet cell:mod.																	
Inflammation,subacute:min.					1							1					
Inflammation,subacute:marked							1										

Table 5: Incidence of Histopathology Findings by Study/Male (continued)

Studies 18-34:

Study Identification	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Approximate Age at Necropsy in Weeks																	
PARATHYROID	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Ectopia:min.																	
PERIPHERAL NERVE	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Degeneration:min.					1												
Infiltration,lymphocytic:min													1				
PITUITARY	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Cyst							1										1
PROSTATE	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Atrophy,focal:min.																	
Atrophy,focal:mild																	
Infiltration,lymphocytic:mild					2								4				
Infiltration,lymphocytic:mild				1													
Infiltration,mononuclear:min.						2											3
Infiltration,mononuclear:mod.						2											
Inflammation,acute:min.														1			1
Inflammation,acute:mild							1										
Inflammation,chronic,multifocal:min.				1								1					
Inflammation,chronic,multifocal:mild				2											2	1	
Inflammation,chronic,multifocal:mod.									1						1		
SEMINAL VESICLE	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Accumulation,purulent,bilateral:mod.								1									
Inflammation,acute,bilateral:mild								1									

Table 5: Incidence of Histopathology Findings by Study/Male (continued)

Studies 18-34:

Study Identification	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Approximate Age at Necropsy in Weeks	9	10	10	11	11	12	13	13	14	14	15	17	17	18	19	19	26
SKELETAL MUSCLE	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Inflammation,chronic:mild																	
SKIN	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Inflammation,acute,focal:min.																	
SMALL INTESTINE	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Diverticulum:min.								1									
Infiltration,neutrophilic:min.					1												
Infiltration,lymphocytic,lymphatic,multifocal:min.								1					1				
Mineralization,Peyer's patches:min.				1													
SPLEEN	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Atrophy:min.																	
Erythropoiesis,increased:min.													2				
Hematopoiesis,extramedullary,increased:min.		1		1							2						
Hematopoiesis,extramedullary,increased:mild																	
Hematopoiesis,extramedullary,increased:mod.																	
Pigmentation,increased:min.													1				
STOMACH	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Cyst,glandular																	
Degeneration,vacuolar,non-glandular:min.					1												
Dilatation,mucosal glands:min.				1								1	1				
Edema,submucosa:mild					1												
Inflammation,acute,granular:min.					1												
Inflammation,subacute:mild																	1
Mineralization,glandular:min.					2												

Table 5: Incidence of Histopathology Findings by Study/Male (continued)

Studies 18-34:

Study Identification	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Approximate Age at Necropsy in Weeks	9	10	10	11	11	12	13	13	14	14	15	17	17	18	19	19	26
TAIL																	
Degeneration, intervertebral disk:mod.	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Exostosis, intervertebral disk			1														
Ossification, intervertebral disk			1														
Ankylosis		1															
TESTIS																	
Inflammation, subacute, arteriole:min	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Dilatation, tubular, focal:mild					1										1		
Necrosis, multifocal:min.																	
THYMUS																	
Congestion, multifocal:min.	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Hemorrhage:min.	2				4	2	1	6				4	8				4
Hemorrhage:mild		2	1				2										
Necrosis, multifocal:min.																	
THYROID																	
Cyst	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Depletion, colloid:min				1				1					5				5
Ectopic Tissue, thymus							1										
Hypertrophy/Hyperplasia, follicular epithelium:mild				2													
TRACHEA																	
Infiltration, lymphocytic:min.	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Infiltration, mononuclear:min.					3								1				
Inflammation, chronic, focal:min.				1													

Table 5: Incidence of Histopathology Findings by Study/Male (continued)

Studies 18-34:

Study Identification	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Approximate Age at Necropsy in Weeks	9	10	10	11	11	12	13	13	14	14	15	17	17	18	19	19	26
URETER																	
Infiltration,inflammatory cell:mod.	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
URINARY BLADDER																	
Calculus	10	20	10	10	10	10	10	12	5	5	5	11	10	10	5	5	10
Cystitis:mod.								1									
Hyperplasia,epithelial,diffuse:mild																	
Infiltration,lymphocytic:min.		1															
Inflammation,subacute,diffuse:min.		1															

