

**Neoplastic and Non-Neoplastic Lesions
in the Charles River
Wistar Hannover [Crl:WI(Han)] Rat**

March 2011

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charles river

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INTRODUCTION:

On occasion statistical tests conducted on data from toxicology studies indicate that the incidence of a particular finding is significantly greater in a treated group than in the concurrent control. Statistical differences can occur as a matter of chance alone, and using a positive statistical difference as the sole or definitive evaluation tool could produce a false positive result. Alternatively, a slight increase in the incidence of an uncommon finding would be unlikely to achieve statistical significance by the tests typically employed in toxicology studies. In this type of situation, the use of historical control data could justify the biological significance of even a slight increase in the incidence of an uncommon finding (1). The time of onset of a particular lesion is also important when analyzing toxicology data. While the overall incidence of a particular lesion may be the same at the end of a 104-week carcinogenicity study, early onset of a lesion could indicate a toxicologically significant alteration in the treated animals. For this reason, we have included control data from very young animals (12-16 weeks of age) and data from animals nearing the end of their natural lifespan (108 to 112 weeks of age) to allow the reviewing scientist a reference incidence of a particular lesion at a particular age.

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 40 control groups of animals from toxicology studies of varying duration from 28 days to 104 weeks (2). All studies were conducted in accordance with Good Laboratory Practice regulations of the United States 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, Canada or Europe 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 onset of neoplasms and non-neoplastic lesions and survival data in Charles River Wistar Hannover [CrI:WI(Han)] rats maintained as control animals in studies of varying duration from 28 days to throughout their lifetime, approximately 104 weeks. This document was prepared for informational purposes only. Diagnoses of the various neoplasms and non-neoplastic lesions 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 1997 and 2009 at four different industrial or contract testing facilities in the United States, Canada or Europe. All studies used Charles River Wistar Hannover [CrI:WI(Han)] rats. This stock of rat was derived by GlaxoWellcome from the Han Wistar stock supplied by BRL. Animals were transferred to Charles River UK in 1996 and then transferred to Charles River in the United States in 1997 and caesarian-rederived to form a foundation colony maintained in biosecure isolators. More information on the Charles River Wistar Hannover [CrI:WI(Han)] rat is available in the informational bibliography presented in Appendix 1.

The rats in the reported studies were from control groups of dietary, gavage or inhalation dosing studies. Some animals received untreated diet as the control article, whereas others were treated with an appropriate control article/vehicle including sterile water, methylcellulose, methylcellulose with Tween 80 or gas mixtures. The rats were approximately 4-9 weeks of age at study initiation.

Rats included in this publication were housed, 1-5 rats/cage, in stainless steel wire mesh cages (solid and mesh bottom cages were used) with free access to water. 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 one of the following

commercial diets; 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 survival data are also presented in graphic form (Graphs 1 and 2). In studies where survival data were not available to us at the time of publication, the designation “NA” is used.

The overall incidences of all neoplastic lesions observed in any organ from the 104-week studies are reported and summarized in Tables 3 and 4. These data also include neoplastic lesions from rats that died or were found moribund and killed prior to terminal sacrifice, but not from rats that were killed for an interim sacrifice or were part of any satellite groups. For simplicity, the data included in this publication are grouped by organ/organ system and presented alphabetically. Due to the apparent diversity in terminology and the variability among studies in the incidence of particular neoplastic lesions, the individual study incidences of neoplastic lesions in selected organs/systems from all studies are also presented (Tables 5 and 6). These organs/systems include adrenal, brain, cervix, hemolymphoreticular system, kidney, liver, lymph nodes, mammary gland, ovary, pancreas, pituitary, skin/subcutis, thyroid, uterus, vagina, testes, thymus and Zymbal’s gland. Neoplastic lesions were only rarely found in studies of less than 104 weeks’ duration; therefore, these studies were not summarized, but all neoplasms found in studies of less than 104 weeks are included in the individual study data presented in Tables 5 and 6. In addition, the individual study incidences of non-neoplastic lesions in selected organs for studies of any duration are presented in Tables 7 and 8. These organs include adrenal, heart, kidney, liver, lung, mammary gland, pancreas and spleen. It should be noted that non-neoplastic lesion data were not available for studies 12, 13, 14, 29, 32 or 36. The studies are listed with no findings to maintain a consecutive numbering system for the convenience of the reviewer. This does not mean that there were no findings for these studies, only that they were not available to us. 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 NEOPLASTIC LESIONS FROM 104-WEEK STUDIES:

The following is a description of how each of the parameters in the tables was 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 16 for males and 16 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 the resultant value by 100 to express it as a percent. Values are expressed to the second decimal place.

NOMENCLATURE:

The terminology used is generally from or consistent with that of the Society of Toxicologic Pathology Standardized System of Nomenclature and Diagnostic Criteria (3,4).

ACKNOWLEDGEMENTS:

Our thanks to Joe Frank and Gayle Hennig and all of the contributing laboratories without whose help this publication would not have been possible.

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Appendix 1: Reference Citations on the Wistar Hannover Rat

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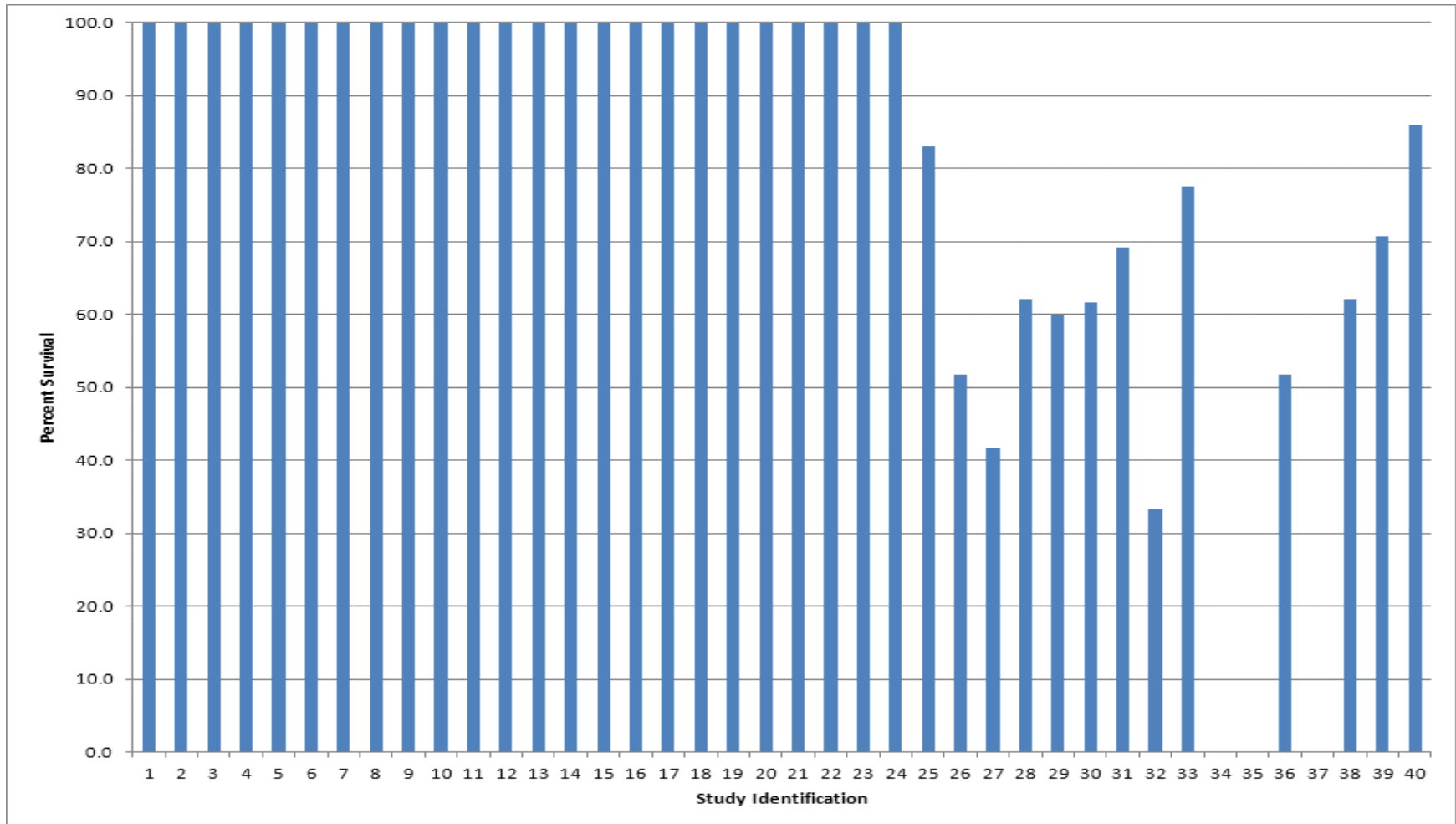
Table 1: Summary of Individual Study Information and Survival/Males

