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Dear Document Control Office (7407):

In compliance with the National Toxicology Program's (NTP) mission to keep our colleagues informed of the current NTP findings during ongoing studies, a copy of the Pathology Working Group (PWG) report and the Summary Pathology Tables for the chronic dosed water study on DIPROPYLENE GLYCOL (25265-71-8) are enclosed for your review.

The NTP assembles a Pathology Working Group to review every study and to resolve any differences between the study laboratory and quality assessment pathology evaluations. Please note that the PWG conclusion of the study results is based solely on the pathology for this study and may not reflect final NTP conclusions. In determining final conclusions, the NTP assesses a broad array of information that includes other results from this study and historical control data.

The Summary Pathology Tables contain the Incidence Rates of Neoplastic and Non-neoplastic Lesion data and the Statistical Analysis of Primary Tumors data pertaining to the laboratory animals. All study data are subject to an NTP retrospective audit and the interpretation may be modified based on the findings.

A wide variety of NTP information is also available in electronic format on the world-wide web, for example, the NTP Annual Plan, abstracts of NTP Reports, study data, and the status of all NTP studies. To view this information requires access to the internet and a Web browser such as Netscape Navigator or Internet Explorer. To access the NTP home page, use the URL http://ntp-server.niehs.nih.gov/. Comments on the usefulness of this site and suggestions for improvement are encouraged.

Please contact Central Data Management (CDM) at (919)541-3419 if you have any questions. You may also fax your requests for information to CDM at (919)541-3687 or send them via e-mail to cdm@niehs.nih.gov.


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Hard copies of documents such as NTP Technical Reports, short-term Toxicity Reports, and the Report on Carcinogens are available from the Environmental Health Information Service (EHIS). You can contact EHIS by phone at (919) 541-3841, by fax at (919)541-0273, or by e-mail at ehis@niehs.nih.gov.

Sincerely,

William Eastin

William Eastin, Ph.D.
Head, Information Systems & Central Files
Environmental Toxicology Program

Encls: PWG Report and Pathology Summary Tables for rats
cc: Central Data Management

A 05

25265-71-8
PWGCHR
C88031B

PATHOLOGY WORKING GROUP
DRAFT CHAIRPERSON'S REPORT

Two Year Chronic Study of
Dipropylene Glycol (DPG) (C88031B/88031-05)
Administered by Dosed Water to F344 Rats

DATE OF PWG: September 21, 2000

LOCATION OF PWG: NIEHS, Research Triangle Park, NC

PARTICIPANTS:
Drs.D. Dixon (NIEHS), G. Flake (NIEHS), R. Hailey (NIEHS), R. Herbert (NIEHS), T. Suwa (NIEHS), D. Malarkey (NCSU), A. Brix (EPL), G. Parker (ILS-PWG Chairperson), C. Moyer (PAI, observer), and V. Turosov (Carcinogenesis Institute of Moscow, observer).

SUMMARY OF FINDINGS FROM PWG:

The PWG was convened to evaluate selected H & E slides from a two-year chronic study of dipropylene glycol (DPG) administered in the drinking water. The following is a summary of review findings.

- Males from the 4% group had an increase in the incidence of nephropathy and associated lesions such as gastric ulceration, hyperplasia of the parathyroid gland and cardiac mineralization. The nephropathy was considered to be the cause of the debilitation that resulted in early sacrifice of many males from the 4% group.

- The olfactory epithelium of males and females from the 4% group had a high incidence of atrophy and a low incidence of vacuolar degeneration.

- The liver of males from all treated groups had a high incidence of granulomatous inflammation that appeared to be associated with accumulation of lipoid material.

- There was an increased incidence of bile duct hyperplasia in males and females from the 4% group and males from the 1% group.

- Males from all treated groups had an increased incidence of basophilic foci in the liver.

- The incidence of pheochromocytomas in 1% males was slightly increased compared to concurrent and historical controls.

- Males from the 4% group had a high incidence of suppurative inflammation of the parotid salivary gland.

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INTRODUCTION:

Dipropylene glycol (DPG) is a colorless, odorless liquid that has the following uses: antifreeze, air sanitation, cosmetic stabilizer, polyester and alkyd resins, reinforced plastics, plasticizers and solvent. Direct consumer contact with DPG occurs with the use of hair care and bath products, perfumes, facial cosmetics, deodorants and skin care preparations. Concentration of DPG in these products can range up to 50%. Production volume of DPG from 1980 to 1985 was estimated to be 27.1 to 52.9 million pounds per year. Occupational exposure occurs in medical and health professionals, office cleaners, automobile dealers, mechanics and service station attendants, chemical industry workers and metal industry workers. The US Food and Drug Administration (FDA) has approved DPG for use in adhesives, as a defoaming agent and as a surface lubricant. No permissible exposure limit has been established by OSHA, and neither NIOSH nor ACGIH have established exposure limits for DPG.

DPG absorption, biotransformation and excretion are poorly characterized. DPG is known to be absorbed following oral and dermal exposure. Biotransformation is assumed to be similar to that of glycol or glycol ether, which involve saponification.

The oral LD_{50} for DPG in rats is 15 g/kg. A 68-day subchronic study (reported in 1939) of 1, 5, or 10% DPG administered in drinking water resulted in death of 7/25 in the 10% dosage group after 10-30 days of treatment. Five of the seven early death rats had renal lesions that were uncharacterized in the study director's report. Four of 18 interim kill rats had uncharacterized renal lesions. A more recent 13-week subchronic study of 0.5, 1, 2, 4 and 8% DPG in drinking water given to F344 rats revealed treatment-associated reduction in body weight of males and females from the 8, 4, and 2% groups. This study also revealed serum chemistry indications of hepatic damage in the 4 and 8% groups. There was an increase in kidney weight in males given ≥2% and females given ≥4% DPG. Microscopic findings in the 13-week subchronic study included adrenocortical hypertrophy in both sexes of all treated groups, liver lesions including necrosis in males at 4 and 8% and females at 8% DPG, olfactory epithelial degeneration in males and females at 8% DPG, and testicular atrophy at 8% DPG.

There are no known studies on the chronic toxicity and carcinogenicity of DPG. Chronic studies of propylene glycol and polypropylene glycol, which are structurally related to DPG, revealed those compounds to be noncarcinogenic. There are no known studies on the genotoxicity of DPG.

STUDY DESIGN:

Male and female F344 rats were given DPG in tap water *ad libitum* at concentrations of 0.25, 1, or 4 percent for approximately 105 weeks. The studies were conducted at Battelle, Columbus, Ohio. The Study Pathologist (SP) was Dr. S. L. The Quality Assessment Pathologist (QAP) was Dr. A. Brix of EPI

A 07

STUDY RESULTS:

Survival of all female groups and males from the 0.25 and 1% DPG groups were similar to controls. Survival of males in the 4% DPG group was severely decreased, with no survivors after Study Week 94. Reduced survival of males in the 4% DPG group was largely due to the large number of moribund sacrifices in that group, as shown in the following text table. The study director's report indicates there were no DPG-related clinical observations, but 31/50 males from the 4% DPG group were listed as moribund sacrifices before Study Week 94. Review of the clinical observations summary table (Table D-1 in study director's report) reveals 23/50 of the 4% males were thin, with earliest onset at Study Day 400 and mean day of onset at Day 557. Nasal/eye discharge was recorded in 13/50 males from the 4% group, with earliest onset and mean onset of Days 372 and 488, respectively. Water consumption of 4% males was substantially elevated compared to controls beginning at approximately Week 50. The combination of these observations suggests nephropathy was the cause of the moribund status that resulted in early sacrifice of many males from the 4% group.

DPG SURVIVAL SUMMARY, MALES

	0%	0.25%	1%	4%
Began Study	50	50	50	50
Moribund Sacrifice	12	14	18	31
Spontaneous Death	15	9	5	19
Terminal Sacrifice	23	27	27	9
Survival to terminal sacrifice (%)	46	54	54	0

Group mean body weights for males and females in the 0.25 and 1% groups were similar to controls for the in-life duration of the study. Group mean body weight for 4% males was decreased 10% relative to controls beginning at Study Week 10 and continued to decrease relative to controls through the remainder of the study. By the time of death at Week 90-94, group mean body weight of 4% males was 68.5% of control body weight. At the time of the terminal sacrifice the group mean body weight of 1% males was 5.5% less than control body weight. Females in the 4% DPG group had reduced group mean body weight that started at Study Week 10 and persisted though the study. At termination the group mean body weight of 4% females was reduced 13.5% compared to controls.

Males and females in the 4% group had reduced water consumption in Study Week 1, which was attributed to taste aversion. Water consumption of 4% females returned to control level thereafter but water consumption of 4% males was somewhat higher than controls up to Week 50 and substantially higher after Week 50.

Necropsy revealed no gross lesions that were attributable to treatment.

The study pathologist identified the following lesions as related to treatment:

Liver-
granulomatous inflammation
bile duct hyperplasia
basophilic foci

Kidney-
nephropathy
transitional cell hyperplasia

Nose-
degeneration of olfactory epithelium
atrophy of olfactory epithelium

CONDUCT OF THE PWG:

In preparation for the PWG, the PWG Chairperson reviewed the study pathology tables (summary and individual animal data), the study Final Report that included the SP's narrative, the Quality Assessment Report, relevant literature/publications and H & E-stained slides of tissues selected for the QA review. The Chairperson then selected slides for review by the PWG, including representative examples of target organ or treatment-related lesions, lesions for which there was an unresolved difference in diagnosis among the SP, QAP and/or PWG Chairperson, and lesions requiring confirmation of terminology. PWG participants reviewed all selected slides, voted on diagnoses where the final diagnoses for the lesions presented were determined by the consensus of the participants, and discussed issues.

The following organs/tissues were examined for all animals in all groups for the below listed lesions:

Male Rats

Liver – Basophilic Focus
Liver – Inflammation, Granulomatous
Liver – Leukemia Mononuclear
Liver, Bile Duct – Hyperplasia
Salivary Glands – Inflammation, Suppurative
Heart – Mineralization
Spleen – Inflammation, Granulomatous
Spleen – Leukemia Mononuclear

Female Rats

Spleen – Hematopoietic Cell Proliferation
Clitoral Gland – Hyperplasia
Clitoral Gland – Adenoma
Clitoral Gland – Carcinoma
Liver, Bile Duct – Hyperplasia
Mammary Gland – Fibroadenoma
Mammary Gland - Carcinoma

The following organs from the sex indicated were reviewed when the specific diagnoses listed as follows were present:

Male Rats

Adrenal Cortex – Pheochromocytoma, Malignant, Metastatic
Adrenal Medulla
Stomach, Forestomach – Hyperplasia, Basal Cell
Spleen – Hyperplasia, Focal

All Tumors in All Organs from All Animals (Except Testes – Interstitial Cell Tumor)

Female Rats

Stomach, Glandular – Hyperplasia
Uterus – Hyperplasia, Cystic
Uterus – Hydrometra
Nose, Olfactory Epithelium – Metaplasia
Nose, Olfactory Epithelium – Metaplasia, Squamous

All Tumors in All Organs from All Animals

PWG RESULTS:

Kidney

After review of representative histologic sections the PWG agreed with the interpretation and terminology of the treatment-related nephropathy and transitional epithelial hyperplasia in 4% males. It was noted that the nephropathy, while marked in severity, did not involve the severe distortion of microarchitecture and alterations of surface contour that is typically seen with severe nephropathy in laboratory rats. It was also noted that the incidence of common nephropathy-related lesions such as gastric ulceration, parathyroid hyperplasia and cardiovascular mineralization were less commonly observed in this study than would be expected from the histologic severity of the nephropathy. The PWG expressed some question as to the exact pathogenesis of the renal lesion, though the histologic presentation was similar to spontaneous nephropathy.