Table 6: Incidence of Histopathology Findings by Study/Female

Studies 1-17:

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Approximate Age at Necropsy in Weeks	4	4	4	4	4	4	5	5	6	7	7	7	8	8	8	9	9
ADRENAL	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Accessory cortical tissue			1														
Ectasia,vascular:mild																1	1
Fatty Infiltration:min.																1	
BONE MARROW	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Ectasia,vascular:mild																1	
BRAIN	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Dilatation,lateral ventricles:min.																	
Hemorrhage:min.																	
CECUM	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Inflammation,mucosa,chronic:min.				3													
Inflammation,mucosa,chronic:mild		1	2	1													1
Inflammation,mucosa,chronic:mod.																	
ESOPHAGUS	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Degeneration,muscularis,focal:min.														1			
Degeneration,muscularis,focal:mild																	
EYE	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Infiltration,mixed cell,conjunctiva,focal																	
Phthisis Bulbi:marked																	
Retinal Dysplasia,unilateral																	

Table 6: Incidence of Histopathology Findings by Study/Female (continued)

Studies 1-17:

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Approximate Age at Necropsy in Weeks																	
HARDERIAN GLAND																	
Hemorrhage, unilateral, acute: min.	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Infiltration, lymphocytic: min.																	
Infiltration, lymphocytic: mild																	
Infiltration, mononuclear cell: min.																	
Inflammation, chronic, focal: min.	1												1				
Necrosis, unilateral, focal: min.																	
HEART																	
Cardiomyopathy, focal: min.	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Infiltration, lymphocytic: min.																	
Infiltration, mononuclear: min.																1	
Inflammation, subacute, epicardium: min.																	
Inflammation, chronic, focal: min.	1																
KIDNEY																	
Basophilia, tubule: min	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Cyst	3																
Degeneration, tubular: min.	2			3	1	1		1	4								1
Degeneration, tubular: mild														1			
Dilatation, pelvis: min	1		1		1			1									
Dilatation, pelvis: mild				1				1			1		1	1		1	1
Dilatation, pelvis: mod.		1					1				1						
Dilatation, tubular: min:																	
Dilatation, tubular, focal: min.					1												
Fibrosis, focal: min.								1									
Fibrosis, focal: mild								1									
Hyperplasia, mesenchymal, focal: min:				1													
Hyperplasia, pelvic/papillary urothelium: min.																	
Infiltration, inflammatory cell: min.																	
Infiltration, lymphocytic: min.									1								
Infiltration, mononuclear cell: mild																	

Table 6: Incidence of Histopathology Findings by Study/Female (continued)

Studies 1-17:

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Approximate Age at Necropsy in Weeks	4	4	4	4	4	4	5	5	6	7	7	7	8	8	8	9	9
Inflammation,subacute:mild																1	
Mineralization:min.										3			3			4	
Mineralization:mild													1	4		2	
Nephritis,chronic,focal:min.											2						
Nephroblastoma,embryonal									1								
Nephroblastoma,malignant																	
Nephropathy,chronic,progressive:min.		2			1	3	3	2	2	3			2			6	
Nephropathy,chronic,progressive:mod.				2													
Proteinaceous Filtrate,tubule:min.																	
Pyelitis,chronic:mod.													1				
LACRIMAL GLAND	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Infiltration,lymphocytic:min.																	
LARGE INTESTINE/ANUS	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Infiltration,lymphocytic,lymphatic,multifocal:mild																	
Infiltration,lymphocytic,lymphatic,multifocal:mod.																	
LARYNX	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Hyperplasia,epithelial:mild																	
Infiltration,lymphocytic:min.																	
Inflammation,acute,glands:min.																	
LIVER	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Altered cell foci																	
Erythropoiesis:min.																	
Fatty Infiltration,hepatocellular,focal:mild																	
Fibrosis,capsule:min.																	
Hematopoiesis	4												1			2	
Infiltration,lymphocytic,focal:min.																	