Study Identification	1	2	3	4	5	6	7	8	9	10
Study Initiation Date	2003	2006	2006	2007	2007	2007	2008	2008	2009	2009
Total Number on Study	10	10	20	10	12	6	10	10	10	10
Number Surviving to Termination	10	10	20	10	12	6	10	10	10	10
% Survival	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Study Duration in Weeks	4	4	4	4	4	4	4	4	4	4
Study Identification	11	12	13	14	15	16	17	18	19	20
Study Initiation Date	2009	2000	2000	2008	2001	2006	2007	2007	2007	2007
Total Number on Study	10	10	10	10	20	60	20	30	20	20
Number Surviving to Termination	10	10	10	10	20	60	20	30	20	20
% Survival	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Study Duration in Weeks	4	13	13	13	26	26	26	26	26	26
Study Identification	21	22	23	24	25	26	27	28	29	30
Study Initiation Date	2008	2008	2008	2008	1997	1999	2000	2000	2000	2001
Total Number on Study	20	23	20	20	100	60	60	50	80	112
Number Surviving to Termination	20	23	20	20	83	31	25	31	48	69
% Survival	100.00	100.00	100.00	100.00	83.00	51.67	41.67	62.00	60.00	61.61
Study Duration in Weeks	26	26	26	26	104	104	104	104	104	104
Study Identification	31	32	33	34	35	36	37	38	39	40
Study Initiation Date	2002	2002	2003	2003	2003	2003	2005	2005	2006	2007
Total Number on Study	65	60	120	50	50	60	50	100	150	50
Number Surviving to Termination	45	20	93	NA	NA	31	NA	62	106	43
% Survival	69.23	33.33	77.50	NA	NA	51.67	NA	62.00	70.67	86.00
Study Duration in Weeks	104	104	104	104	104	104	104	104	104	104

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

Study Identification	1	2	3	4	5	6	7	8	9	10
Study Initiation Date	2003	2006	2006	2007	2007	2007	2008	2008	2009	2009
Total Number on Study	10	10	20	10	12	6	10	10	10	10
Number Surviving to Termination	10	10	20	10	12	6	10	10	10	10
% Survival	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Study Duration in Weeks	4	4	4	4	4	4	4	4	4	4
Study Identification	11	12	13	14	15	16	17	18	19	20
Study Initiation Date	2009	2000	2000	2008	2001	2006	2007	2007	2007	2007
Total Number on Study	10	10	10	10	20	60	20	30	20	20
Number Surviving to Termination	10	10	10	10	20	60	20	30	20	18
% Survival	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	90.00
Study Duration in Weeks	4	13	13	13	26	26	26	26	26	26
Study Identification	21	22	23	24	25	26	27	28	29	30
Study Initiation Date	2008	2008	2008	2008	1997	1999	2000	2000	2000	2001
Total Number on Study	20	23	20	20	100	60	60	50	80	112
Number Surviving to Termination	20	22	19	20	63	33	26	38	40	72
% Survival	100.00	95.65	95.00	100.00	63.00	55.00	43.33	76.00	50.00	64.29
Study Duration in Weeks	26	26	26	26	104	104	104	104	104	104
Study Identification	31	32	33	34	35	36	37	38	39	40
Study Initiation Date	2002	2002	2003	2003	2003	2003	2005	2005	2006	2007
Total Number on Study	65	60	120	50	50	60	50	100	150	50
Number Surviving to Termination	42	31	93	NA	NA	28	NA	70	100	33
% Survival	64.62	51.67	77.50	NA	NA	46.67	NA	70.00	66.67	66.00
Study Duration in Weeks	104	104	104	104	104	104	104	104	104	104

Graph 1: Male Survival



Graph 2: Female Survival

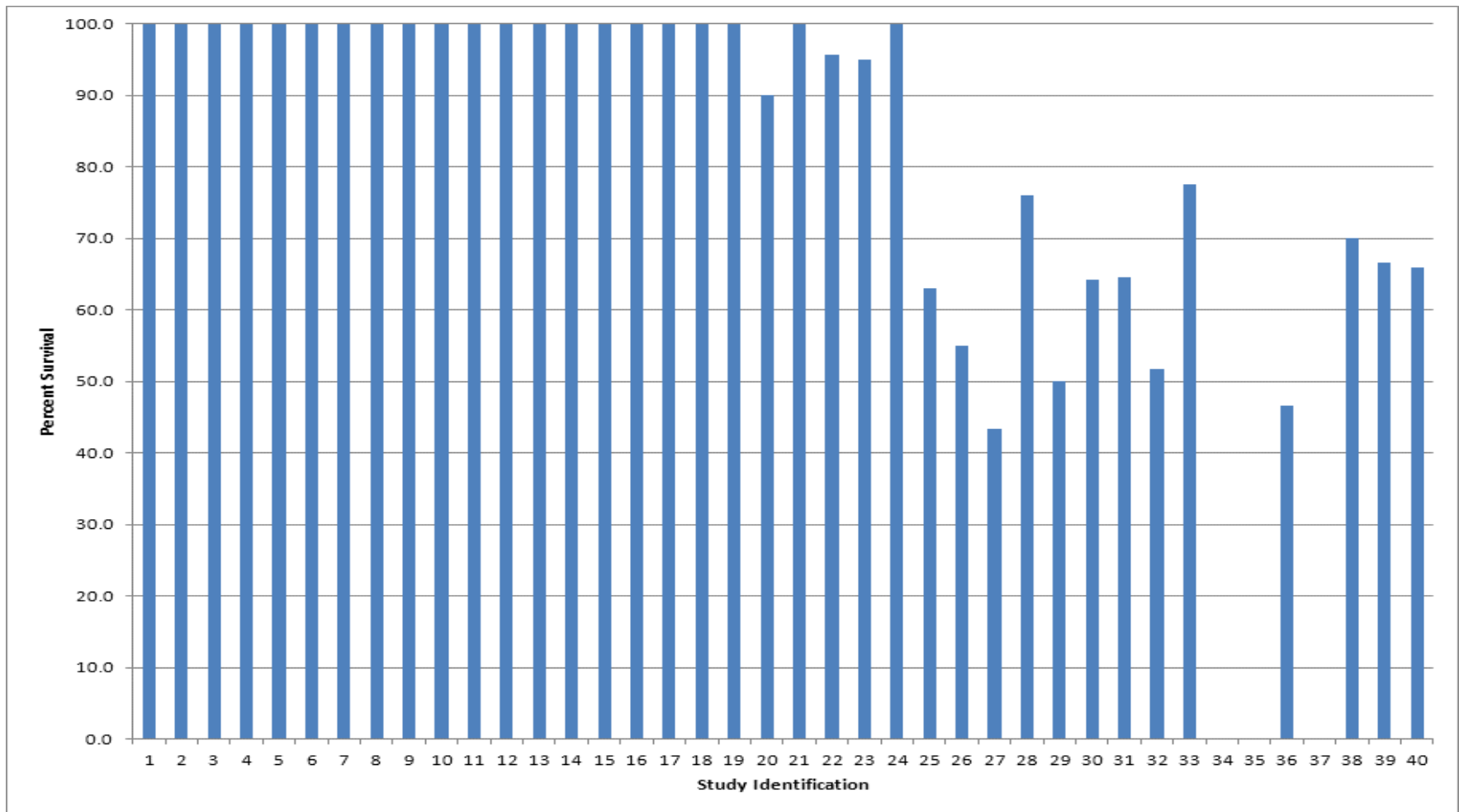


Table 3: Neoplasms/104 Weeks/Males

		TOTAL		#STUDIES		
		#ORGANS	PERCENT	USING THIS	MINIMUM	MAXIMUM
LOCATION AND TUMOR	#STUDIES	#LESIONS	OF TOTAL	DIAGNOSIS	% FOUND	% FOUND
ABDOMEN	16	1217				
Fibrosarcoma		3	0.25	2	0.83	1.33
Hemangiosarcoma		1	0.08	1	2.00	2.00
Schwannoma, Malignant		1	0.08	1	0.67	0.67
ADRENAL	16	1217				
Adenoma, Cortex		21	1.73	8	1.00	6.67
Adenocarcinoma, Cortex		2	0.16	2	0.67	0.89
Ganglioneuroma		1	0.08	1	2.00	2.00
Pheochromocytoma, Benign		16	1.31	8	1.33	4.00
Pheochromocytoma, Malignant		4	0.33	4	0.83	2.00
BRAIN	16	1217				
Ependymoma, Malignant		1	0.08	1	0.83	0.83
Granular Cell Tumor, Benign		7	0.58	5	1.00	2.00
Granular Cell Tumor, Malignant		3	0.25	2	0.83	4.00
Mixed Glioma, Malignant		4	0.33	3	1.00	1.79
BROWN FAT	16	1217				
Hibernoma, Benign		1	0.08	1	0.89	0.89
EPIDIDYMIS	16	1217				
Mesothelioma, Malignant		2	0.16	1	4.00	4.00
Sarcoma		1	0.08	1	1.00	1.00
HARDERIAN GLAND	16	1217				
Adenoma		4	0.33	3	1.67	2.00
HEAD	16	1217				
Schwannoma, Malignant		1	0.08	1	0.67	0.67
HEART	16	1217				
Endocardial Schwannoma, Benign		1	0.08	1	1.00	1.00
Endocardial Schwannoma, Malignant		1	0.08	1	2.00	2.00
Paraganglioma, Benign		1	0.08	1	2.00	2.00
HEMOLYMPHORETICULAR TISSUE	16	1217				
Histiocytic Sarcoma		9	0.74	7	1.00	2.00
Lymphoma, Malignant		15	1.23	7	0.83	4.00