Liver

After review of representative histologic sections the PWG agreed with the general interpretation and terminology applied to the hepatic lesions, but questioned the SP's narrative comment that the treatment-related granulomatous lesion was similar to background granulomatous inflammation. The PWG consensus was that the lipogranulomatous lesions seen in the liver of males from all DPG-treated groups was a different pathologic process from the spontaneous microgranulomatous lesions that are seen in the liver of laboratory rodents, presumably as a result of bacterial showering from the intestinal tract. There was discussion regarding the necessity of applying different nomenclature to the treatment-related granulomatous lesion in the liver. It was concluded that the current recording of the lesion provides clear evidence of a treatment-related effect on the liver, and that little would be gained from the considerable effort involved in re-evaluation of all livers from the study.

In addition, there was an increased incidence of bile duct hyperplasia in males and females from the 4% group and males from the 1% group. Males from the 0.25, 1 and 4% groups had an increased incidence of basophilic foci in the liver. These lesions were not reviewed by the PWG because there was good agreement between the SP, QAP and PWG chairperson. The bile duct hyperplasia and basophilic foci were morphologically typical of those encountered as spontaneous lesions in F344 rats.

Nose

After review of representative histologic sections the PWG agreed with the general interpretation and terminology applied to the lesions in the nasal cavity. None of the attendees had previously encountered a chemically-induced vacuolative degenerative change in the olfactory epithelium. There was discussion as to whether the olfactory lesion represented selective toxicity, or was a result of inhalation of DPG contained in the water. It was noted there was no evidence of neuronal degeneration associated with the changes in the olfactory epithelium. There was some discussion as to possible pathogenesis, with no conclusions. Based on an absence of correlation in the incidence, and different patterns of distribution within the nasal cavity, it was concluded the vacuolative degeneration was not related to thrombosis. The PWG saw no evidence of neuronal degeneration associated with degeneration of the olfactory epithelium

The PWG chairman suggested that hyaline droplet accumulation in nasal epithelial cells, though seen in control animals, was equivocally increased in severity in the 4% DPG group. Hyaline droplet accumulation in nasal epithelial cells is a common spontaneous alteration in aged rats, but an increased incidence is sometimes seen following chemical treatments. The change had not been recorded in the histopathology tables at the time of the PWG. The consensus of the PWG was that the PWG chairman should review sections of nasal cavity from 10 males and 10 females from the control and 4% DPG groups, and score the severity of the hyaline change. If a difference in incidence or severity existed, then a complete review of the nasal cavities of all rats should be performed

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Adrenal Gland

The PWG reviewed representative examples of adrenocortical hyperplasia and adrenal medullary hyperplasia, and reviewed all pheochromocytomas in the study. The PWG largely concurred with the classification of the lesions and confirmed the increased incidence of pheochromocytomas in males from the 1% DPG group. The combined incidence of pheochromocytomas in the 1% DPG group exceeded the historical incidence of 3-10/50 for the NTP 2000 diet studies, but may not be statistically significant. If pheochromocytomas are combined with nonneoplastic adrenal medullary hyperplasia, the combined incidence of proliferative lesions in 1% males is only slightly different from controls

There was an increased incidence of adrenocortical hyperplasia in males from the 0.25 and 1% groups. The lesions were most commonly located in the superficial aspect of the adrenal cortex, which is the site of mineralocorticoid formation. The nature of the study does not permit conclusions with regard to pathogenesis, but it is possible that the adrenocortical proliferations were related to electrolyte imbalances associated with nephropathy.

Salivary Gland

There was a high incidence of suppurative inflammation of the parotid salivary gland of males from the 4% group. The lesion consisted of infiltrations of neutrophils and accumulations of inspissated secretory material in the lumen of slightly dilated ductules. The PWG reviewed selected examples of the salivary gland lesion. Members of the PWG expressed the opinion that the lesion appeared to be related to duct obstruction, but had no opinions as to the precise etiopathogenesis.

Miscellaneous

The PWG reviewed examples of schwannoma and sarcoma, NOS to insure consistency in diagnostic criteria. The PWG reviewed an unusual neuroendocrine cell proliferation in the stomach of one rat, and concluded the lesion was hyperplastic rather than neoplastic.

HISTOTECHNIQUE QUALITY:

In both studies the Histotechnique Quality Assessment indicated that the overall histologic processing and slide preparation was good, with no artifacts that would interfere with interpretation of tissue sections.

POST-PWG ACTION ITEMS:

The clinical basis for the moribund sacrifices in the 4% male group will be investigated by NIEHS study personnel.

Renal lesions figured prominently in the chronic study, and may have been the basis for the early termination of the 4% male group, but renal lesions were not reported in the subchronic DPG rat study. The PWG chairman was instructed to review kidney sections from the subchronic rat DPG study. Results of that review will be presented as a separate report.

As indicated above under Nasal Cavity, the PWG chairman was instructed to investigate the possibility of a treatment-related effect on the incidence and/or severity of hyaline droplet accumulation in nasal epithelial cells. That review has been completed as of the date of this narrative report. The nasal cavities of the first ten rats from the control male, 1% male, 4% male, control female and 4% female groups were examined by the PWG chairman, and the severity of hyaline droplet accumulation in nasal epithelial cells was scored. Both the 1% and 5% males were examined because the 4% males died before the end of the study. A possible difference in severity of the change was noted in 4% females, but not in males from the 4% or 1% groups. The nasal cavities of all females from all treatment groups were examined, and hyaline droplet accumulation was scored as 0= no lesion, 1= minimal, 2= mild, 3= moderate, and 4= marked. No entry was made for specimens considered too autolytic for review. The review revealed mean lesion scores of 1.56, 1.58, 1.51 and 2.39 in control, 0.25, 1 and 4% females, respectively. The incidence of hyaline droplet accumulation was 41/50, 40/48, 40/47, and 47/49 in the control, 0.25, 1 and 4% females, respectively. Statistical analysis was not performed, but the large standard deviation and relatively small difference in severity suggests the increased severity of hyaline droplet accumulation in the nasal epithelium of 4% females probably would not be statistically significant.

SUMMARY:

There was generally good agreement in the terminology, incidence and severity of lesions recorded in the study. Males from the 4% group had an increased incidence and severity of nephropathy, which was considered to be the cause of the moribund status that resulted in early sacrifice of many males in the 4% group. The increased incidence of gastric ulceration, cardiac mineralization and hyperplasia of the parathyroid gland were considered to be secondary to the nephropathy, and the increased incidence of adrenocortical hyperplasia was suspected to have a similar basis. The olfactory epithelium of males and females from the 4% group had a low incidence of vacuolar degeneration, and males from the 4% group had a high incidence of atrophy of the olfactory epithelium. The incidence of pheochromocytomas in males from the 1% group was slightly elevated as compared to concurrent and historical controls. The liver of males of all treated groups had granulomatous inflammation that was morphologically different from that commonly encountered as a spontaneous lesion in laboratory rats. Males from the 4% group had a high incidence of suppurative inflammation of the parotid salivary gland.

G. A. Parker

George A. Parker, D.V.M., Ph.D.
Diplomate, ACVP
PWG Chairperson

17 Oct 00

Date

NATIONAL TOXICOLOGY PROGRAM

TR-511 Dipropylene Glycol

Pathology Tables - Rats

P03 - Incidence Rates of Non-Neoplastic Lesions - 2 year Study

P05 - Incidence Rates of Neoplasms by Anatomic Site (systemic lesions abridged) - 2 year Study

P08 - Statistical Analysis of Primary Tumors - 2 year Study

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
DIPROPYLENE GLYCOL

RATS/FINAL#1

Facility: Battelle Columbus Laboratory

Chemical CAS #: 25265-71-8

Lock Date: 11/09/99

Cage Range: All

Reasons For Removal: All

Removal Date Range: All

Treatment Groups: Include All

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

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
DIPROPYLENE GLYCOL

FISCHER 344 RATS FEMALE	0.0%	0.25%	1.0%	4.0%
DISPOSITION SUMMARY				
Animals Initially In Study	50	50	50	50
Early Deaths				
Natural Death	9	10	6	6
Moribund Sacrifice	11	9	6	12
Accidently Killed				1
Survivors				
Terminal Sacrifice	30	31	37	31
Natural Death			1	
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Intestine Large, Colon	(48)	(47)	(48)	(46)
Parasite Metazoan	4 (8%)	4 (9%)	1 (2%)	2 (4%)
Intestine Large, Rectum	(48)	(47)	(49)	(46)
Parasite Metazoan	7 (15%)	5 (11%)	13 (27%)	3 (7%)
Intestine Small, Ileum	(44)	(41)	(47)	(45)
Necrosis				1 (2%)
Liver	(50)	(50)	(50)	(49)
Angiectasis		2 (4%)		
Basophilic Focus	46 (92%)	46 (92%)	49 (98%)	46 (94%)
Clear Cell Focus	10 (20%)	16 (32%)	20 (40%)	17 (35%)
Eosinophilic Focus			1 (2%)	4 (8%)
Fatty Change	6 (12%)	9 (18%)	6 (12%)	4 (8%)
Hepatodiaphragmatic Nodule	4 (8%)	7 (14%)	6 (12%)	6 (12%)
Inflammation, Granulomatous	37 (74%)	36 (72%)	36 (72%)	28 (57%)
Mixed Cell Focus	1 (2%)	7 (14%)	7 (14%)	4 (8%)
Necrosis		1 (2%)		
Tension Lipidosis		1 (2%)		
Bile Duct, Hyperplasia	2 (4%)	3 (6%)	7 (14%)	18 (37%)
Centrilobular, Necrosis	6 (12%)	8 (16%)	2 (4%)	6 (12%)
Mesentery	(15)	(13)	(13)	(11)
Fat, Hemorrhage		1 (8%)		
Fat, Necrosis	14 (93%)	13 (100%)	11 (85%)	8 (73%)
Pancreas	(47)	(48)	(48)	(48)
Atrophy	7 (15%)	10 (21%)	6 (13%)	10 (21%)
Basophilic Focus	3 (6%)	2 (4%)	3 (6%)	3 (6%)
Hyperplasia	2 (4%)	1 (2%)	4 (8%)	3 (6%)
Salivary Glands	(49)	(50)	(50)	(50)
Atrophy	3 (6%)	4 (8%)	3 (6%)	1 (2%)