Table 6: Incidence of Histopathology Findings by Study/Female (continued)

Studies 1-17:

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Approximate Age at Necropsy in Weeks	4	4	4	4	4	4	5	5	6	7	7	7	8	8	8	9	9
Infiltration, mononuclear cell: min.											1			1			1
Infiltration, mixed cell: min.																6	
Inflammation, chronic, focal/multifocal: min.		1								6			2				
Inflammation, perivascular: min.																	
Necrosis, focal, subcapsular: min.								2		5					1		
Vacuolation, hepatocellular: min.													3			1	
LUNG	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Congestion: min.																1	
Edema, perivascular: min.																	
Edema, perivascular: mild																	
Embolus, foreign body/hair shaft: min.								5									
Fibrosis, alveolar, multifocal: mild																	
Hemorrhage: min.																1	
Hemorrhage: mod.													1				
Hyperplasia, bronchiolo-alveolar: min																1	
Infiltration, eosinophilic, periarterial: min.																	
Infiltration, lymphocytic, subpleural: min.																	
Infiltration, lymphohistiocytic, peribronchiolar																2	
Infiltration, macrophage, alveolar: min																	
Infiltration, neutrophilic, perivascular: min.								3									1
Inflammation, interstitial, focal/multifocal: mild													1				
Inflammation, chronic-active, multifocal: mild														1		2	
Pleuritis, chronic, focal: min.		1															
LXMPH NODES	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Erythrophagocytosis: min.	9																
Hemorrhage: min.																	
Hyperplasia, lymphocytic/plasmacytic: min		1		1					3	2							
Hyperplasia, lymphocytic/plasmacytic: mild		2		1					3								
Hyperplasia, lymphocytic/plasmacytic: mod.																	
Plasmacytosis, medullary: min.																	

Table 6: Incidence of Histopathology Findings by Study/Female (continued)

Studies 1-17:

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Approximate Age at Necropsy in Weeks	4	4	4	4	4	4	5	5	6	7	7	7	8	8	8	9	9
Plasmacytosis, medullary: mild																	
MAMMARY GLAND																	
Hyperplasia, acinar cell, focal: mod.	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
OVARY																	
Atrophy: marked	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Corpus luteum, cyst																	
Mineralization: min.																	
PANCREAS																	
Atrophy, acinar cell, focal: min.	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Infiltration, lymphocytic: min.																	
Infiltration, mononuclear cell: min.																	
PERIPHERAL NERVE																	
Inflammation, subacute, focal: min.	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
PHARYNX																	
Inflammation, subacute, muscle: min.	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
PITUITARY																	
Cyst	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Malformation/Anomaly																	
SALIVARY GLAND																	
Hemorrhage, acute: mild.	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Inflammation, chronic, focal: min.													1				

Table 6: Incidence of Histopathology Findings by Study/Female (continued)

Studies 1-17:

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Approximate Age at Necropsy in Weeks	4	4	4	4	4	4	5	5	6	7	7	7	8	8	8	9	9
Necrosis, focal:mild													1				
SKIN	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Inflammation,acute,focal:mild																1	
Microgranuloma:min.																	1
SMALL INTESTINE	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Granuloma,focal:mild																	
Mineralization,Peyer's patches																	
SPINAL CORD	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Cyst,epidermal																	
SPLEEN	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Accessory splenic tissue																	
Hematopoiesis,extramedullary,increased:mild		1															
Hematopoiesis,extramedullary,increased:mod.																	
Hyperplasia,lymphoid																	
Irregular capsule				1													
STOMACH	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Cyst,glands													1				
Degeneration,vacuolar,non-glandular:min.																	
Dilatation,mucosal glands:min.													1			1	
Hyperplasia,tunica muscularis,focal:mild																	
Necrosis,single cell,glandular:min.																	