		TOTAL		#STUDIES		
		#ORGANS	PERCENT	USING THIS	MINIMUM	MAXIMUM
LOCATION AND TUMOR	#STUDIES	#LESIONS	OF TOTAL	DIAGNOSIS	% FOUND	% FOUND
KIDNEY	16	1217				
Adenoma, Tubular Cell		2	0.16	2	0.89	1.67
Carcinoma, Tubular Cell		3	0.25	1	3.00	3.00
Lipoma		6	0.49	5	0.83	3.33
Liposarcoma		1	0.08	1	0.89	0.89
Renal Mesenchymal Tumor		3	0.25	3	0.83	1.54
LARGE INTESTINE/CECUM/ANUS	16	1217				
Adenoma		1	0.08	1	2.00	2.00
LIVER	16	1217				
Adenoma, Hepatocellular		52	4.27	12	0.67	17.50
Carcinoma, Hepatocellular		13	1.07	9	0.67	3.33
Hemangiosarcoma		1	0.08	1	2.00	2.00
LUNG	16	1217				
Adenoma, Alveolar/Bronchiolar		5	0.41	2	1.79	2.50
Carcinoma, Alveolar/Bronchiolar		1	0.08	1	0.67	0.67
LYMPH NODES	16	1217				
Hemangioma		13	1.07	6	0.89	4.00
Hemangiosarcoma		8	0.66	6	0.89	4.00
MAMMARY GLAND	16	1217				
Fibroadenoma		2	0.16	1	1.67	1.67
PANCREAS	16	1217				
Adenoma, Acinar Cell		4	0.33	3	0.83	1.79
Carcinoma, Acinar Cell		3	0.25	2	1.33	1.54
Adenoma, Islet Cell		26	2.14	10	1.00	7.00
Carcinoma, Islet Cell		10	0.82	5	0.67	4.00
PARATHYROID	16	1217				
Adenoma		17	1.40	4	0.67	8.93
PITUITARY	16	1217				
Adenoma, Pars Distalis		300	24.65	16	6.00	37.33
Adenoma, Pars Intermedia		29	2.38	9	1.67	6.67
Ganglioneuroma		1	0.08	1	1.00	1.00
Schwannoma, Malignant		1	0.08	1	0.83	0.83
PROSTATE	16	1217				
Adenocarcinoma		1	0.08	1	0.67	0.67

		TOTAL		#STUDIES		
		#ORGANS	PERCENT	USING THIS	MINIMUM	MAXIMUM
LOCATION AND TUMOR	#STUDIES	#LESIONS	OF TOTAL	DIAGNOSIS	% FOUND	% FOUND
SALIVARY GLAND	16	1217				
Adenoma		1	0.08	1	1.00	1.00
SKELETAL MUSCLE	16	1217				
Fibrosarcoma		1	0.08	1	2.00	2.00
Hemangiosarcoma		1	0.08	1	0.89	0.89
SKIN	16	1217				
Keratoacanthoma		23	1.89	7	1.54	10.00
Papilloma, Squamous Cell		6	0.49	5	0.67	2.00
Carcinoma, Squamous cell		7	0.58	4	0.83	2.68
Trichoepithelioma		4	0.33	4	0.83	2.00
Adenoma, Basal Cell		4	0.33	2	4.00	4.00
Carcinoma, Basal Cell		3	0.25	2	0.89	1.33
Adenoma, Sebaceous		1	0.08	1	0.67	0.67
Fibroma		5	0.41	4	1.00	2.00
Fibrosarcoma		1	0.08	1	0.67	0.67
Hemangioma		1	0.08	1	0.67	0.67
Hemangiosarcoma		1	0.08	1	0.67	0.67
SMALL INTESTINE	16	1217				
Fibroma		2	0.16	2	0.83	1.67
Fibrosarcoma		1	0.08	1	0.83	0.83
Leiomyoma		1	0.08	1	2.00	2.00
Leiomyosarcoma		1	0.08	1	1.00	1.00
SPLEEN	16	1217				
Fibrosarcoma		1	0.08	1	0.89	0.89
Hemangioma		1	0.08	1	0.83	0.83
Hemangiosarcoma		1	0.08	1	1.00	1.00
Leiomyosarcoma		1	0.08	1	0.67	0.67
STOMACH	16	1217				
Adenoma		1	0.08	1	0.67	0.67
Adenocarcinoma		1	0.08	1	2.00	2.00
Carcinoma, Squamous Cell		2	0.16	1	1.79	1.79
Fibrosarcoma		2	0.16	1	1.67	1.67
TAIL	16	1217				
Hemangioma		1	0.08	1	0.89	0.89
TESTIS	16	1217				
Adenoma, Interstitial Cell		14	1.15	7	0.89	6.67

		TOTAL		#STUDIES		
		#ORGANS	PERCENT	USING THIS	MINIMUM	MAXIMUM
LOCATION AND TUMOR	#STUDIES	#LESIONS	OF TOTAL	DIAGNOSIS	% FOUND	% FOUND
Mesothelioma, Malignant		2	0.16	2	0.89	2.00
THYMUS	16	1217				
Thymoma, Benign		10	0.82	5	1.54	4.17
Thymoma, Malignant		6	0.49	2	0.89	5.00
THYROID	16	1217				
Adenoma, C-Cell		84	6.90	15	1.00	18.00
Carcinoma, C-Cell		17	1.40	2	4.00	13.39
Adenoma, Follicular Cell		53	4.35	13	1.00	11.67
Carcinoma, Follicular Cell		12	0.99	5	0.67	5.83
TOOTH	16	1217				
Odontoma		1	0.08	1	0.83	0.83
ZYMBAL'S GLAND	16	1217				
Carcinoma		1	0.08	1	2.00	2.00

Table 4: Neoplasms/104 Weeks/Females

		TOTAL		#STUDIES		
LOCATION AND TUMOR	#STUDIES	#ORGANS	PERCENT	USING THIS	MINIMUM	MAXIMUM
		#LESIONS	OF TOTAL	DIAGNOSIS	% FOUND	% FOUND
ABDOMEN	16	1217				
Hemangiosarcoma		2	0.16	2	0.67	2.00
Sarcoma		1	0.08	1	2.00	2.00
ADRENAL	16	1217				
Adenoma, Cortex		14	1.15	7	1.33	3.00
Adenocarcinoma, Cortex		1	0.08	1	2.00	2.00
Pheochromocytoma, Benign		5	0.41	3	1.00	2.00
BONE	16	1217				
Osteosarcoma		1	0.08	1	1.00	1.00
BRAIN	16	1217				
Ependymoma, Benign		1	0.08	1	1.67	1.67
Granular Cell Tumor, Benign		2	0.16	2	0.67	2.00
Granular Cell Tumor, Malignant		1	0.08	1	0.83	0.83
Meningioma, Benign		2	0.16	1	2.00	2.00
Oligodendroglioma, Malignant		2	0.16	2	0.89	2.00
Glioma, Mixed Cell, Malignant		3	0.25	2	0.89	2.00
CERVIX	16	1217				
Granular Cell Tumor, Benign		1	0.08	1	2.00	2.00
Polyp, Stromal		1	0.08	1	2.00	2.00
Sarcoma, Stromal		1	0.08	1	2.00	2.00
HEMOLYMPHORETICULAR TISSUE	16	1217				
Leukemia, Large Granular Lymphocytic		1	0.08	1	2.00	2.00
Lymphoma, Malignant		10	0.82	4	1.67	4.00
Sarcoma, Histiocytic		3	0.25	2	0.89	1.33
KIDNEY	16	1217				
Carcinoma, Tubular Cell		4	0.33	2	1.67	3.00
Hemangiosarcoma		1	0.08	1	2.00	2.00
Lipoma		1	0.08	1	2.00	2.00
Renal Mesenchymal Tumor, Benign		1	0.08	1	2.00	2.00
LARGE INTESTINE/CECUM/ANUS	16	1217				
Leiomyosarcoma		3	0.25	3	0.89	2.00

		TOTAL		#STUDIES		
		#ORGANS	PERCENT	USING THIS	MINIMUM	MAXIMUM
LOCATION AND TUMOR	#STUDIES	#LESIONS	OF TOTAL	DIAGNOSIS	% FOUND	% FOUND
LIVER	16	1217				
Adenoma, Hepatocellular		26	2.14	9	1.00	9.17
Carcinoma, Hepatocellular		1	0.08	1	1.54	1.54
Hemangiosarcoma		1	0.08	1	1.54	1.54
LUNG	16	1217				
Adenoma, Alveolar/Bronchiolar		2	0.16	2	0.83	2.00
LYMPH NODES	16	1217				
Hemangioma		1	0.08	1	2.00	2.00
Hemangiosarcoma		1	0.08	1	0.89	0.89
Lymphangioma		1	0.08	1	2.00	2.00
MAMMARY GLAND	16	1217				
Adenoma		27	2.22	10	0.67	8.00
Adenocarcinoma		36	2.96	10	1.54	12.00
Fibroadenoma, Benign		153	12.57	15	2.00	32.00
ORAL CAVITY	16	1217				
Papilloma, Squamous Cell		1	0.08	1	0.89	0.89
Carcinoma, Squamous Cell		2	0.16	2	0.67	2.00
OVARY	16	1217				
Adenoma, Sertoliform Tubular		2	0.16	2	0.83	1.67
Adenoma, Tubulostromal		1	0.08	1	1.67	1.67
Granulosa-Theca Cell Tumor, Benign		13	1.07	6	0.67	6.00
Granulosa-Theca Cell Tumor, Malignant		3	0.25	3	0.67	2.00
Leiomyosarcoma		1	0.08	1	0.83	0.83
Luteoma, Benign		1	0.08	1	0.83	0.83
OVIDUCT	16	1217				
Leiomyoma		1	0.08	1	0.83	0.83
PANCREAS	16	1217				
Adenoma, Islet Cell		5	0.41	4	0.89	2.00
Carcinoma, Islet Cell		2	0.16	2	1.00	2.00
Mixed Acinar-Islet Cell Tumor		1	0.08	1	0.89	0.89
PARATHYROID	16	1217				
Adenoma		3	0.25	3	0.67	2.00
Carcinoma		1	0.08	1	0.89	0.89