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

FISCHER 344 RATS FEMALE	0.0%	0.25%	1.0%	4.0%
ALIMENTARY SYSTEM - CONT				
Basophilic Focus	1 (2%)	3 (6%)	5 (10%)	
Inflammation, Suppurative		1 (2%)	1 (2%)	1 (2%)
Stomach, Forestomach	(50)	(49)	(50)	(48)
Foreign Body	1 (2%)			
Hyperplasia, Squamous	4 (8%)	3 (6%)	3 (6%)	2 (4%)
Inflammation, Granulomatous	1 (2%)			
Ulcer	2 (4%)	6 (12%)	2 (4%)	1 (2%)
Stomach, Glandular	(49)	(47)	(49)	(47)
Hypertrophy, Focal		1 (2%)		
Inflammation, Chronic		1 (2%)		
Mineralization	1 (2%)	1 (2%)		1 (2%)
Necrosis	3 (6%)	2 (4%)	2 (4%)	4 (9%)
Neuroendocrine Cell, Hyperplasia		1 (2%)		
Tooth	(6)	(2)	(1)	(1)
Inflammation, Chronic Active	6 (100%)	2 (100%)	1 (100%)	1 (100%)
CARDIOVASCULAR SYSTEM				
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	33 (66%)	42 (84%)	32 (64%)	26 (52%)
Atrium, Thrombosis		2 (4%)		1 (2%)
ENDOCRINE SYSTEM				
Adrenal Cortex	(49)	(47)	(47)	(47)
Angiectasis		1 (2%)	1 (2%)	
Atrophy		1 (2%)		
Degeneration, Cystic	5 (10%)	2 (4%)		
Hyperplasia	18 (37%)	24 (51%)	25 (53%)	13 (28%)
Hypertrophy	11 (22%)	14 (30%)	12 (26%)	9 (19%)
Necrosis	1 (2%)	2 (4%)		2 (4%)
Thrombosis	1 (2%)			
Adrenal Medulla	(49)	(47)	(46)	(47)
Hyperplasia	12 (24%)	8 (17%)	10 (22%)	7 (15%)
Necrosis				2 (4%)
Parathyroid Gland	(49)	(47)	(47)	(49)
Hyperplasia				2 (4%)
Pituitary Gland	(48)	(45)	(50)	(47)
Angiectasis			3 (6%)	2 (4%)
Cyst		1 (2%)		1 (2%)
Pars Distalis, Hyperplasia	19 (40%)	15 (33%)	22 (44%)	19 (40%)

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

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
DIPROPYLENE GLYCOL

FISCHER 344 RATS FEMALE	0.0%	0.25%	1.0%	4.0%
ENDOCRINE SYSTEM - CONT				
Thyroid Gland	(45)	(45)	(46)	(46)
C-Cell, Hyperplasia	36 (80%)	36 (80%)	38 (83%)	28 (61%)
Follicular Cell, Hyperplasia		1 (2%)		
GENERAL BODY SYSTEM				
None				
GENITAL SYSTEM				
Clitoral Gland	(48)	(44)	(48)	(48)
Hyperplasia	5 (10%)	2 (5%)	3 (6%)	3 (6%)
Inflammation, Chronic Active	2 (4%)			1 (2%)
Ovary	(50)	(50)	(49)	(48)
Cyst	4 (8%)	6 (12%)	7 (14%)	8 (17%)
Inflammation, Granulomatous				1 (2%)
Interstitial Cell, Hyperplasia			1 (2%)	
Uterus	(50)	(48)	(50)	(49)
Hydrometra	1 (2%)			
Hyperplasia, Cystic	1 (2%)			
Thrombosis	1 (2%)		1 (2%)	1 (2%)
HEMATOPOIETIC SYSTEM				
Lymph Node	(15)	(11)	(8)	(14)
Deep Cervical, Ectasia			2 (25%)	
Deep Cervical, Hyperplasia				1 (7%)
Iliac, Inflammation, Suppurative	1 (7%)			
Mediastinal, Ectasia		1 (9%)		1 (7%)
Mediastinal, Hemorrhage	1 (7%)			
Mediastinal, Hyperplasia	1 (7%)			
Mediastinal, Infiltration Cellular, Plasma Cell		1 (9%)		
Pancreatic, Inflammation, Granulomatous	1 (7%)			1 (7%)
Lymph Node, Mesenteric	(49)	(47)	(49)	(48)
Ectasia		1 (2%)		
Spleen	(48)	(48)	(49)	(48)
Accessory Spleen			1 (2%)	
Hematopoietic Cell Proliferation	7 (15%)	7 (15%)	4 (8%)	2 (4%)
Hemorrhage	1 (2%)			1 (2%)

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

FISCHER 344 RATS FEMALE	0.0%	0.25%	1.0%	4.0%
HEMATOPOIETIC SYSTEM - CONT				
Inflammation, Granulomatous		1 (2%)	1 (2%)	3 (6%)
Necrosis	1 (2%)	1 (2%)	1 (2%)	
INTEGUMENTARY SYSTEM				
Mammary Gland	(50)	(49)	(50)	(49)
Galactocele	3 (6%)	3 (6%)	1 (2%)	1 (2%)
Inflammation, Chronic		1 (2%)		
Skin	(50)	(50)	(50)	(50)
Inflammation, Chronic Active				2 (4%)
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Inflammation, Chronic Active	1 (2%)			
Osteopetrosis	1 (2%)			
Skeletal Muscle	(1)	3 (6%)	1 (2%)	1 (2%)
Inflammation, Suppurative	1 (100%)	(1)		
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Gliosis		1 (2%)		
Inflammation, Suppurative	1 (2%)			
Necrosis				1 (2%)
Meninges, Fibrosis			1 (2%)	
RESPIRATORY SYSTEM				
Lung	(50)	(50)	(50)	(49)
Cyst, Squamous			1 (2%)	
Infiltration Cellular, Histiocyte	46 (92%)	47 (94%)	46 (92%)	45 (92%)
Inflammation, Chronic Active	8 (16%)	4 (8%)	8 (16%)	11 (22%)
Metaplasia, Osseous		1 (2%)		
Metaplasia, Squamous			1 (2%)	
Thrombosis	1 (2%)			
Alveolar Epithelium, Hyperplasia	11 (22%)	15 (30%)	17 (34%)	8 (16%)
Bronchiole, Hyperplasia	1 (2%)	2 (4%)	3 (6%)	2 (4%)
Nose	(48)	(48)	(46)	(49)

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

B 04

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
DIPROPYLENE GLYCOL

FISCHER 344 RATS FEMALE	0.0%	0.25%	1.0%	4.0%
RESPIRATORY SYSTEM - CONT				
Inflammation, Suppurative	10 (21%)	5 (10%)	7 (15%)	4 (8%)
Thrombosis	1 (2%)	4 (8%)		3 (6%)
Olfactory Epithelium, Atrophy			1 (2%)	
Olfactory Epithelium, Degeneration				9 (18%)
Olfactory Epithelium, Metaplasia			1 (2%)	1 (2%)
Olfactory Epithelium, Metaplasia, Squamous			1 (2%)	
Respiratory Epithelium, Accumulation, Hyaline Droplet	40 (83%)	36 (75%)	37 (80%)	46 (94%)
Respiratory Epithelium, Hyperplasia			1 (2%)	
Respiratory Epithelium, Metaplasia, Squamous	1 (2%)			
SPECIAL SENSES SYSTEM				
Eye	(2)	(1)	(2)	(3)
Cataract	2 (100%)		2 (100%)	1 (33%)
Degeneration				2 (67%)
Inflammation, Chronic Active		1 (100%)		
Cornea, Inflammation, Suppurative	1 (50%)			
Retina, Atrophy	2 (100%)		1 (50%)	2 (67%)
Harderian Gland	(1)			
Inflammation, Suppurative	1 (100%)			
URINARY SYSTEM				
Kidney	(49)	(49)	(49)	(47)
Cyst			1 (2%)	
Hydronephrosis		1 (2%)		
Infarct	3 (6%)	2 (4%)	1 (2%)	4 (9%)
Inflammation, Suppurative	1 (2%)	1 (2%)		
Mineralization	1 (2%)			
Nephropathy	43 (88%)	45 (92%)	47 (96%)	46 (98%)
Pelvis, Inflammation, Acute		1 (2%)	1 (2%)	
Renal Tubule, Hypertrophy	1 (2%)			
Transitional Epithelium, Hyperplasia		1 (2%)	1 (2%)	1 (2%)
Ureter	(1)			
Inflammation, Suppurative	1 (100%)			
Urinary Bladder	(50)	(48)	(48)	(46)
Transitional Epithelium, Hyperplasia				1 (2%)

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

B05

FISCHER 344 RATS MALE	0.0%	0.25%	1.0%	4.0%
DISPOSITION SUMMARY				
Animals Initially In Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	12	14	18	31
Natural Death	15	9	5	19
Survivors				
Terminal Sacrifice	23	27	27	
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Intestine Large, Colon	(41)	(49)	(48)	(43)
Parasite Metazoan	4 (10%)	1 (2%)	3 (6%)	
Ulcer		1 (2%)		1 (2%)
Intestine Large, Rectum	(40)	(50)	(48)	(44)
Parasite Metazoan	6 (15%)	3 (6%)	6 (13%)	
Intestine Large, Cecum	(38)	(46)	(47)	(35)
Inflammation, Acute			1 (2%)	
Ulcer		1 (2%)	1 (2%)	
Intestine Small, Duodenum	(39)	(49)	(49)	(42)
Necrosis				1 (2%)
Intestine Small, Ileum	(37)	(42)	(47)	(36)
Necrosis				1 (3%)
Liver	(50)	(50)	(49)	(48)
Angiectasis				2 (4%)
Basophilic Focus	24 (48%)	35 (70%)	26 (53%)	45 (94%)
Clear Cell Focus	22 (44%)	22 (44%)	23 (47%)	2 (4%)
Degeneration, Cystic	4 (8%)	3 (6%)	6 (12%)	2 (4%)
Eosinophilic Focus	1 (2%)		2 (4%)	
Fatty Change	6 (12%)	5 (10%)	3 (6%)	5 (10%)
Hepatodiaphragmatic Nodule	3 (6%)	5 (10%)	4 (8%)	5 (10%)
Inflammation, Granulomatous	20 (40%)	34 (68%)	47 (96%)	48 (100%)
Mixed Cell Focus		2 (4%)	2 (4%)	2 (4%)
Regeneration	3 (6%)			
Thrombosis	1 (2%)		1 (2%)	
Vacuolization Cytoplasmic, Focal		1 (2%)		
Bile Duct, Hyperplasia	34 (68%)	38 (76%)	43 (88%)	44 (92%)
Centrilobular, Necrosis	15 (30%)	11 (22%)	12 (24%)	3 (6%)
Mesentery	(14)	(11)	(6)	(4)
Fat, Inflammation	1 (7%)			
Fat, Necrosis	12 (86%)	9 (82%)	5 (83%)	4 (100%)