Table 6: Incidence of Histopathology Findings by Study/Female (continued)

Studies 1-17:

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Approximate Age at Necropsy in Weeks	4	4	4	4	4	4	5	5	6	7	7	7	8	8	8	9	9
TAIL	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Inflammation, neutrophilic: marked												1					
Necrosis, soft tissue: mod.																	
THYMUS	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Congestion, multifocal: min.											1						
Hemorrhage: min.								1									
Hemorrhage: mild														3			
Necrosis, multifocal: min.											3						1
THYROID	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Cyst																1	
Ectopic Tissue, thymus: min.																	
TRACHEA	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Infiltration, lymphocytic: min.																	
Inflammation, chronic, focal: min.																	
URINARY BLADDER	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Infiltration, lymphocytic: min.																	
UTERUS	10	10	5	10	5	10	5	15	10	12	9	10	10	10	15	10	5
Dilatation: min.																	
Dilatation: mild		1															
Dilatation: mod.	1	2				3			3								1

Table 6: Incidence of Histopathology Findings by Study/Female (continued)

Studies 18-34:

Study Identification	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Approximate Age at Necropsy in Weeks																	
HARDERIAN GLAND	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Hemorrhage, unilateral, acute: min.				5													
Infiltration, lymphocytic: min.												1					
Infiltration, lymphocytic: mild												1					
Infiltration, mononuclear cell: min.							1										
Inflammation, chronic, focal: min.				1													
Necrosis, unilateral, focal: min.				4													
HEART	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Cardiomyopathy, focal: min.				1									1				
Infiltration, lymphocytic: min.												1					
Infiltration, mononuclear: min.								1									
Inflammation, subacute, epicardium: min.												1					
Inflammation, chronic, focal: min.																	
KIDNEY	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Basophilia, tubule: min					1		1					1					3
Cyst												1	1				
Degeneration, tubular: min.																	
Degeneration, tubular: mild																	
Dilatation, pelvis: min	1			1	1			1			1						
Dilatation, pelvis: mild				1				1				1	1				
Dilatation, pelvis: mod.																	
Dilatation, tubular: min:							3										2
Dilatation, tubular, focal: min.									1								
Fibrosis, focal: min.	2																
Fibrosis, focal: mild																	
Hyperplasia, mesenchymal, focal: min:																	
Hyperplasia, pelvic/papillary urothelium: min.				1													
Infiltration, inflammatory cell: min.	1																
Infiltration, lymphocytic: min.					1							4					
Infiltration, mononuclear cell: mild					1		3										3

Table 6: Incidence of Histopathology Findings by Study/Female (continued)

Studies 18-34:

Study Identification	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Approximate Age at Necropsy in Weeks	9	10	10	11	11	12	13	13	14	14	15	16	17	18	19	19	26
Inflammation,subacute:mild																	
Mineralization:min.				3			5					1					3
Mimeralization:mild																	
Nephritis,chronic,focal:min.																	
Nephroblastoma,embryonal																	
Nephroblastoma,malignant		1															
Nephropathy,chronic,progressive:min.					2							2					
Nephropathy,chronic,progressive:mod.				1						1							
Proteinaceous Filtrate,tubule:min.												1					
Pyelitis,chronic:mod.																	
LACRIMAL GLAND	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Infiltration,lymphocytic:min.												1					
LARGE INTESTINE/ANUS	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Infiltration,lymphocytic,lymphatic,multifocal:mild								1									
Infiltration,lymphocytic,lymphatic,multifocal:mod.								1									
LARYNX	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Hyperplasia,epithelial:mild												1					
Infiltration,lymphocytic:min.					2							4					
Inflammation,acute,glands:min.												1					
LIVER	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Altered cell foci	1																
Erythropoiesis:min.												1					
Fatty Infiltration,hepatocellular,focal:mild										1							
Fibrosis,capsule:min.												1					
Hematopoiesis																	
Infiltration,lymphocytic,focal:min.								1									

Table 6: Incidence of Histopathology Findings by Study/Female (continued)

Studies 18-34:

Study Identification	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Approximate Age at Necropsy in Weeks	9	10	10	11	11	12	13	13	14	14	15	16	17	18	19	19	26
Infiltration, mononuclear cell: min.					8			1				10					
Infiltration, mixed cell: min.																	
Inflammation, chronic, focal/multifocal: min.				3													3
Inflammation, perivascular: min.														1			1
Necrosis, focal, subcapsular: min.					4							6					1
Vacuolation, hepatocellular: min.																	
LUNG	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Congestion: min.																	
Edema, perivascular: min.					1												
Edema, perivascular: mild					5												
Embolus, foreign body/hair shaft: min.	7																
Fibrosis, alveolar, multifocal: mild									1								
Hemorrhage: min.					2												
Hemorrhage: mod.						1			1								
Hypertrophia, bronchiolo-alveolar: min																	
Infiltration, eosinophilic, periarterial: min.	4												1				
Infiltration, lymphocytic, subpleural: min.					1												
Infiltration, lymphohistiocytic, peribronchiolar																	
Infiltration, macrophage, alveolar: min																	1
Infiltration, neutrophilic, perivascular: min.					1												
Inflammation, interstitial, focal/multifocal: mild	1			2													
Inflammation, chronic-active, multifocal: mild									1								
Pleuritis, chronic, focal: min.																	
LYMPH NODES	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Erythrophagocytosis: min.																	
Hemorrhage: min.					2												
Hypertrophia, lymphocytic/plasmacytic: min				1													
Hypertrophia, lymphocytic/plasmacytic: mild				1													
Hypertrophia, lymphocytic/plasmacytic: mod.				1													
Plasmacytosis, medullary: min.																	1

Table 6: Incidence of Histopathology Findings by Study/Female (continued)

Studies 18-34:

Study Identification	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Approximate Age at Necropsy in Weeks	9	10	10	11	11	12	13	13	14	14	15	16	17	18	19	19	26
Plasmacytosis, medullary: mild																	3
MAMMARY GLAND																	
Hyperplasia, acinar cell, focal: mod.	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
									1								
OVARY																	
Atrophy: marked	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Corpus luteum, cyst																	1
Mineralization: min.					1												2
PANCREAS																	
Atrophy, acinar cell, focal: min.	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Infiltration, lymphocytic: min.					1		1										
Infiltration, mononuclear cell: min.																	3
PERIPHERAL NERVE																	
Inflammation, subacute, focal: min.	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
				1													
PHARYNX																	
Inflammation, subacute, muscle: min.	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
					1												
PITUITARY																	
Cyst	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Malformation/Anomaly													1				3

Table 6: Incidence of Histopathology Findings by Study/Female (continued)

Studies 18-34:

Study Identification	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Approximate Age at Necropsy in Weeks	9	10	10	11	11	12	13	13	14	14	15	16	17	18	19	19	26
SALIVARY GLAND	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Hemorrhage, acute:mild.																	
Inflammation, chronic, focal:min.				1													
Necrosis, focal:mild																	
SKIN	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Inflammation, acute, focal:mild																	
Microgranuloma:min.																	
SMALL INTESTINE	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Granuloma, focal:mild													2				
Mineralization, Peyer's patches				3													
SPINAL CORD	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Cyst, epidermal				1													
SPLEEN	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Accessory splenic tissue	1		1														
Hematopoiesis, extramedullary, increased:mild			1														
Hematopoiesis, extramedullary, increased:mod.			1														
Hyperplasia, lymphoid			1														
Irregular capsule			1														
STOMACH	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Cyst, glands																	
Degeneration, vacuolar, non-glandular:min.					1												
Dilatation, mucosal glands:min.											1						
Hyperplasia, tunica muscularis, focal:mild			1														
Necrosis, single cell, glandular:min.					2												

Table 6: Incidence of Histopathology Findings by Study/Female (continued)

Studies 18-34:

Study Identification	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Approximate Age at Necropsy in Weeks	9	10	10	10	11	12	13	13	14	14	15	16	17	18	19	19	26
TAIL	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Inflammation, neutrophilic: marked																	
Necrosis, soft tissue: mod.			1														
THYMUS	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Congestion, multifocal: min.				1					1	1							
Hemorrhage: min.	2				6	1	1	1					6				4
Hemorrhage: mild							1	1					2				
Necrosis, multifocal: min.																	
THYROID	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Cyst					4		5			1							7
Ectopic Tissue, thymus: min.							1										
TRACHEA	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Infiltration, lymphocytic: min.					1												
Inflammation, chronic, focal: min.				1													1
URINARY BLADDER	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Infiltration, lymphocytic: min.					1												
UTERUS	10	20	10	10	10	10	10	12	5	5	5	10	11	10	5	5	10
Dilatation: min.																	
Dilatation: mild					2						2						
Dilatation: mod.					1			2									