		TOTAL		#STUDIES		
		#ORGANS	PERCENT	USING THIS	MINIMUM	MAXIMUM
LOCATION AND TUMOR	#STUDIES	#LESIONS	OF TOTAL	DIAGNOSIS	% FOUND	% FOUND
PITUITARY	16	1217				
Adenoma, Pars Distalis		545	44.78	16	3.33	75.00
Carcinoma, Pars Distalis		14	1.15	7	0.83	5.36
Adenoma, Pars Intermedia		15	1.23	8	0.89	6.00
SALIVARY GLAND	16	1217				
Adenoma		2	0.16	2	0.67	1.67
SKELETAL MUSCLE	16	1217				
Hemangiosarcoma		1	0.08	1	0.83	0.83
SKIN	16	1217				
Keratoacanthoma		5	0.41	4	1.00	2.00
Trichoepithelioma		1	0.08	1	2.00	2.00
Adenoma, Basal Cell		5	0.41	4	0.89	4.00
Carcinoma, Basal Cell		3	0.25	3	0.89	2.00
Carcinoma, Sebaceous		1	0.08	1	2.00	2.00
Fibrous Histiocytoma, Malignant		2	0.16	2	2.00	2.00
Sarcoma		1	0.08	1	2.00	2.00
SMALL INTESTINE	16	1217				
Adenoma		1	0.08	1	2.00	2.00
Fibroma		3	0.25	2	0.83	1.79
Fibrosarcoma		1	0.08	1	0.89	0.89
Leiomyosarcoma		1	0.08	1	2.00	2.00
SPINAL CORD	16	1217				
Schwannoma, Malignant		1	0.08	1	0.89	0.89
SPLEEN	16	1217				
Hemangiosarcoma		1	0.08	1	1.00	1.00
STOMACH	16	1217				
Carcinoma, Squamous Cell		1	0.08	1	0.89	0.89
Fibrosarcoma		2	0.16	2	1.67	2.00
Sarcoma		1	0.08	1	0.67	0.67
THYMUS	16	1217				
Thymoma, Benign		33	2.71	10	1.67	6.67
Thymoma, Malignant		15	1.23	7	0.83	5.00

		TOTAL		#STUDIES		
		#ORGANS	PERCENT	USING THIS	MINIMUM	MAXIMUM
LOCATION AND TUMOR	#STUDIES	#LESIONS	OF TOTAL	DIAGNOSIS	% FOUND	% FOUND
THYROID	16	1217				
Adenoma, C-Cell		85	6.98	14	1.25	22.00
Carcinoma, C-Cell		20	1.64	5	1.33	8.93
Adenoma, Follicular Cell		33	2.71	12	0.67	8.33
Carcinoma, Follicular Cell		14	1.15	7	0.67	5.83
URINARY BLADDER	16	1217				
Carcinoma, Transitional Cell		1	0.08	1	0.89	0.89
UTERUS	16	1217				
Adenoma, Endometrial		5	0.41	3	1.79	4.00
Adenocarcinoma, Endometrial		30	2.47	10	0.89	14.00
Carcinoma, Squamous Cell		2	0.16	2	0.67	2.00
Leiomyoma		8	0.66	7	0.89	2.00
Leiomyosarcoma		1	0.08	1	0.83	0.83
Polyp, Endometrial Stromal		83	6.82	14	1.00	22.00
Sarcoma, Endometrial Stromal		5	0.41	3	0.67	3.00
Schwannoma, Malignant		2	0.16	2	0.67	2.00
VAGINA	16	1217				
Granular Cell Tumor, Benign		5	0.41	3	0.67	6.00
Papilloma, Squamous Cell		1	0.08	1	0.89	0.89
Polyp, Stromal		1	0.08	1	2.00	2.00

Table 5: Incidence of Neoplasms by Study for Selected Organs/Males

Studies 1-20:

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Study Duration	4	4	4	4	4	4	4	4	4	4	4	13	13	13	26	26	26	26	26	26
ADRENAL	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Adenoma, Cortex																				
Adenocarcinoma, Cortex																				
Ganglioneuroma																				
Pheochromocytoma, Benign																				
Pheochromocytoma, Malignant																				
BRAIN	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Ependymoma, Benign																				
Ependymoma, Malignant																				
Granular Cell Tumor, Benign																				
Granular Cell Tumor, Malignant																				
Mixed Glioma, Benign																				
Mixed Glioma, Malignant																				
HEMOLYMPHORETICULAR TISSUE	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Histiocytic Sarcoma																				
Lymphoma, Malignant																				
KIDNEY	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Adenoma, Tubular Cell																				
Carcinoma, Tubular Cell																				
Lipoma																				
Liposarcoma																				
Renal Mesenchymal Tumor																				

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Study Duration	4	4	4	4	4	4	4	4	4	4	4	13	13	13	26	26	26	26	26	26
LIVER	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Adenoma, Hepatocellular																				
Carcinoma, Hepatocellular																				
Hemangiosarcoma																				
LYMPH NODES	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Hemangioma																				
Hemangiosarcoma																				
MAMMARY GLAND	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Fibroadenoma																				
PANCREAS	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Adenoma, Acinar Cell																				
Carcinoma, Acinar Cell																				
Adenoma, Islet Cell																				
Carcinoma, Islet Cell																				
PITUITARY	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Adenoma, Pars Distalis																				
Adenoma, Pars Intermedia																				
Ganglioneuroma																				
Schwannoma, Malignant																				
SKIN	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Keratoacanthoma																				
Papilloma, Squamous Cell																				

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Study Duration	4	4	4	4	4	4	4	4	4	4	4	13	13	13	26	26	26	26	26	26
Carcinoma, Squamous Cell																				
Trichoepithelioma																				
Adenoma, Basal Cell																				
Carcinoma, Basal Cell																				
Adenoma, Sebaceous																				
Fibroma																				
Fibrosarcoma																				
Hemangioma																				
Hemangiosarcoma																				
TESTIS	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Adenoma, Interstitial Cell																				
Adenoma, Sertoli Cell																				
Mesothelioma, Malignant																				
THYMUS	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Thymoma, Benign																				
Thymoma, Malignant																				
THYROID	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Adenoma, C-Cell																				
Carcinoma, C-Cell																				
Adenoma, Follicular Cell																				
Carcinoma, Follicular Cell																				
ZYMBAL'S GLAND	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Carcinoma														1						

Studies 21-40:

Study Identification	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Study Duration	26	26	26	26	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
ADRENAL	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Adenoma, Cortex					1					2	2	4	7	2					2	1
Adenocarcinoma, Cortex										1									1	
Ganglioneuroma																				1
Pheochromocytoma, Benign					3					2	1		3			2	1		2	2
Pheochromocytoma, Malignant					1								1				1			1
BRAIN	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Ependymoma, Benign																				
Ependymoma, Malignant													1							
Granular Cell Tumor, Benign					1					2	1		2				1			
Granular Cell Tumor, Malignant													1							2
Mixed Glioma, Benign			1																	
Mixed Glioma, Malignant					1					2		1								
HEMOLYMPHORETICULAR TISSUE	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Histiocytic Sarcoma					1					2	1		2	1		1	1			
Lymphoma, Malignant					4					3			1		1		1		4	1
KIDNEY	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Adenoma, Tubular Cell						1				1										
Carcinoma, Tubular Cell				1	3															
Lipoma							1	1				2	1			1				
Liposarcoma										1										
Renal Mesenchymal Tumor					1						1		1							
LIVER	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Adenoma, Hepatocellular					6		1	1	1	14	1		21		1	2		1	1	2

Study Identification	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Study Duration	26	26	26	26	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
Carcinoma, Hepatocellular						1	1	1		2	1		4		1	1			1	
Hemangiosarcoma															1					
LYMPH NODES	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Hemangioma					4					1	1		4				2			1
Hemangiosarcoma										1		1		1	1				2	2
MAMMARY GLAND	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Fibroadenoma													2							
PANCREAS	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Adenoma, Acinar Cell										2			1			1				
Carcinoma, Acinar Cell											1								2	
Adenoma, Islet Cell					7					2		1	3		1	1	3	1	5	2
Carcinoma, Islet Cell										4	1		2						1	2
PITUITARY	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Adenoma, Pars Distalis					32	14	11	17	26	38	9	11	26	3	4	6	18	19	56	10
Adenoma, Pars Intermedia							1			2			3		1	4	3	4	10	1
Ganglioneuroma					1															
Schwannoma, Malignant													1							
SKIN	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Keratoacanthoma					2					7	1		2			1	5		5	
Papilloma, Squamous Cell					2					1			1				1		1	
Carcinoma, Squamous Cell					2			1		3			1							
Trichoepithelioma												1	1	1	1					
Adenoma, Basal Cell																	2			2
Carcinoma, Basal Cell										1									2	