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

FISCHER 344 RATS MALE	0.0%	0.25%	1.0%	4.0%
ALIMENTARY SYSTEM - CONT				
Oral Mucosa	(1)			(2)
Pharyngeal, Necrosis	1 (100%)			
Pancreas	(44)	(49)	(50)	(47)
Atrophy	17 (39%)	20 (41%)	12 (24%)	9 (19%)
Basophilic Focus	1 (2%)	2 (4%)	2 (4%)	
Hyperplasia	7 (16%)	6 (12%)	4 (8%)	5 (11%)
Thrombosis		1 (2%)		
Artery, Inflammation	1 (2%)			
Salivary Glands	(49)	(49)	(50)	(50)
Atrophy	1 (2%)	5 (10%)		
Basophilic Focus	1 (2%)	1 (2%)	1 (2%)	
Inflammation, Suppurative		1 (2%)		22 (44%)
Stomach, Forestomach	(50)	(50)	(50)	(49)
Cyst				1 (2%)
Hyperkeratosis		1 (2%)		
Hyperplasia, Basal Cell			1 (2%)	2 (4%)
Hyperplasia, Diffuse, Squamous	2 (4%)		1 (2%)	1 (2%)
Hyperplasia, Squamous		1 (2%)	3 (6%)	5 (10%)
Inflammation, Chronic			1 (2%)	
Inflammation, Suppurative				1 (2%)
Ulcer	3 (6%)	5 (10%)	8 (16%)	10 (20%)
Stomach, Glandular	(46)	(49)	(50)	(48)
Cyst, Squamous				1 (2%)
Metaplasia		1 (2%)		
Mineralization		1 (2%)		2 (4%)
Necrosis	5 (11%)	7 (14%)	2 (4%)	5 (10%)
Tooth	(1)		(3)	
Inflammation, Chronic Active	1 (100%)		3 (100%)	
CARDIOVASCULAR SYSTEM				
Blood Vessel	(1)			(2)
Inflammation, Granulomatous	1 (100%)			
Aorta, Mineralization				1 (50%)
Heart	(50)	(50)	(50)	(49)
Cardiomyopathy	41 (82%)	42 (84%)	43 (86%)	22 (45%)
Hemorrhage	1 (2%)			
Mineralization				7 (14%)
Necrosis			1 (2%)	
Atrium, Thrombosis		5 (10%)	2 (4%)	
Valve, Inflammation, Acute				1 (2%)

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

B 07

FISCHER 344 RATS MALE	0.0%	0.25%	1.0%	4.0%
ENDOCRINE SYSTEM				
Adrenal Cortex	(47)	(49)	(50)	(48)
Degeneration, Cystic	1 (2%)			
Hyperplasia	15 (32%)	22 (45%)	26 (52%)	8 (17%)
Hypertrophy	5 (11%)	4 (8%)	6 (12%)	5 (10%)
Inflammation, Granulomatous		1 (2%)		
Necrosis	1 (2%)	4 (8%)	1 (2%)	
Vacuolization Cytoplasmic			1 (2%)	
Adrenal Medulla	(47)	(49)	(50)	(47)
Hyperplasia	23 (49%)	23 (47%)	24 (48%)	4 (9%)
Necrosis	1 (2%)			1 (2%)
Islets, Pancreatic	(44)	(48)	(50)	(47)
Hyperplasia			2 (4%)	
Parathyroid Gland	(45)	(48)	(49)	(50)
Hyperplasia		4 (8%)	1 (2%)	5 (10%)
Pituitary Gland	(47)	(49)	(50)	(49)
Angiectasis	1 (2%)			1 (2%)
Cyst		4 (8%)	1 (2%)	
Pars Distalis, Hyperplasia	9 (19%)	16 (33%)	16 (32%)	6 (12%)
Thyroid Gland	(42)	(47)	(48)	(47)
C-Cell, Hyperplasia	24 (57%)	26 (55%)	31 (65%)	3 (6%)
Follicular Cell, Hyperplasia	1 (2%)	1 (2%)	1 (2%)	2 (4%)
GENERAL BODY SYSTEM				
None				
GENITAL SYSTEM				
Epididymis	(50)	(50)	(50)	(49)
Granuloma Sperm				1 (2%)
Preputial Gland	(50)	(47)	(50)	(50)
Cyst				2 (4%)
Hyperplasia	1 (2%)	3 (6%)	3 (6%)	1 (2%)
Inflammation, Chronic Active		1 (2%)		1 (2%)
Prostate	(48)	(50)	(50)	(50)
Hyperplasia	11 (23%)	11 (22%)	10 (20%)	5 (10%)
Inflammation, Chronic Active	8 (17%)	8 (16%)	12 (24%)	
Seminal Vesicle	(43)	(48)	(49)	(46)
Inflammation, Chronic Active		2 (4%)		

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

FISCHER 344 RATS MALE	0.0%	0.25%	1.0%	4.0%
GENITAL SYSTEM - CONT				
Testes	(50)	(50)	(50)	(50)
Atrophy	2 (4%)	4 (8%)	1 (2%)	3 (6%)
Interstitial Cell, Hyperplasia	3 (6%)	2 (4%)	2 (4%)	1 (2%)
HEMATOPOIETIC SYSTEM				
Bone Marrow	(46)	(48)	(50)	(48)
Inflammation, Granulomatous			1 (2%)	
Lymph Node	(18)	(14)	(21)	(9)
Bronchial, Ectasia			1 (5%)	
Mediastinal, Ectasia	2 (11%)		1 (5%)	2 (22%)
Mediastinal, Hemorrhage				1 (11%)
Mediastinal, Hyperplasia			1 (5%)	
Mediastinal, Infiltration Cellular, Plasma Cell			1 (5%)	
Mediastinal, Inflammation, Granulomatous				1 (11%)
Lymph Node, Mesenteric	(44)	(48)	(49)	(47)
Inflammation, Granulomatous		1 (2%)		
Spleen	(43)	(50)	(49)	(47)
Atrophy	1 (2%)			
Congestion	1 (2%)			
Fibrosis	6 (14%)	5 (10%)	4 (8%)	2 (4%)
Hematopoietic Cell Proliferation	2 (5%)	5 (10%)	2 (4%)	
Hemorrhage	2 (5%)			
Hyperplasia, Focal, Lymphoid	4 (9%)	4 (8%)	9 (18%)	2 (4%)
Necrosis		3 (6%)	2 (4%)	
Thymus	(39)	(48)	(43)	(41)
Atrophy		1 (2%)	1 (2%)	
Hemorrhage	1 (3%)			
INTEGUMENTARY SYSTEM				
Mammary Gland	(48)	(41)	(47)	(44)
Galactocele	1 (2%)		1 (2%)	
Skin	(48)	(48)	(49)	(49)
Cyst	1 (2%)			
Foreign Body		1 (2%)		
Hyperkeratosis	1 (2%)	4 (8%)		
Hyperplasia, Basal Cell		1 (2%)		
Inflammation, Chronic Active	1 (2%)	1 (2%)		
Prepuce, Inflammation, Suppurative		1 (2%)		

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

FISCHER 344 RATS MALE	0.0%	0.25%	1.0%	4.0%
INTEGUMENTARY SYSTEM - CONT				
Subcutaneous Tissue, Hemorrhage				1 (2%)
MUSCULOSKELETAL SYSTEM				
Skeletal Muscle			(1)	(2)
Cyst, Squamous			1 (100%)	
Mineralization				1 (50%)
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Gliosis			1 (2%)	
Necrosis		1 (2%)	1 (2%)	
RESPIRATORY SYSTEM				
Lung	(50)	(49)	(50)	(49)
Foreign Body		1 (2%)		
Hemorrhage	1 (2%)			
Infiltration Cellular, Histiocyte	32 (64%)	35 (71%)	39 (78%)	34 (69%)
Inflammation, Chronic Active	3 (6%)	2 (4%)	4 (8%)	1 (2%)
Inflammation, Suppurative			1 (2%)	
Metaplasia, Squamous	1 (2%)	1 (2%)	3 (6%)	
Mineralization		1 (2%)		1 (2%)
Thrombosis		2 (4%)	1 (2%)	3 (6%)
Alveolar Epithelium, Hyperplasia	11 (22%)	18 (37%)	10 (20%)	5 (10%)
Mediastinum, Necrosis, Fatty	1 (2%)			
Nose	(46)	(50)	(50)	(49)
Foreign Body		2 (4%)		
Inflammation, Suppurative	11 (24%)	17 (34%)	15 (30%)	6 (12%)
Thrombosis	2 (4%)	5 (10%)	4 (8%)	9 (18%)
Goblet Cell, Respiratory Epithelium, Hyperplasia		1 (2%)		
Olfactory Epithelium, Atrophy	4 (9%)	3 (6%)	3 (6%)	34 (69%)
Olfactory Epithelium, Degeneration				7 (14%)
Olfactory Epithelium, Metaplasia	4 (9%)	1 (2%)		2 (4%)
Respiratory Epithelium, Hyperplasia				1 (2%)
Pleura			(2)	
Inflammation, Chronic			1 (50%)	
Inflammation, Suppurative			1 (50%)	

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

FISCHER 344 RATS MALE	0.0%	0.25%	1.0%	4.0%
SPECIAL SENSES SYSTEM				
Eye	(2)	(2)	(3)	(1)
Cataract	2 (100%)	1 (50%)	2 (67%)	1 (100%)
Degeneration			1 (33%)	
Cornea, Inflammation, Suppurative		1 (50%)		
Cornea, Mineralization		1 (50%)		
Retina, Atrophy	1 (50%)	1 (50%)	2 (67%)	1 (100%)
URINARY SYSTEM				
Kidney	(47)	(50)	(50)	(48)
Cyst			3 (6%)	
Hydronephrosis		1 (2%)		1 (2%)
Infarct	3 (6%)	6 (12%)	3 (6%)	2 (4%)
Metaplasia, Osseous		1 (2%)		
Mineralization		2 (4%)	1 (2%)	2 (4%)
Nephropathy	41 (87%)	47 (94%)	50 (100%)	48 (100%)
Pigmentation	1 (2%)	2 (4%)	1 (2%)	
Papilla, Necrosis		1 (2%)		
Renal Tubule, Accumulation, Hyaline Droplet			2 (4%)	
Transitional Epithelium, Hyperplasia	1 (2%)	3 (6%)	7 (14%)	9 (19%)
Urinary Bladder	(46)	(50)	(49)	(49)
Hemorrhage		1 (2%)		
Inflammation, Chronic Active		1 (2%)		
Inflammation, Suppurative			1 (2%)	
Mineralization				1 (2%)
Necrosis				1 (2%)

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

B 1.1

END OF REPORT

Facility: Battelle Columbus Laboratory

Chemical CAS #: 25265-71-8

Lock Date: 11/09/99

Cage Range: All

Reasons For Removal: All

Removal Date Range: All

Treatment Groups: Include All

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

D 12

FISCHER 344 RATS FEMALE	0.0%	0.25%	1.0%	4.0%
DISPOSITION SUMMARY				
Animals Initially in Study	50	50	50	50
Early Deaths				
Natural Death	9	10	6	6
Moribund Sacrifice	11	9	6	12
Accidently Killed				1
Survivors				
Terminal Sacrifice	30	31	37	31
Natural Death			1	
Animals Examined Microscopically	50	50	5[illegible]	50
ALIMENTARY SYSTEM				
Intestine Large, Colon	(48)	(47)	(48)	(46)
Intestine Large, Rectum	(48)	(47)	(49)	(46)
Sarcoma, Metastatic, Mesentery			1 (2%)	
Sarcoma, Metastatic, Skin		1 (2%)		
Intestine Large, Cecum	(46)	(43)	(47)	(45)
Intestine Small, Duodenum	(47)	(46)	(47)	(47)
Intestine Small, Jejunum	(45)	(44)	(47)	(44)
Leiomyoma		1 (2%)		
Intestine Small, Ileum	(44)	(41)	(47)	(45)
Liver	(50)	(50)	(50)	(49)
Histiocytic Sarcoma			2 (4%)	
Sarcoma, Metastatic, Mesentery				1 (2%)
Sarcoma, Metastatic, Skin		1 (2%)	1 (2%)	
Sarcoma, Metastatic, Skeletal Muscle		1 (2%)		
Schwannoma Malignant, Metastatic, Heart		1 (2%)		
Mesentery	(15)	(13)	(13)	(11)
Histiocytic Sarcoma			1 (8%)	
Sarcoma			1 (8%)	2 (18%)
Sarcoma, Metastatic, Ovary	1 (7%)			
Sarcoma, Metastatic, Skeletal Muscle		1 (8%)		
Pancreas	(47)	(48)	(48)	(48)
Adenoma	1 (2%)			
Histiocytic Sarcoma			1 (2%)	
Sarcoma, Metastatic, Mesentery				1 (2%)
Sarcoma, Metastatic, Ovary	1 (2%)			
Salivary Glands	(49)	(50)	(50)	(50)
Sarcoma		1 (2%)		

B 14

FISCHER 344 RATS FEMALE	0.0%	0.25%	1.0%	1.0%
ALIMENTARY SYSTEM - cont				
Stomach, Forestomach	(50)	(49)	(50)	(48)
Histiocytic Sarcoma			1 (2%)	
Sarcoma, Metastatic, Mesentery				1 (2%)
Squamous Cell Carcinoma				1 (2%)
Squamous Cell Papilloma	2 (4%)	1 (2%)		
Stomach, Glandular	(49)	(47)	(49)	(47)
Tongue	(1)		(1)	(1)
Squamous Cell Carcinoma	1 (100%)			1 (100%)
Squamous Cell Papilloma			1 (100%)	
CARDIOVASCULAR SYSTEM				
Heart	(50)	(50)	(50)	(50)
Hemangiosarcoma				1 (2%)
Schwannoma Benign		2 (4%)	4 (8%)	1 (2%)
Schwannoma Malignant		1 (2%)		
ENDOCRINE SYSTEM				
Adrenal Cortex	(49)	(47)	(47)	(47)
Adenoma	1 (2%)		1 (2%)	
Adrenal Medulla	(49)	(47)	(46)	(47)
Pheochromocytoma Malignant	2 (4%)			
Pheochromocytoma Benign		3 (6%)	1 (2%)	
Islets, Pancreatic	(47)	(48)	(48)	(48)
Adenoma		1 (2%)		
Pituitary Gland	(48)	(45)	(50)	(47)
Pars Distalis, Adenoma	20 (42%)	18 (40%)	20 (40%)	13 (28%)
Pars Distalis, Carcinoma	1 (2%)		1 (2%)	
Thyroid Gland	(45)	(45)	(46)	(46)
Bilateral, C-Cell, Adenoma	1 (2%)			
C-Cell, Adenoma	5 (11%)	8 (18%)	3 (7%)	3 (7%)
C-Cell, Carcinoma	1 (2%)	1 (2%)	2 (4%)	1 (2%)
Follicular Cell, Carcinoma	1 (2%)		1 (2%)	

C01

FISCHER 344 RATS FEMALE	0.0%	0.25%	1.0%	4.0%
GENERAL BODY SYSTEM				
Peritoneum				(1)
Sarcoma, Metastatic, Mesentery				1 (100%)
GENITAL SYSTEM				
Clitoral Gland	(48)	(44)	(48)	(48)
Adenoma	6 (13%)	8 (18%)	4 (8%)	4 (8%)
Carcinoma	4 (8%)	5 (11%)	2 (4%)	1 (2%)
Sarcoma			1 (2%)	
Bilateral, Adenoma		1 (2%)		
Bilateral, Carcinoma	1 (2%)			
Ovary	(50)	(50)	(49)	(48)
Histiocytic Sarcoma			1 (2%)	
Sarcoma	1 (2%)			
Sarcoma, Metastatic, Mesentery				1 (2%)
Sarcoma, Metastatic, Skeletal Muscle		1 (2%)		
Uterus	(50)	(48)	(50)	(49)
Adenoma	1 (2%)			1 (2%)
Carcinoma			1 (2%)	
Polyp Stromal	8 (16%)	10 (21%)	6 (12%)	11 (22%)
Polyp Stromal, Multiple		2 (4%)		1 (2%)
Sarcoma, Metastatic, Ovary	1 (2%)			
Sarcoma Stromal	1 (2%)		2 (4%)	
Vagina		(1)		
Sarcoma, Metastatic, Skeletal Muscle		1 (100%)		
HEMATOPOIETIC SYSTEM				
Bone Marrow	(48)	(47)	(48)	(47)
Lymph Node	(15)	(11)	(8)	(14)
Mediastir , Histiocytic Sarcoma			1 (13%)	
Lymph Node, Mandibular	(18)	(12)	(14)	(14)
Lymph Node, Mesenteric	(49)	(47)	(49)	(48)
Histiocytic Sarcoma			1 (2%)	
Sarcoma, Metastatic, Ovary	1 (2%)			
Spleen	(48)	(48)	(49)	(48)
Histiocytic Sarcoma			1 (2%)	
Sarcoma, Metastatic, Ovary	1 (2%)			
Sarcoma, Metastatic, Skin		1 (2%)		
Sarcoma, Metastatic, Skeletal Muscle		1 (2%)		

C.02

FISCHER 344 RATS FEMALE	0.0%	0.25%	1.0%	4.0%
HEMATOPOIETIC SYSTEM - cont				
Thymus	(48)	(49)	(48)	(39)
Thymoma Benign	1 (2%)			
INTEGUMENTARY SYSTEM				
Mammary Gland	(50)	(49)	(50)	(49)
Carcinoma	4 (8%)	4 (8%)	2 (4%)	2 (4%)
Fibroadenoma	20 (40%)	24 (49%)	14 (28%)	19 (39%)
Fibroadenoma, Multiple	16 (32%)	11 (22%)	16 (32%)	3 (6%)
Sarcoma		1 (2%)		
Skin	(50)	(50)	(50)	(50)
Trichoepithelioma		1 (2%)		
Subcutaneous Tissue, Fibroma	1 (2%)			
Subcutaneous Tissue, Histiocytic Sarcoma			1 (2%)	
Subcutaneous Tissue, Sarcoma		2 (4%)	2 (4%)	
Subcutaneous Tissue, Schwannoma Malignant		1 (2%)		
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Osteosarcoma			1 (2%)	
Skeletal Muscle	(1)	(1)		
Sarcoma		1 (100%)		
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Osteosarcoma, Metastatic, Bone			1 (2%)	
RESPIRATORY SYSTEM				
Lung	(50)	(50)	(50)	(49)
Alveolar/Bronchiolar Adenoma		2 (4%)		
Alveolar/Bronchiolar Carcinoma	1 (2%)	1 (2%)	1 (2%)	
Carcinoma, Metastatic, Mammary Gland			1 (2%)	
Histiocytic Sarcoma			1 (2%)	
Sarcoma, Metastatic, Skin		1 (2%)	1 (2%)	
Sarcoma, Metastatic, Skeletal Muscle		1 (2%)		
Mediastinum, Sarcoma, Metastatic, Skeletal				

C 85

FISCHER 344 RATS FEMALE	0.0%	0.25%	1.0%	4.0%
RESPIRATORY SYSTEM - cont				
Muscle		1 (2%)		
Mediastinum, Schwannoma Malignant, Metastatic, Heart		1 (2%)		
Nose	(48)	(48)	(46)	(49)
Pleura				(1)
Sarcoma, Metastatic, Mesentery				1 (100%)
SPECIAL SENSES SYSTEM				
None				
URINARY SYSTEM				
Kidney	(49)	(49)	(49)	(47)
Hemangiosarcoma				1 (2%)
Histiocytic Sarcoma			1 (2%)	
Mesenchymal Tumor Malignant				1 (2%)
Sarcoma, Metastatic, Skeletal Muscle		1 (2%)		
Urinary Bladder	(50)	(48)	(48)	(46)
Sarcoma, Metastatic, Skin		1 (2%)		
SYSTEMIC LESIONS				
Multiple Organs	*(50)	*(50)	*(50)	*(50)
Histiocytic Sarcoma			2 (4%)	
Leukemia Mononuclear	10 (20%)	10 (20%)	4 (8%)	13 (26%)

* Number of animals with any tissue examined microscopically

C-04

FISCHER 344 RATS FEMALE	0.0%	0.25%	1.0%	4.0%
TUMOR SUMMARY				
Total Animals with Primary Neoplasms (b)	50	49	46	46
Total Primary Neoplasms	111	121	93	80
Total Animals with Benign Neoplasms	44	45	40	36
Total Benign Neoplasms	83	93	70	56
Total Animals with Malignant Neoplasms	25	24	20	21
Total Malignant Neoplasms	28	28	23	24
Total Animals with Metastatic Neoplasms	1	3	4	2
Total Metastatic Neoplasm	5	15	5	6
Total Animals with Malignant Neoplasms Uncertain Primary Site				
Total Animals with Neoplasms Uncertain-Benign or Malignant				
Total Uncertain Neoplasms				

a Number of animals examined microscopically at site and number of animals with lesion
b Primary tumors: all tumors except metastatic tumors