Study Identification	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Study Duration	26	26	26	26	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
Adenoma, Sebaceous																			1	
Fibroma														1				1	2	1
Fibrosarcoma																			1	
Hemangioma																			1	
Hemangiosarcoma																			1	
TESTIS	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Adenoma, Interstitial Cell					1		1			1		1	8	1	1					
Adenoma, Sertoli Cell																				
Mesothelioma, Malignant										1							1			
THYMUS	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Thymoma, Benign											1		5	1	1		2			
Thymoma, Malignant					5					1										
THYROID	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Adenoma, C-Cell					9		4	2	1	18	3	4	9	6	4	1	6	1	7	9
Carcinoma, C-Cell										15										2
Adenoma, Follicular Cell					5			2		5	6	5	14	4	2	1	4	1	2	2
Carcinoma, Follicular Cell							1					2	7						1	1
ZYMBAL'S GLAND	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Carcinoma																				

Table 6: Incidence of Neoplasms by Study for Selected Organs/Females

Studies 1-20:

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Study Duration	4	4	4	4	4	4	4	4	4	4	4	13	13	13	26	26	26	26	26	26
ADRENAL	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Adenoma, Cortex																				
Adenocarcinoma, Cortex																				
Pheochromocytoma, Benign																				
Pheochromocytoma, Malignant																				
Ganglioneuroma																				
BRAIN	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Ependymoma, Benign																				
Ependymoma, Malignant																				
Granular Cell Tumor, Benign																				
Granular Cell Tumor, Malignant																				
Meningioma, Benign																				
Oligodendroglioma, Malignant																				1
Glioma, Mixed Cell, Malignant																				
CERVIX	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Granular Cell Tumor, Benign																				
Polyp, Stromal																				
Sarcoma, Stromal																				
HEMOLYMPHORETICULAR TISSUE	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Leukemia, Large Granular Lymphocytic																				
Lymphoma, Malignant																				
Sarcoma, Histiocytic																				

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Study Duration	4	4	4	4	4	4	4	4	4	4	4	13	13	13	26	26	26	26	26	26
KIDNEY	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Carcinoma, Tubular Cell																				
Hemangiosarcoma																				
Lipoma																				
Renal Mesenchymal Tumor, Benign																				
LIVER	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Adenoma, Hepatocellular																				
Carcinoma, Hepatocellular																				
Hemangiosarcoma																				
LYMPH NODES	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Hemangioma																				
Hemangiosarcoma																				
Lymphangioma																				
MAMMARY GLAND	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Adenoma																				
Adenocarcinoma																				
Fibroadenoma, Benign															1					
OVARY	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Adenoma, Sertoliform Tubular																				
Adenoma, Tubulostromal																				
Cystadenocarcinoma																				
Granulosa-Theca Cell Tumor, Benign																				
Granulosa-Theca Cell Tumor, Malignant																				
Leiomyosarcoma																				
Luteoma, Benign																				

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Study Duration	4	4	4	4	4	4	4	4	4	4	4	13	13	13	26	26	26	26	26	26
PANCREAS	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Adenoma, Islet Cell																				
Carcinoma, Islet Cell																				
Mixed Acinar-Islet Cell Tumor																				
PITUITARY	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Adenoma, Pars Distalis																1				1
Carcinoma, Pars Distalis																				
Adenoma, Pars Intermedia																				
SKIN	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Keratoacanthoma																				
Trichoepithelioma																				
Adenoma, Basal Cell																				
Carcinoma, Basal Cell																				
Carcinoma, Sebaceous																				
Fibrous Histiocytoma, Malignant																				
Sarcoma																				
THYMUS	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Thymoma, Benign																				
Thymoma, Malignant																				
THYROID	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Adenoma, C-Cell																				
Carcinoma, C-Cell																				
Adenoma, Follicular Cell																				
Carcinoma, Follicular Cell																				

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Study Duration	4	4	4	4	4	4	4	4	4	4	4	13	13	13	26	26	26	26	26	26
UTERUS	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Adenoma, Endometrial																				
Adenocarcinoma, Endometrial																				
Carcinoma, Squamous Cell																				
Granular Cell Tumor, Benign																				
Leiomyoma																				
Leiomyosarcoma																				
Polyp, Endometrial Stromal															1				1	
Sarcoma, Endometrial Stromal																				
Schwannoma, Malignant																				
VAGINA	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Granular Cell Tumor, Benign																				
Papilloma, Squamous Cell																				
Polyp, Stromal																				

Studies 21-40:

Study Identification	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Study Duration	26	26	26	26	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
ADRENAL	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Adenoma, Cortex					3		1			3	1		3	1					2	
Adenocarcinoma, Cortex																				1
Pheochromocytoma, Benign					1									1					3	
Pheochromocytoma, Malignant																				
Ganglioneuroma																				
BRAIN	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Ependymoma, Benign				1			1													
Ependymoma, Malignant			1																	
Granular Cell Tumor, Benign								1											1	
Granular Cell Tumor, Malignant													1							
Meningioma, Benign					2															
Oligodendroglioma, Malignant										1				1						
Glioma, Mixed Cell, Malignant					2					1										
CERVIX	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Granular Cell Tumor, Benign															1					
Polyp, Stromal															1					
Sarcoma, Stromal														1						
HEMOLYMPHORETICULAR TISSUE	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Leukemia, Large Granular Lymphocytic																				1
Lymphoma, Malignant						1				2					2				5	
Sarcoma, Histiocytic										1									2	
KIDNEY	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Carcinoma, Tubular Cell					3	1														

Study Identification	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Study Duration	26	26	26	26	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
Hemangiosarcoma								1												
Lipoma								1												
Renal Mesenchymal Tumor, Benign																	1			
LIVER	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Adenoma, Hepatocellular					1		1			6		1	11			1	2		2	1
Carcinoma, Hepatocellular											1									
Hemangiosarcoma											1									
LYMPH NODES	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Hemangioma															1					
Hemangiosarcoma										1										
Lymphangioma															1					
MAMMARY GLAND	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Adenoma					2		3			1	1	4	4	2		1		8	1	
Adenocarcinoma					4			1		4	1	2	5		1		1		11	6
Fibroadenoma, Benign					15	6	4	8	10	17	4	2	26	1	3		13	2	26	16
OVARY	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Adenoma, Sertoliform Tubular													1			1				
Adenoma, Tubulostromal																1				
Cystadenocarcinoma	1																			
Granulosa-Theca Cell Tumor, Benign													5	1	3			2	1	1
Granulosa-Theca Cell Tumor, Malignant													1						1	1
Leiomyosarcoma													1							
Luteoma, Benign													1							
PANCREAS	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50

Study Identification	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Study Duration	26	26	26	26	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
Adenoma, Islet Cell						1				1					1				2	
Carcinoma, Islet Cell					1															1
Mixed Acinar-Islet Cell Tumor										1										
PITUITARY	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Adenoma, Pars Distalis	1				75	28	38	29	16	59	21	16	65	12	19	2	28	7	98	32
Carcinoma, Pars Distalis					1		1	1		6			1	1					3	
Adenoma, Pars Intermedia					1				4	1				1	1		1		3	3
SKIN	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Keratoacanthoma					1					2				1	1					
Trichoepithelioma																	1			
Adenoma, Basal Cell						1				1				1	2					
Carcinoma, Basal Cell								1		1										1
Carcinoma, Sebaceous																				1
Fibrous Histiocytoma, Malignant															1		1			
Sarcoma																	1			
THYMUS	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Thymoma, Benign					2		3			5	2	1	8	3	3		3			3
Thymoma, Malignant					1			1			2	3	1			1			6	
THYROID	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Adenoma, C-Cell					9	2	1	4	1	18	1	6	13	2	1		11		7	9
Carcinoma, C-Cell					3					10	1		4						2	
Adenoma, Follicular Cell					3	1	1		2	4	2	4	8			5	1	1	1	
Carcinoma, Follicular Cell					2					1	1	1	7			1			1	
UTERUS	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50

Study Identification	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Study Duration	26	26	26	26	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
Adenoma, Endometrial								1		2				2						
Adenocarcinoma, Endometrial					3					1	1	4	5	4			7	1	3	1
Carcinoma, Squamous Cell																			1	1
Granular Cell Tumor, Benign																				
Leiomyoma						1				1	1	1				1			2	1
Leiomyosarcoma													1							
Polyp, Endometrial Stromal					6	3	2	1	4	13	2	9	6	10			6	1	9	11
Sarcoma, Endometrial Stromal					3														1	1
Schwannoma, Malignant																			1	1
VAGINA	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Granular Cell Tumor, Benign															3	1			1	
Papilloma, Squamous Cell										1										
Polyp, Stromal															1					

Table 7: Incidence of Non-Neoplastic Lesions by Study for Selected Organs/Males

Studies 1-20:

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Study Duration	4	4	4	4	4	4	4	4	4	4	4	13	13	13	26	26	26	26	26	26
ADRENAL	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Accessory Cortical Tissue								1												
Angiectasis																				
Congestion																				1
Degeneration and/or Necrosis																				
Degeneration: Cystic																				
Deposits: Lipofuscin																				
Deposits: Pigment																				
Hematopoiesis: Extramedullary																				
Hemorrhage																				
Hyperplasia: Cortical																	1			
Hyperplasia: Cortical Focal															1					
Hyperplasia: Medullary																				
Hypertrophy: Cortical																				
Hypertrophy: Cortical Focal																				
Infiltration: Mixed Cell																				
Necrosis: Vascular																				
Vacuolation: Cortical			2																	
Vacuolation: Cortical Focal																				
HEART	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Congestion																				
Dilatation																				
Endocardiosis: Valvular																				
Fibrosis																				