C 05

FISCHER 344 RATS MALE	0.0%	0.25%	1.0%	4.0%
DISPOSITION SUMMARY				
Animals Initially in Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	12	14	18	31
Natural Death	15	9	5	19
Survivors				
Terminal Sacrifice	23	27	27	
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Intestine Large, Colon	(41)	(49)	(48)	(43)
Polyp Adenomatous		1 (2%)		
Intestine Large, Cecum	(38)	(46)	(47)	(35)
Intestine Small, Duodenum	(39)	(49)	(49)	(42)
Intestine Small, Jejunum	(37)	(45)	(48)	(39)
Carcinoma			1 (2%)	
Leiomyoma		1 (2%)		
Intestine Small, Ileum	(37)	(42)	(47)	(36)
Polyp Adenomatous		1 (2%)		
Liver	(50)	(50)	(49)	(48)
Hepatocellular Adenoma				1 (2%)
Sarcoma, Metastatic, Skin			1 (2%)	
Mesentery	(14)	(11)	(6)	(4)
Oral Mucosa	(1)			(2)
Pharyngeal, Squamous Cell Carcinoma				2 (100%)
Pancreas	(44)	(49)	(50)	(47)
Adenoma		1 (2%)		1 (2%)
Carcinoma	1 (2%)			
Fibrosarcoma, Metastatic, Tissue NOS		1 (2%)		
Mixed Tumor Benign	2 (5%)			
Salivary Glands	(49)	(49)	(50)	(50)
Carcinoma		1 (2%)		
Sarcoma		1 (2%)	3 (6%)	
Schwannoma Malignant		2 (4%)		
Stomach, Forestomach	(50)	(50)	(50)	(49)
Stomach, Glandular	(46)	(49)	(50)	(48)
Tongue		(1)	(1)	
Squamous Cell Papilloma		1 (100%)	1 (100%)	

C 06

FISCHER 344 RATS MALE	0.0%	0.25%	1.0%	4.0%
CARDIOVASCULAR SYSTEM				
Heart	(50)	(50)	(50)	(49)
Sarcoma, Metastatic, Skin	1 (2%)		1 (2%)	
Schwannoma Benign	2 (4%)	3 (6%)	1 (2%)	
ENDOCRINE SYSTEM				
Adrenal Cortex	(47)	(49)	(50)	(48)
Adenoma		2 (4%)		
Carcinoma				1 (2%)
Pheochromocytoma Malignant, Metastatic, Adrenal Medulla	1 (2%)			
Sarcoma, Metastatic, Skin	1 (2%)			
Adrenal Medulla	(47)	(49)	(50)	(47)
Ganglioneuroma	1 (2%)			
Pheochromocytoma Malignant	5 (11%)		2 (4%)	
Pheochromocytoma Complex		1 (2%)		
Pheochromocytoma Benign	4 (9%)	7 (14%)	11 (22%)	1 (2%)
Bilateral, Pheochromocytoma Benign			1 (2%)	
Islets, Pancreatic	(44)	(48)	(50)	(47)
Adenoma	2 (5%)	3 (6%)		
Carcinoma		4 (8%)		2 (4%)
Parathyroid Gland	(45)	(48)	(49)	(50)
Adenoma	1 (2%)	2 (4%)		
Pituitary Gland	(47)	(49)	(50)	(49)
Pars Distalis, Adenoma	15 (32%)	21 (43%)	18 (36%)	7 (14%)
Pars Distalis, Carcinoma			1 (2%)	
Pars Intermedia, Adenoma		1 (2%)		
Thyroid Gland	(42)	(47)	(48)	(47)
C-Cell, Adenoma	4 (10%)	4 (9%)	6 (13%)	
C-Cell, Carcinoma	2 (5%)	3 (6%)	2 (4%)	
Follicular Cell, Adenoma	1 (2%)	1 (2%)		
GENERAL BODY SYSTEM				
Peritoneum	(3)	(2)	(2)	
Tissue NOS		(1)		(1)
Fibrosarcoma		1 (100%)		

C 07

FISCHER 344 RATS MALE	0.0%	0.25%	1.0%	4.0%
GENITAL SYSTEM				
Epididymis	(50)	(50)	(50)	(49)
Preputial Gland	(50)	(47)	(50)	(50)
Adenoma	3 (6%)	1 (2%)	3 (6%)	1 (2%)
Carcinoma	3 (6%)	1 (2%)	1 (2%)	
Sarcoma	1 (2%)			
Bilateral, Carcinoma			1 (2%)	
Prostate	(48)	(50)	(50)	(50)
Adenoma	1 (2%)	1 (2%)	2 (4%)	
Hemangiosarcoma		1 (2%)		
Seminal Vesicle	(43)	(48)	(49)	(46)
Testes	(50)	(50)	(50)	(50)
Bilateral, Interstitial Cell, Adenoma	39 (78%)	41 (82%)	41 (82%)	44 (88%)
Interstitial Cell, Adenoma	6 (12%)	4 (8%)	2 (4%)	4 (8%)
HEMATOPOIETIC SYSTEM				
Bone Marrow	(46)	(48)	(50)	(48)
Pheochromocytoma Malignant, Metastatic, Adrenal Medulla	1 (2%)			
Lymph Node	(18)	(14)	(21)	(9)
Deep Cervical, Carcinoma, Metastatic, Thyroid Gland		1 (7%)		
Mediastinal, Carcinoma, Metastatic, Thyroid Gland		1 (7%)		
Lymph Node, Mandibular	(13)	(16)	(14)	(11)
Carcinoma, Metastatic, Zymbal's Gland		1 (6%)		
Lymph Node, Mesenteric	(44)	(48)	(49)	(47)
Spleen	(43)	(50)	(49)	(47)
Thymus	(39)	(48)	(43)	(41)
Thymoma Benign			1 (2%)	
INTEGUMENTARY SYSTEM				
Mammary Gland	(48)	(41)	(47)	(44)
Fibroadenoma	1 (2%)	6 (15%)	1 (2%)	
Fibroadenoma, Multiple		1 (2%)		
Skin	(48)	(48)	(49)	(49)
Keratoacanthoma	1 (2%)	2 (4%)	4 (8%)	
Keratoacanthoma, Multiple		1 (2%)		
Squamous Cell Carcinoma		2 (4%)		

C.08

FISCHER 344 RATS MALE	0.0%	0.25%	1.0%	4.0%
INTEGUMENTARY SYSTEM - cont				
Sebaceous Gland, Adenoma	1 (2%)	1 (2%)		
Subcutaneous Tissue, Fibroma	6 (13%)	5 (10%)	3 (6%)	1 (2%)
Subcutaneous Tissue, Lipoma	1 (2%)	1 (2%)		
Subcutaneous Tissue, Sarcoma	3 (6%)		5 (10%)	
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Osteosarcoma			1 (2%)	1 (2%)
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Granular Cell Tumor Benign		1 (2%)		
Sarcoma	1 (2%)			
Peripheral Nerve	(1)			(1)
Sarcoma	1 (100%)			
Spinal Cord			(1)	(1)
Osteosarcoma, Metastatic, Bone			1 (100%)	
RESPIRATORY SYSTEM				
Lung	(50)	(49)	(50)	(49)
Alveolar/Bronchiolar Adenoma	2 (4%)	3 (6%)		1 (2%)
Alveolar/Bronchiolar Carcinoma	1 (2%)	2 (4%)	2 (4%)	1 (2%)
Carcinoma, Metastatic, Pituitary Gland			1 (2%)	
Carcinoma, Metastatic, Preputial Gland	1 (2%)			
Carcinoma, Metastatic, Thyroid Gland		1 (2%)		
Carcinoma, Metastatic, Zymbal's Gland	1 (2%)	1 (2%)		
Osteosarcoma, Metastatic, Bone			1 (2%)	1 (2%)
Pheochromocytoma Malignant, Metastatic, Adrenal Medulla	1 (2%)			
Sarcoma, Metastatic, Salivary Glands		1 (2%)	1 (2%)	
Sarcoma, Metastatic, Skin	1 (2%)		1 (2%)	
Squamous Cell Carcinoma, Metastatic, Oral Mucosa				1 (2%)
Nose	(46)	(50)	(50)	(49)
Trachea	(43)	(49)	(49)	(47)

C 09

FISCHER 344 RATS MALE	0.0%	0.25%	1.0%	4.0%
SPECIAL SENSES SYSTEM				
Zymbal's Gland	(3)	(2)	(1)	(1)
Carcinoma	3 (100%)	2 (100%)	1 (100%)	1 (100%)
URINARY SYSTEM				
Kidney	(47)	(50)	(50)	(48)
Lipoma			2 (4%)	
Sarcoma, Metastatic, Skin	1 (2%)			
Stromal Nephroma	1 (2%)			
Renal Tubule, Adenoma	1 (2%)			
Renal Tubule, Carcinoma		1 (2%)		
Urinary Bladder	(46)	(50)	(49)	(49)
Sarcoma	1 (2%)			
SYSTEMIC LESIONS				
Multiple Organs	*(50)	*(50)	*(50)	*(50)
Leukemia Mononuclear	16 (32%)	20 (40%)	22 (44%)	5 (10%)
Lymphoma Malignant	1 (2%)		1 (2%)	
Mesothelioma Benign	1 (2%)			
Mesothelioma Malignant	6 (12%)	2 (4%)	2 (4%)	2 (4%)

* Number of animals with any tissue examined microscopically

C'10

FISCHER 344 RATS MALE	0.0%	0.25%	1.0%	4.0%
TUMOR SUMMARY				
Total Animals with Primary Neoplasms (b)	49	50	50	50
Total Primary Neoplasms	141	161	142	76
Total Animals with Benign Neoplasms	47	49	50	49
Total Benign Neoplasms	95	117	97	61
Total Animals with Malignant Neoplasms	35	34	35	14
Total Malignant Neoplasms	46	44	45	15
Total Animals with Metastatic Neoplasms	3	4	4	2
Total Metastatic Neoplasm	9	7	7	2
Total Animals with Malignant Neoplasms Uncertain Primary Site				
Total Animals with Neoplasms Uncertain-Benign or Malignant				
Total Uncertain Neoplasms				

a Number of animals examined microscopically at site and number of animals with lesion
b Primary tumors: all tumors except metastatic tumors

C 11

END OF REPORT

RATS/FINAL#1

REASONS FOR REMOVAL: ALL

REMOVAL DATE RANGE: ALL

TREATMENT GROUPS: INCLUDE ALL

NTP
LAB: Battelle Columbus
EXPERIMENT: 88031 TEST: 05
TEST TYPE: CHRONIC
CONT: N01-ES-55388
PATHOLOGIST: MISSING
Rats(FISCHER 344)

STATISTICAL ANALYSIS OF PRIMARY TUMORS
DIPROPYLENE GLYCOL

CAGES FROM 0000 TO LAST CAGE
ROUTE: DOSED WATER

REPORT: PEIRPT08
DATE: 12/07/00
TIME: 10:35:44

NTP C#: C88031
CAS: 25265-71-8

FOR ALL DOSES THE TUMOR RATES IN THE FOLLOWING TISSUES/ORGANS ARE BASED ON NUMBER OF TISSUES EXAMINED. IN OTHER TISSUES/ORGANS RATES ARE BASED ON THE NUMBER OF ANIMALS NECROPSIED.