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Study Duration	4	4	4	4	4	4	4	4	4	4	4	13	13	13	26	26	26	26	26	26
Hemorrhage																				
Hyperplasia: Endocardial																				
Infiltration: Mixed Cell				1																
Infiltration: Mononuclear Cell					1											10	2			
Inflammation			2																	
Mineralization																				
Murine Progressive Cardiopathy															3					
Polyarteritis																				
Thrombosis: Atrial																				
Vacuolation: Myocardial																				
KIDNEY	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Amphophilic Cell Focus																				
Angiectasis																				
Basophilia: Tubular		2		1			1		2	2	4				1					3
Cast															1					
Chronic Progressive Nephropathy															7					
Clear Cell Focus																				
Congestion																				
Cyst					1															
Deposits: Pigment																				
Dilatation: Pelvis		1			1		1			4					2	6	1	6	1	
Dilatation: Tubular																				
Eosinophilic Cell Focus																				
Fibrosis																				
Glomerulonephritis/Glomerulopathy																				
Hemorrhage																				
Hyaline Droplet: Tubular		5																		
Hyperplasia: Transitional Cell																				

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Study Duration	4	4	4	4	4	4	4	4	4	4	4	13	13	13	26	26	26	26	26	26
Hyperplasia: Tubular																				
Infiltration: Mononuclear Cell	1	1								2	2									
Inflammation																		1		
Inflammation: Interstitial																				
Mineralization															1					
Necrosis: Papilla																				
Nephropathy																				
Polyarteritis																				
Pyelitis/Pyelonephritis																	1			
Urolithiasis																	1			
Vacuolation: Tubular																				
LIVER	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Angiectasis																				
Basophilic Cell Focus																				
Clear Cell Focus																				
Congestion																				
Cyst																				
Cyst: Biliary																				
Cytoplasmic Rarefaction																				
Degeneration: Cystic																				
Deposits: Pigment																				
Eosinophilic Cell Focus																				
Fibrosis																				1
Fibrosis: Capsular																1				
Fibrosis: Peribiliary																1				
Hematopoiesis: Extramedullary			2																	
Hemorrhage																				
Hyperplasia: Bile Duct																				

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Study Duration	4	4	4	4	4	4	4	4	4	4	4	13	13	13	26	26	26	26	26	26
Hyperplasia: Oval Cell																				
Hyperplasia: Regenerative																				
Hypertrophy: Hepatocellular																				
Increased Mitotic Figures																				
Infiltration: Mixed Cell		2		1						1							1			
Infiltration: Mononuclear Cell																				
Inflammation	1										1					3		1		
Inflammation: Biliary																				
Inflammation: Capsular																				
Necrosis	2									1									1	
Necrosis: Centrilobular																				
Necrosis: Single Cell																				
Nodule: Hepatodiaphragmatic																				
Reactive Sinusoidal Lining Cells																				
Tension Lipidosis			1													1			1	
Vacuolation: Centrilobular																1				
Vacuolation: Hepatocellular																				
Vacuolation: Midzonal																				
Vacuolation: Periportal																	2			
LUNG	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Atelectasis																				
Congestion																				1
Deposits: Pigment																				
Edema																				
Granuloma																				
Hemorrhage		1	3		1		1	1	3							5				
Histiocytosis					1	1	3		2						2	20				
Hyperplasia: Alveolar Epithelium																				

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Study Duration	4	4	4	4	4	4	4	4	4	4	4	13	13	13	26	26	26	26	26	26	
Hyperplasia: Bronchioloalveolar																					1
Hyperplasia: BALT																					
Infiltration: Eosinophilic Cell		1								2											
Infiltration: Mixed Cell		1																			
Infiltration: Mononuclear Cell																					
Inflammation										1					1				1		
Inflammation: Bronchoalveolar																					
Inflammation: Interstitial			1																		
Macrophage Accumulation	2									1											1
Mineralization																					
Mineralization: Vascular																					
Necrosis																					
Polyarteritis																					
MAMMARY GLAND	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20	
Ectasia: Ducts and/or Alveoli																					
Hyperplasia																					
Inflammation																					
PANCREAS	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20	
Atrophy: Acinar Cell									1						2		1	1			
Basophilic Alteration: Focal																					
Deposits: Pigment																					
Edema																					
Hemorrhage																					
Hyperplasia: Islet Cell																					
Inflammation																					
Mineralization																					

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Study Duration	4	4	4	4	4	4	4	4	4	4	4	13	13	13	26	26	26	26	26	26
Polyarteritis																				
PITUITARY	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Angiectasis																				
Cyst										1					2	4				
Fibrosis																				
Hyperplasia: Pars Distalis																1				
Hyperplasia: Pars Intermedia																				
Hypertrophy: Pars Distalis																				
Rothko's Pouch Remnants																				
Vacuolation: Pars Distalis																				
SPLEEN	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Atrophy/Necrosis: Lymphoid																				
Congestion																				
Deposits: Hemosiderin																				
Deposits: Pigment																				
Fibrosis															1					
Hematopoiesis: Extramedullary	1														2		3			
Histiocytosis																				
Hyperplasia: Lymphoid																				
Inflammation																				
Necrosis																				
THYROID	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Cyst																				
Ectasia: Follicular																				
Ectopic Thymus Tissue	1																			
Hyperplasia: C-Cell																				

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Study Duration	4	4	4	4	4	4	4	4	4	4	4	13	13	13	26	26	26	26	26	26
Hyperplasia: Follicular Cell																				
Hypertrophy: Follicular Cell																				

Studies 21-40:

Study Identification	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Study Duration	26	26	26	26	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
ADRENAL	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Accessory Cortical Tissue													1							
Angiectasis					13	6		9					13					1		
Congestion							1												2	
Degeneration and/or Necrosis								3		1										1
Degeneration: Cystic										3			1						1	1
Deposits: Lipofuscin								11		13										
Deposits: Pigment							2													1
Hematopoiesis: Extramedullary					1					2			3					2	2	9
Hemorrhage										6			1							18
Hyperplasia: Cortical														22	24					59
Hyperplasia: Cortical Focal					11	3	6	5		23			12				6	2		2
Hyperplasia: Medullary					3			2		5							1		1	1
Hypertrophy: Cortical								7		10			23					4	6	
Hypertrophy: Cortical Focal					6			13		16			31					2		5
Infiltration: Mixed Cell										1										
Necrosis: Vascular													1							
Vacuolation: Cortical			2		50	14	4	5		99			85					7	5	
Vacuolation: Cortical Focal																				23
HEART	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Congestion						28	28	20			24									
Dilatation					1					6			4							
Endocardiosis: Valvular																			1	
Fibrosis										9			1					1	22	
Hemorrhage					1	1	2			1	1		2							1

Study Identification	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
Study Duration	26	26	26	26	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	
Hyperplasia: Endocardial		1											4								
Infiltration: Mixed Cell																					
Infiltration: Mononuclear Cell										1											
Inflammation					1	2	1			2									9	1	
Mineralization					1		3	6		4											
Murine Progressive Cardiopathy		1	4		66	38	56	50		87	35		106					12		46	
Polyarteritis													2							1	
Thrombosis: Atrial					2					1			1								
Vacuolation: Myocardial																			1		
KIDNEY	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50	
Amphophilic Cell Focus														3	4		1				
Angiectasis													1								
Basophilia: Tubular			4											12	13		4			23	
Cast			2							1										28	
Chronic Progressive Nephropathy		3			76	30	23	35		103	40		98					16		42	
Clear Cell Focus														5			6				
Congestion						28	36	27			1									2	
Cyst					3	3		5		2	4		1							5	1
Deposits: Pigment		1									6		25								
Dilatation: Pelvis	1	1		1	5		6			9	3		19					6	10	4	
Dilatation: Tubular					1			7					1							2	
Eosinophilic Cell Focus														39	34		31				
Fibrosis						3		1													
Glomerulonephritis/Glomerulopathy										3								2	34		
Hemorrhage											1									1	
Hyaline Droplet: Tubular										3			5								
Hyperplasia: Transitional Cell						13		14			6			8	11		6			8	
Hyperplasia: Tubular						2	8	1		3					1						

Study Identification	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Study Duration	26	26	26	26	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
Infiltration: Mononuclear Cell				2			7												2	
Inflammation							9			1	4								1	1
Inflammation: Interstitial							4	5											2	
Mineralization						8	8	4		2	8							1	7	
Necrosis: Papilla							3	3			1								2	
Nephropathy						50													1	
Polyarteritis																				1
Pyelitis/Pyelonephritis		1			6	8	7	1			2		6						11	4
Urolithiasis					52	6														
Vacuolation: Tubular																			1	
LIVER	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Angiectasis					23					16			21							11
Basophilic Cell Focus			1		15	12	24			27	12		29					42	13	41
Clear Cell Focus					50					11			76					4		39
Congestion						30	42	31			31								1	
Cyst					4	1				1			1						2	2
Cyst: Biliary								2			5									
Cytoplasmic Rarefaction					2					9			13						7	
Degeneration: Cystic					6															
Deposits: Pigment					1					1			4							
Eosinophilic Cell Focus					7					34	11		29					79	44	7
Fibrosis							5			1									1	
Fibrosis: Capsular					2	2	2				2		3						1	
Fibrosis: Peribiliary						19	16						2							
Hematopoiesis: Extramedullary					1	13	35	14		3			8						3	6
Hemorrhage													1							
Hyperplasia: Bile Duct		1			19	15	37	39		5	26		23						7	7
Hyperplasia: Oval Cell													1							