Adrenal Cortex
Adrenal Medulla
Brain
Clitoral/Preputial Gland
Heart
Islets, Pancreatic
Kidney
Liver
Lung
Ovary
Pancreas
Parathyroid Gland
Pituitary Gland
Prostate
Salivary Glands
Testes
Thymus
Thyroid Gland
Urinary Bladder

NTP
LAB: Battelle Columbus
EXPERIMENT: 88031 TEST: 05
TEST TYPE: CHRONIC
CONT: N01-ES-55388
PATHOLOGIST: MISSING

STATISTICAL ANALYSIS OF PRIMARY TUMORS
DIPROPYLENE GLYCOL

CAGES FROM 0000 TO LAST CAGE
ROUTE: DOSED WATER

REPORT: PEIRPT08
DATE: 12/07/00
TIME: 10:35:44

NTP C#: C88031
CAS: 25265-71-8

SUMMARY OF STATISTICALLY SIGNIFICANT (P<=.05) RESULTS
IN THE ANALYSIS OF DIPROPYLENE GLYCOL

Male Rats

Organ	Morphology
Adrenal Medulla	Pheochromocytoma Benign
	Pheochromocytoma Malignant
	Pheochromocytoma: Benign, Complex, Malignant, NOS
Clitoral/Preputial Gland	Carcinoma or Adenoma
Islets, Pancreatic	Carcinoma
	Carcinoma or Adenoma
Mammary Gland	Fibroadenoma
	Fibroma, Fibroadenoma, Carcinoma, or Adenoma
Oral Cavity (Oral Mucosa, Tongue, Pharynx, Tooth, Gingiva)	Squamous Cell Carcinoma
	Squamous Cell Carcinoma, Papilloma Squamous, or Papilloma
Oral Mucosa	Squamous Cell Carcinoma
Pituitary Gland: Pars Distalis or Unspecified Site	Adenoma
	Carcinoma or Adenoma
Skin	Fibroma
	Fibroma, Fibrosarcoma, Sarcoma, Myxoma, Myxosarcoma, or Fibrous Histiocytoma
Testes	Adenoma
Thyroid Gland: C-Cell	Adenoma
	Carcinoma or Adenoma
All Organs	Leukemia: Lymphocytic, Monocytic, Mononuclear, or Undifferentiated
	Benign Tumors
	Malignant Tumors
	Malignant and Benign Tumors

Female Rats

Organ	Morphology
Clitoral/Preputial Gland	Carcinoma or Adenoma
Mammary Gland	Fibroadenoma
	Fibroma, Fibroadenoma, Carcinoma, or Adenoma
All Organs	Hemangiosarcoma
	Leukemia: Lymphocytic, Monocytic, Mononuclear, or Undifferentiated
	Benign Tumors
	Malignant and Benign Tumors

D 01

Statistical Analysis of Primary Tumors in Rats(FISCHER 344) - DIPROPYLENE GLYCOL
Terminal Sacrifice at 105 weeks

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Adrenal Cortex Adenoma								
TUMOR RATES								
OVERALL (a)	0/47 (0%)	2/49 (4%)	0/50 (0%)	0/48 (0%)	1/49 (2%)	0/47 (0%)	1/47 (2%)	0/47 (0%)
POLY-3 RATE (b)	0/37.58	2/42.09	0/42.10	0/24.30	1/42.75	0/41.25	1/44.49	0/42.03
POLY-3 PERCENT (g)	0.0%	4.8%	0.0%	0.0%	2.3%	0.0%	2.3%	0.0%
TERMINAL (d)	0/23 (0%)	1/27 (4%)	0/27 (0%)	0/0 (0%)	1/30 (3%)	0/31 (0%)	1/38 (3%)	0/31 (0%)
FIRST INCIDENCE	---	698	---	---	729 (T)	---	729 (T)	---
STATISTICAL TESTS								
LIFE TABLE	P=0.971N	P=0.287	(e)	(e)	P=0.480N	P=0.493N	P=0.708N	P=0.493N
POLY 3	P=0.420N	P=0.263	(e)	(e)	P=0.481N	P=0.507N	P=0.752N	P=0.503N
POLY 1.5	P=0.411N	P=0.257	(e)	(e)	P=0.481N	P=0.507N	P=0.758N	P=0.504N
POLY 6	P=0.392N	P=0.271	(e)	(e)	P=0.482N	P=0.508N	P=0.745N	P=0.504N
LOGISTIC REGRESSION	P=0.737N	P=0.270	(e)	(e)	P=0.480N	(e)	P=0.708N	(e)
COCH-ARM / FISHERS	P=0.390N	P=0.258	(e)	(e)	P=0.483N	P=0.510N	P=0.742	P=0.510N

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Adrenal Medulla Pheochromocytoma Benign								
TUMOR RATES								
OVERALL (a)	4/47 (9%)	7/49 (14%)	12/50 (24%)	1/47 (2%)	0/49 (0%)	3/47 (6%)	1/46 (2%)	0/47 (0%)
POLY-3 RATE (b)	4/37.88	7/42.10	12/43.89	1/24.31	0/42.75	3/41.63	1/43.84	0/42.03
POLY-3 PERCENT (g)	10.6%	16.6%	27.3%	4.1%	0.0%	7.2%	2.3%	0.0%
TERMINAL (d)	1/23 (4%)	4/27 (15%)	8/27 (30%)	0/0 (0%)	0/30 (0%)	2/31 (7%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	697	711	340	614	---	622	725	---
STATISTICAL TESTS								
LIFE TABLE	P=0.146	P=0.388	P=0.063	P=0.335	P=0.265N	P=0.127	P=0.546	(e)
POLY 3	P=0.308N	P=0.323	P=0.049 *	P=0.339N	P=0.263N	P=0.113	P=0.505	(e)
POLY 1.5	P=0.140N	P=0.310	P=0.045 *	P=0.250N	P=0.263N	P=0.113	P=0.499	(e)
POLY 6	P=0.424	P=0.339	P=0.051	P=0.512N	P=0.265N	P=0.114	P=0.512	(e)
LOGISTIC REGRESSION	P=0.296N	P=0.367	P=0.042 *	P=0.700N	P=0.267N	P=0.114	P=0.521	(e)
COCH-ARM / FISHERS	P=0.050N	P=0.287	P=0.036 *	P=0.181N	P=0.268N	P=0.113	P=0.484	(e)

D 02

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Adrenal Medulla Pheochromocytoma Malignant								
TUMOR RATES								
OVERALL (a)	5/47 (11%)	0/49 (0%)	2/50 (4%)	0/47 (0%)	2/49 (4%)	0/47 (0%)	0/46 (0%)	0/47 (0%)
POLY-3 RATE (b)	5/38.29	0/41.97	2/43.00	0/23.91	2/42.86	0/41.25	0/43.82	0/42.03
POLY-3 PERCENT (g)	13.1%	0.0%	4.7%	0.0%	4.7%	0.0%	0.0%	0.0%
TERMINAL (d)	3/23 (13%)	0/27 (0%)	1/27 (4%)	0/0 (0%)	0/30 (0%)	0/31 (0%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	511	---	340	---	702	---	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.307N	P=0.024N*	P=0.172N	P=0.537N	P=0.311N	P=0.237N	P=0.201N	P=0.240N
POLY 3	P=0.161N	P=0.023N*	P=0.170N	P=0.094N	P=0.316N	P=0.245N	P=0.232N	P=0.241N
POLY 1.5	P=0.125N	P=0.024N*	P=0.175N	P=0.054N	P=0.315N	P=0.245N	P=0.239N	P=0.242N
POLY 6	P=0.199N	P=0.021N*	P=0.167N	P=0.213N	P=0.318N	P=0.247N	P=0.225N	P=0.242N
LOGISTIC REGRESSION	P=0.058N	P=0.027N*	P=0.218N	P=0.106N	P=0.309N	P=0.246N	P=0.230N	P=0.241N
COCH-ARM / FISHERS	P=0.087N	P=0.025N*	P=0.193N	P=0.028N*	P=0.312N	P=0.258N	P=0.263N	P=0.258N

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Adrenal Medulla Pheochromocytoma: Benign, Complex, Malignant, NOS								
TUMOR RATES								
OVERALL (a)	9/47 (19%)	7/49 (14%)	13/50 (26%)	1/47 (2%)	2/49 (4%)	3/47 (6%)	1/46 (2%)	0/47 (0%)
POLY-3 RATE (b)	9/38.58	7/42.10	13/43.89	1/24.31	2/42.86	3/41.63	1/43.84	0/42.03
POLY-3 PERCENT (g)	23.3%	16.6%	29.6%	4.1%	4.7%	7.2%	2.3%	0.0%
TERMINAL (d)	4/23 (17%)	4/27 (15%)	9/27 (33%)	0/0 (0%)	0/30 (0%)	2/31 (7%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	511	711	340	614	702	622	725	---
STATISTICAL TESTS								
LIFE TABLE	P=0.387	P=0.264N	P=0.374	P=0.648	P=0.117N	P=0.508	P=0.432N	P=0.240N
POLY 3	P=0.121N	P=0.317N	P=0.346	P=0.050N	P=0.118N	P=0.487	P=0.492N	P=0.241N
POLY 1.5	P=0.039N*	P=0.330N	P=0.330	P=0.020N*	P=0.117N	P=0.486	P=0.503N	P=0.242N
POLY 6	P=0.408N	P=0.302N	P=0.353	P=0.178N	P=0.120N	P=0.487	P=0.480N	P=0.242N
LOGISTIC REGRESSION	P=0.092N	P=0.285N	P=0.313	P=0.129N	P=0.116N	P=0.483	P=0.483N	P=0.241N
COCH-ARM / FISHERS	P=0.009N**	P=0.358N	P=0.288	P=0.008N**	P=0.118N	P=0.480	P=0.524N	P=0.258N