Study Identification	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Study Duration	26	26	26	26	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
Hyperplasia: Regenerative													1							
Hypertrophy: Hepatocellular						2		7					11							
Increased Mitotic Figures													4							
Infiltration: Mixed Cell											2									
Infiltration: Mononuclear Cell			1																3	
Inflammation							3	3		12	1		1							
Inflammation: Biliary																			1	
Inflammation: Capsular																			1	
Necrosis					8		6	5		1	9		9						5	2
Necrosis: Centrilobular					2	5		1		4			2							
Necrosis: Single Cell							1			1			1							
Nodule: Hepatodiaphragmatic										1										
Reactive Sinusoidal Lining Cells																			1	
Tension Lipidosis			1		19					17	22		11					6	17	4
Vacuolation: Centrilobular								3		2			5						7	
Vacuolation: Hepatocellular					42	19	14	20		54	2		77						2	34
Vacuolation: Midzonal													1							
Vacuolation: Periportal							21	12		7	9		13						19	
LUNG	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Atelectasis					2															
Congestion																				
Deposits: Pigment										1										
Edema					4	1		2		1			5					1		
Granuloma		2			1								1							
Hemorrhage					2			1		3			5						3	1
Histiocytosis			4		34	7		5		37			41					20		19
Hyperplasia: Alveolar Epithelium										2			1						3	
Hyperplasia: Bronchioloalveolar																				33

Study Identification	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Study Duration	26	26	26	26	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
Hyperplasia: BALT																				1
Infiltration: Eosinophilic Cell																				
Infiltration: Mixed Cell																				
Infiltration: Mononuclear Cell					1															
Inflammation					1	1				22			6					2	6	
Inflammation: Bronchoalveolar								12		2										
Inflammation: Interstitial																				
Macrophage Accumulation	1			1																50
Mineralization										5										
Mineralization: Vascular																				1
Necrosis								1												1
Polyarteritis																				1
MAMMARY GLAND	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Ectasia: Ducts and/or Alveoli					9	1		2		6			9					1	3	2
Hyperplasia										3			4				1		4	
Inflammation					1															1
PANCREAS	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Atrophy: Acinar Cell			1		15	4		2		12			17					6	8	7
Basophilic Alteration: Focal					2					3			3							1
Deposits: Pigment										1										3
Edema						1							1							1
Hemorrhage								1		1										
Hyperplasia: Islet Cell					1					1			7							3
Inflammation					3					5			12					2		
Mineralization										2										
Polyarteritis					1			1					2					1		1

Study Identification	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Study Duration	26	26	26	26	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
PITUITARY	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Angiectasis													1							
Cyst	1	2	1	2	18	21		30		7			21					11	10	3
Fibrosis													1							
Hyperplasia: Pars Distalis	1	2			25	19		8		18			17	11	13		3	12	15	5
Hyperplasia: Pars Intermedia					3			2		9			6				2	3	2	2
Hypertrophy: Pars Distalis					1	2				6			10					9		
Rothko's Pouch Remnants													1							
Vacuolation: Pars Distalis	3									1			2							
SPLEEN	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Atrophy/Necrosis: Lymphoid					1					3									8	1
Congestion					1		21	8		43	21		10					4	10	
Deposits: Hemosiderin																				
Deposits: Pigment																			2	
Fibrosis																				
Hematopoiesis: Extramedullary	4				14	9	5	34		69	8		56	12				19	35	38
Histiocytosis													2							
Hyperplasia: Lymphoid										2			2						3	
Inflammation								1		1								1		
Necrosis										2										
THYROID	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Cyst										1								1	2	1
Ectasia: Follicular										9			6							
Ectopic Thymus Tissue																				
Hyperplasia: C-Cell	1				62	14	6			61	4		71	10	14		6	8	20	9
Hyperplasia: Follicular Cell					11		13			10	2		7				1		9	3

Study Identification	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Study Duration	26	26	26	26	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
Hypertrophy: Follicular Cell							21						19					2		

Table 8: Incidence of Non-Neoplastic Lesions by Study for Selected Organs/Females

Studies 1-20:

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Study Duration	4	4	4	4	4	4	4	4	4	4	4	13	13	13	26	26	26	26	26	26
ADRENAL	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Accessory Cortical Tissue																				
Angiectasis																				
Atrophy																				
Congestion																	2			2
Degeneration and/or Necrosis																				
Degeneration: Cystic																				
Deposits: Lipofuscin																				
Fibrosis																				
Hematopoiesis: Extramedullary																				
Hemorrhage																				
Hyperplasia: Cortical																	1		1	
Hyperplasia: Cortical Focal																				1
Hyperplasia: Medullary																				
Hypertrophy: Cortical																				
Hypertrophy: Cortical Focal																				
Infiltration: Mononuclear Cell																	4			
Inflammation																				
Necrosis: Vascular																				
Vacuolation: Cortical																				
Vacuolation: Cortical Focal																				
HEART	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Congestion																				

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Study Duration	4	4	4	4	4	4	4	4	4	4	4	13	13	13	26	26	26	26	26	26
Dilatation																				
Endocardiosis: Valvular																				
Fibrosis																				
Hemorrhage																				
Hyperplasia: Endocardial																				
Infiltration: Mononuclear Cell																				
Inflammation																				
Mineralization																				
Murine Progressive Cardiopathy															1					
Thrombosis: Atrial																				
KIDNEY	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Basophilia: Tubular			1			1			2						2			1		
Cast	1														1					
Chronic Progressive Nephropathy																				
Congestion																	1			
Cyst										1										
Deposits: Pigment																				
Dilatation: Pelvis				1		1		2		2					1	3	2	3	1	0
Dilatation: Tubular											1									
Fibrosis																				
Glomerulonephritis/Glomerulopathy																				
Hemorrhage																				
Hyaline Droplet: Tubular																				
Hyperplasia: Transitional Cell										1										2
Hyperplasia: Tubular																				
Infiltration: Mononuclear Cell										1	2									
Inflammation																				

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Study Duration	4	4	4	4	4	4	4	4	4	4	4	13	13	13	26	26	26	26	26	26
Inflammation: Interstitial																				
Mineralization																				
Necrosis																				
Nephropathy																				
Pyelitis/Pyelonephritis										1						1		1	1	
Urolithiasis															9					
Vacuolation: Tubular																				
LIVER	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Amphophilic Cell Focus																				
Angiectasis																				
Basophilic Cell Focus																		1		
Clear Cell Focus																				
Congestion																				
Cyst																				
Cyst: Biliary																				
Cytoplasmic Rarefaction																				
Degeneration and/or Necrosis																				
Degeneration: Cystic																				
Deposits: Pigment																		2		
Eosinophilic Cell Focus																				
Fibrosis																				
Fibrosis: Capsular																				
Fibrosis: Peribiliary																				
Hematopoiesis: Extramedullary																				
Hemorrhage																				
Hyperplasia: Bile Duct																				
Hypertrophy: Hepatocellular																				

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Study Duration	4	4	4	4	4	4	4	4	4	4	4	13	13	13	26	26	26	26	26	26
Hypertrophy: Periportal																				
Increased Mitotic Figures																				
Infiltration: Mixed Cell																		1		
Infiltration: Mononuclear Cell		4		1											1				2	
Inflammation																				
Inflammation: Biliary																		1		1
Inflammation: Capsular																				
Inflammation: Granulomatous																				1
Mineralization																				
Necrosis																			2	2
Necrosis: Centrilobular																				
Necrosis: Single Cell																				
Prominent Multinuclear Hepatocytes																				
Reactive Sinusoidal Lining Cells																				2
Tension Lipidosis																				2
Vacuolation: Centrilobular																				
Vacuolation: Hepatocellular																				
Vacuolation: Midzonal																				
Vacuolation: Periportal																				
LUNG	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Atelectasis																				
Deposits: Pigment																				
Edema																				
Fibrosis: Pleura																				
Granuloma		1	1																1	
Hemorrhage			2						1	1					2					
Histiocytosis		2					1								13	2				

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Study Duration	4	4	4	4	4	4	4	4	4	4	4	13	13	13	26	26	26	26	26	26
Hyperplasia: Bronchioloalveolar																				
Infiltration: Eosinophilic Cell					1															
Infiltration: Mixed Cell									2											
Inflammation									1	1							2			
Inflammation: Bronchoalveolar									1											
Inflammation: Granulomatous																				
Macrophage Accumulation	3																	2		
Thrombosis																				
MAMMARY GLAND	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Ectasia: Ducts and/or Alveoli																				
Hyperplasia																				
Inflammation: Granulomatous																				
PANCREAS	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Atrophy: Acinar Cell				1					2	1					2				1	
Atypical Ductular Hyperplasia																				
Basophilic Alteration: Focal																				
Deposits: Pigment																				
Edema																				
Hyperplasia: Islet Cell																				
Infiltration: Mononuclear Cell															1					
Inflammation																				1
Polyarteritis																				

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Study Duration	4	4	4	4	4	4	4	4	4	4	4	13	13	13	26	26	26	26	26	26
PITUITARY	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Angiectasis																				
Congestion		1																		
Cyst									1	1									1	
Hemorrhage																1				
Hyperplasia: Pars Distalis																				
Hyperplasia: Pars Intermedia																				
Hypertrophy: Pars Distalis																				
Infiltration: Mixed Cell																				
Vacuolation: Pars Distalis																				
SPLEEN	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Amyloidosis																				
Atrophy/Necrosis: Lymphoid																				
Congestion																				
Cyst																				
Deposits: Hemosiderin																				
Deposits: Pigment																				
Fibrosis: Capsular																				
Hematopoiesis: Extramedullary	3																			
Hemorrhage																				
Hyperplasia: Lymphoid																				
Inflammation																				
Necrosis																				
Siderotic Plaque																				

Study Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Study Duration	4	4	4	4	4	4	4	4	4	4	4	13	13	13	26	26	26	26	26	26
THYROID	10	10	20	10	12	6	10	10	10	10	10	10	10	10	20	60	20	30	20	20
Cyst																				
Ectasia: Follicular																				
Ectopic Thymic Tissue	1																			
Hemorrhage								1												
Hyperplasia: C-Cell																1				
Hyperplasia: Follicular Cell																				
Hypertrophy: Follicular Cell																				

Studies 21-40:

Study Identification	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Study Duration	26	26	26	26	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
ADRENAL	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Accessory Cortical Tissue							1													
Angiectasis					75								78							21
Atrophy																			1	
Congestion					9			2												
Degeneration and/or Necrosis					3					3									5	1
Degeneration: Cystic					2	12	8	17		69			17					41	17	5
Deposits: Lipofuscin						9	3			21								6		
Fibrosis													1							
Hematopoiesis: Extramedullary			1		5					3			2						12	1
Hemorrhage						1				3									96	
Hyperplasia: Cortical														18	13				24	
Hyperplasia: Cortical Focal	1		1		18	12	10	2		18			11				1	9		2
Hyperplasia: Medullary					2					1			1							1
Hypertrophy: Cortical	1							1		10			21					12	4	
Hypertrophy: Cortical Focal			1		9	19	5			30			38					19		10
Infiltration: Mononuclear Cell																				
Inflammation			1																	
Necrosis: Vascular													2							
Vacuolation: Cortical					17	18	11	21		49			40					21		
Vacuolation: Cortical Focal																				6
HEART	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Congestion							28	21												
Dilatation										1										

Study Identification	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Study Duration	26	26	26	26	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
Endocardiosis: Valvular																				1
Fibrosis										4								4	11	
Hemorrhage											1		1							
Hyperplasia: Endocardial								1					1							
Infiltration: Mononuclear Cell								2												
Inflammation						2														3
Mineralization							3	3			11									
Murine Progressive Cardiopathy	2	2			26	38	56			60	35		55					6		29
Thrombosis: Atrial							1			1										
KIDNEY	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Basophilia: Tubular		1	4	1	2					8			4						8	1
Cast		3								14								16	21	
Chronic Progressive Nephropathy				1	45					63	20		50					9		24
Congestion						28	36	22			20								1	
Cyst					1	3		3		3	1								2	2
Deposits: Pigment					2						8		37					6	2	4
Dilatation: Pelvis	1	1	1			1	6	2		1	4		8					2	1	2
Dilatation: Tubular							8	5		2								6	1	1
Fibrosis																				6
Glomerulonephritis/Glomerulopathy										5										
Hemorrhage				1			4				1									
Hyaline Droplet: Tubular						3	5			3										
Hyperplasia: Transitional Cell											21			18	21			18		5
Hyperplasia: Tubular						2		2		1	1									
Infiltration: Mononuclear Cell							7			3	5		1							
Inflammation											4									2
Inflammation: Interstitial		1					24	5										4	4	

Study Identification	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
Study Duration	26	26	26	26	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	
Mineralization						4	7	12		8										5	
Necrosis							3	1					6							1	
Nephropathy						25		11											1		
Pyelitis/Pyelonephritis			1		3	6	7			8			9						4	3	
Urolithiasis		1			63	14		17			41										
Vacuolation: Tubular										1											
LIVER	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50	
Amphophilic Cell Focus										3				1	1		2				
Angiectasis					8					10			13							5	
Basophilic Cell Focus	1	6	3		15	19	24	14		19	9		51	38	39		42	88	32	45	
Clear Cell Focus					1								2				16	1		9	
Congestion							42	27			19									1	
Cyst					7					6			9							2	
Cyst: Biliary								1			4									8	3
Cytoplasmic Rarefaction					2															1	
Degeneration and/or Necrosis																				1	
Degeneration: Cystic										1			1								
Deposits: Pigment			1		2					5			1							1	
Eosinophilic Cell Focus					3	2	4			3	19		23	4	3		15	24	14	2	
Fibrosis										3											
Fibrosis: Capsular						4							1							3	
Fibrosis: Peribiliary							16						2								
Hematopoiesis: Extramedullary					1		35	22		3			2							4	3
Hemorrhage						1		2												3	
Hyperplasia: Bile Duct					34		37	21		23	17		42							14	5
Hypertrophy: Hepatocellular						2	1						6								
Hypertrophy: Periportal							1	3		1											

Study Identification	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Study Duration	26	26	26	26	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
Increased Mitotic Figures							3						6							
Infiltration: Mixed Cell								2			3									
Infiltration: Mononuclear Cell										1										1
Inflammation					2	4				7	2		4						1	1
Inflammation: Biliary																			4	
Inflammation: Capsular								2												
Inflammation: Granulomatous								11											1	
Mineralization				1				12												
Necrosis					7	6	6	3		1	1		6					3		2
Necrosis: Centrilobular		1			1	4		1		3										
Necrosis: Single Cell													4							
Prominent Multinuclear Hepatocytes													22					6		
Reactive Sinusoidal Lining Cells						7													2	
Tension Lipidosis					15	2		1		22	30		15					5	13	7
Vacuolation: Centrilobular								2		5	14		1						1	
Vacuolation: Hepatocellular					17	29	14	11		24	2		13							20
Vacuolation: Midzonal													1							
Vacuolation: Periportal							20	14		4	4		7					3	10	
LUNG	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Atelectasis							1						1							
Deposits: Pigment				2						2										
Edema					4	1				1			3							
Fibrosis: Pleura					2															
Granuloma		4						1												
Hemorrhage		1		1	4					2			8					4	3	1
Histiocytosis			2		34		6	5		29	4		29					23		9
Hyperplasia: Bronchioloalveolar														2	1		1			1

Study Identification	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Study Duration	26	26	26	26	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
Infiltration: Eosinophilic Cell																				
Infiltration: Mixed Cell		1				2														
Inflammation			1		1	4		4		14			6					7	1	1
Inflammation: Bronchoalveolar										3										
Inflammation: Granulomatous																				1
Macrophage Accumulation																				39
Thrombosis					1															
MAMMARY GLAND	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Ectasia: Ducts and/or Alveoli					52	21	14	9		49			65	12				14	16	36
Hyperplasia						30	19	25		43	21		68				6	21	68	4
Inflammation: Granulomatous						2	3	1		4			4	1						
PANCREAS	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Atrophy: Acinar Cell					12	7	9	6		11			3	2				4	3	2
Atypical Ductular Hyperplasia					1															
Basophilic Alteration: Focal					1					1										
Deposits: Pigment								1												
Edema													1							1
Hyperplasia: Islet Cell							1			3			2							1
Infiltration: Mononuclear Cell																				1
Inflammation					3								5					2	1	
Polyarteritis					2															
PITUITARY	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50

Study Identification	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Study Duration	26	26	26	26	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
Angiectasis							2	1					3							
Congestion																			2	
Cyst					7					5			4						3	1
Hemorrhage																				
Hyperplasia: Pars Distalis					11		31	28		27	19		25	19	18		3	13	16	9
Hyperplasia: Pars Intermedia					2		1			1			1				4		2	2
Hypertrophy: Pars Distalis								5		5			12					8		
Infiltration: Mixed Cell								1		1										
Vacuolation: Pars Distalis										1										
SPLEEN	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50
Amyloidosis										1										
Atrophy/Necrosis: Lymphoid							1												5	2
Congestion					1															
Cyst																				1
Deposits: Hemosiderin						31	24	19		63			30					5		
Deposits: Pigment																				1
Fibrosis: Capsular										1			1							
Hematopoiesis: Extramedullary					18	41	19	41		77			39				2	21	56	31
Hemorrhage													1							1
Hyperplasia: Lymphoid					2		2			3			2							5
Inflammation					1															
Necrosis								1												
Siderotic Plaque										1										
THYROID	20	23	20	20	100	60	60	50	80	112	65	60	120	50	50	60	50	100	150	50

Study Identification	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Study Duration	26	26	26	26	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
Cyst																			4	
Ectasia: Follicular					1	5				14			1							
Ectopic Thymic Tissue																				
Hemorrhage																				
Hyperplasia: C-Cell					71	41	59	28		70	1		67	9	13		11	17	22	
Hyperplasia: Follicular Cell					4					8			7							1
Hypertrophy: Follicular Cell						4		13					13					6		



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