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Clitoral/Preputial Gland Adenoma								
TUMOR RATES								
OVERALL (a)	3/50 (6%)	1/47 (2%)	3/50 (6%)	1/50 (2%)	6/48 (13%)	9/44 (20%)	4/48 (8%)	4/48 (8%)
POLY-3 RATE (b)	3/40.37	1/41.26	3/42.10	1/25.88	6/41.42	9/38.95	4/44.12	4/42.17
POLY-3 PERCENT (g)	7.4%	2.4%	7.1%	3.9%	14.5%	23.1%	9.1%	9.5%
TERMINAL (d)	1/23 (4%)	0/27 (0%)	3/27 (11%)	0/0 (0%)	6/29 (21%)	8/30 (27%)	4/37 (11%)	3/30 (10%)
FIRST INCIDENCE	654	586	729 (T)	484	729 (T)	585	729 (T)	725
STATISTICAL TESTS								
LIFE TABLE	P=0.389	P=0.266N	P=0.609N	P=0.579	P=0.182N	P=0.307	P=0.224N	P=0.346N
POLY 3	P=0.543N	P=0.297N	P=0.644N	P=0.475N	P=0.154N	P=0.240	P=0.330N	P=0.357N
POLY 1.5	P=0.447N	P=0.308N	P=0.648N	P=0.386N	P=0.162N	P=0.237	P=0.345N	P=0.358N
POLY 6	P=0.505	P=0.281N	P=0.642N	P=0.624N	P=0.170N	P=0.244	P=0.313N	P=0.362N
LOGISTIC REGRESSION	P=0.405N	P=0.338N	P=0.631N	P=0.360N	P=0.173N	P=0.233	P=0.224N	P=0.358N
COCH-ARM / FISHERS	P=0.336N	P=0.332N	P=0.661N	P=0.309N	P=0.167N	P=0.227	P=0.370N	P=0.370N

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Clitoral/Preputial Gland Carcinoma								
TUMOR RATES								
OVERALL (a)	3/50 (6%)	1/47 (2%)	2/50 (4%)	0/50 (0%)	5/48 (10%)	5/44 (11%)	2/48 (4%)	1/48 (2%)
POLY-3 RATE (b)	3/41.08	1/41.53	2/42.51	0/25.17	5/41.79	5/38.49	2/44.12	1/42.74
POLY-3 PERCENT (g)	7.3%	2.4%	4.7%	0.0%	12.0%	13.0%	4.5%	2.3%
TERMINAL (d)	1/23 (4%)	0/27 (0%)	0/27 (0%)	0/0 (0%)	4/29 (14%)	4/30 (13%)	2/37 (5%)	0/30 (0%)
FIRST INCIDENCE	511	456	627	---	626	725	729 (T)	542
STATISTICAL TESTS								
LIFE TABLE	P=0.312N	P=0.293N	P=0.456N	P=0.305N	P=0.065N	P=0.613N	P=0.139N	P=0.100N
POLY 3	P=0.258N	P=0.301N	P=0.484N	P=0.230N	P=0.059N	P=0.578	P=0.194N	P=0.095N
POLY 1.5	P=0.199N	P=0.310N	P=0.488N	P=0.167N	P=0.059N	P=0.579	P=0.202N	P=0.096N
POLY 6	P=0.337N	P=0.287N	P=0.480N	P=0.361N	P=0.060N	P=0.576	P=0.186N	P=0.096N
LOGISTIC REGRESSION	P=0.070N	P=0.452N	P=0.547N	P=0.085N	P=0.060N	P=0.586	P=0.187N	P=0.105N
COCH-ARM / FISHERS	P=0.137N	P=0.332N	P=0.500N	P=0.121N	P=0.061N	P=0.573	P=0.218N	P=0.102N

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Clitoral/Preputial Gland								
Carcinoma or Adenoma								
TUMOR RATES								
OVERALL (a)	6/50 (12%)	2/47 (4%)	5/50 (10%)	1/50 (2%)	10/48 (21%)	14/44 (32%)	6/48 (13%)	5/48 (10%)
POLY-3 RATE (b)	6/41.55	2/42.01	5/42.51	1/25.88	10/41.79	14/38.97	6/44.12	5/42.76
POLY-3 PERCENT (g)	14.4%	4.8%	11.8%	3.9%	23.9%	35.9%	13.6%	11.7%
TERMINAL (d)	2/23 (9%)	0/27 (0%)	3/27 (11%)	0/0 (0%)	9/29 (31%)	12/30 (40%)	6/37 (16%)	3/30 (10%)
FIRST INCIDENCE	511	456	627	484	626	585	729 (T)	542
STATISTICAL TESTS								
LIFE TABLE	P=0.581N	P=0.118N	P=0.429N	P=0.509N	P=0.037N*	P=0.261	P=0.086N	P=0.117N
POLY 3	P=0.284N	P=0.128N	P=0.484N	P=0.175N	P=0.027N*	P=0.172	P=0.170N	P=0.116N
POLY 1.5	P=0.181N	P=0.137N	P=0.486N	P=0.102N	P=0.027N*	P=0.173	P=0.183N	P=0.118N
POLY 6	P=0.457N	P=0.116N	P=0.485N	P=0.357N	P=0.028N*	P=0.171	P=0.157N	P=0.117N
LOGISTIC REGRESSION	P=0.051N	P=0.214N	P=0.497N	P=0.044N*	P=0.032N*	P=0.171	P=0.141N	P=0.123N
COCH-ARM / FISHERS	P=0.094N	P=0.155N	P=0.500N	P=0.056N	P=0.033N*	P=0.168	P=0.206N	P=0.130N

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Heart								
Schwannoma Benign								
TUMOR RATES								
OVERALL (a)	2/50 (4%)	3/50 (6%)	1/50 (2%)	0/49 (0%)	0/50 (0%)	2/50 (4%)	4/50 (8%)	1/50 (2%)
POLY-3 RATE (b)	2/40.56	3/42.41	1/42.17	0/24.59	0/43.16	2/43.38	4/45.88	1/43.66
POLY-3 PERCENT (g)	4.9%	7.1%	2.4%	0.0%	0.0%	4.6%	8.7%	2.3%
TERMINAL (d)	0/23 (0%)	3/27 (11%)	0/27 (0%)	0/0 (0%)	0/30 (0%)	1/31 (3%)	4/38 (11%)	1/31 (3%)
FIRST INCIDENCE	565	729 (T)	712	---	---	634	729 (T)	729 (T)
STATISTICAL TESTS								
LIFE TABLE	P=0.495N	P=0.556	P=0.459N	P=0.576N	P=0.504N	P=0.243	P=0.096	P=0.507
POLY 3	P=0.198N	P=0.520	P=0.486N	P=0.361N	P=0.573N	P=0.238	P=0.068	P=0.502
POLY 1.5	P=0.160N	P=0.514	P=0.490N	P=0.298N	P=0.571N	P=0.238	P=0.065	P=0.503
POLY 6	P=0.233N	P=0.531	P=0.484N	P=0.474N	P=0.579N	P=0.238	P=0.072	P=0.500
LOGISTIC REGRESSION	P=0.210N	P=0.518	P=0.511N	P=0.241N	P=0.501N	P=0.237	P=0.096	P=0.507
COCH-ARM / FISHERS	P=0.118N	P=0.500	P=0.500N	P=0.253N	P=0.578N	P=0.247	P=0.059	P=0.500

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Islets, Pancreatic Adenoma								
TUMOR RATES								
OVERALL (a)	2/44 (5%)	3/48 (6%)	0/50 (0%)	0/47 (0%)	0/47 (0%)	1/48 (2%)	0/48 (0%)	0/48 (0%)
POLY-3 RATE (b)	2/36.11	3/41.84	0/42.10	0/23.65	0/41.03	1/41.49	0/45.05	0/42.76
POLY-3 PERCENT (g)	5.5%	7.2%	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%
TERMINAL (d)	2/23 (9%)	2/27 (7%)	0/27 (0%)	0/0 (0%)	0/30 (0%)	0/31 (0%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	729 (T)	649	---	---	---	717	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.488N	P=0.566	P=0.203N	P=1.000	P=0.616N	P=0.518	(e)	(e)
POLY 3	P=0.145N	P=0.567	P=0.203N	P=0.342N	P=0.612N	P=0.502	(e)	(e)
POLY 1.5	P=0.130N	P=0.558	P=0.204N	P=0.277N	P=0.609N	P=0.504	(e)	(e)
POLY 6	P=0.136N	P=0.579	P=0.204N	P=0.460N	P=0.616N	P=0.501	(e)	(e)
LOGISTIC REGRESSION	P=0.274N	P=0.573	(e)	(e)	P=0.606N	P=0.500	(e)	(e)
COCH-ARM / FISHERS	P=0.106N	P=0.542	P=0.216N	P=0.231N	P=0.607N	P=0.505	(e)	(e)

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Islets, Pancreatic Carcinoma								
TUMOR RATES								
OVERALL (a)	0/44 (0%)	4/48 (8%)	0/50 (0%)	2/47 (4%)	0/47 (0%)	0/48 (0%)	0/48 (0%)	0/48 (0%)
POLY-3 RATE (b)	0/36.11	4/41.62	0/42.10	2/24.37	0/41.03	0/41.44	0/45.05	0/42.76
POLY-3 PERCENT (g)	0.0%	9.6%	0.0%	8.2%	0.0%	0.0%	0.0%	0.0%
TERMINAL (d)	0/23 (0%)	3/27 (11%)	0/27 (0%)	0/0 (0%)	0/30 (0%)	0/31 (0%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	---	709	---	564	---	---	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.011 *	P=0.092	(e)	P=0.032 *	(e)	(e)	(e)	(e)
POLY 3	P=0.409	P=0.079	(e)	P=0.163	(e)	(e)	(e)	(e)
POLY 1.5	P=0.469	P=0.077	(e)	P=0.203	(e)	(e)	(e)	(e)
POLY 6	P=0.350	P=0.082	(e)	P=0.114	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	P=0.252	P=0.090	(e)	P=0.210	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.546	P=0.070	(e)	P=0.264	(e)	(e)	(e)	(e)

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Islets, Pancreatic Carcinoma or Adenoma								
TUMOR RATES								
OVERALL (a)	2/44 (5%)	7/48 (15%)	0/50 (0%)	2/47 (4%)	0/47 (0%)	1/48 (2%)	0/48 (0%)	0/48 (0%)
POLY-3 RATE (b)	2/36.11	7/41.92	0/42.10	2/24.37	0/41.03	1/41.49	0/45.05	0/42.76
POLY-3 PERCENT (g)	5.5%	16.7%	0.0%	8.2%	0.0%	2.4%	0.0%	0.0%
TERMINAL (d)	2/23 (9%)	5/27 (19%)	0/27 (0%)	0/0 (0%)	0/30 (0%)	0/31 (0%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	729 (T)	649	---	564	---	717	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.111	P=0.127	P=0.203N	P=0.032 *	P=0.616N	P=0.518	(e)	(e)
POLY 3	P=0.379N	P=0.117	P=0.203N	P=0.545	P=0.612N	P=0.502	(e)	(e)
POLY 1.5	P=0.327N	P=0.112	P=0.204N	P=0.635	P=0.609N	P=0.504	(e)	(e)
POLY 6	P=0.395N	P=0.125	P=0.204N	P=0.394	P=0.616N	P=0.501	(e)	(e)
LOGISTIC REGRESSION	P=0.614	P=0.125	(e)	P=0.363	P=0.606N	P=0.500	(e)	(e)
COCH-ARM / FISHERS	P=0.259N	P=0.101	P=0.216N	P=0.666N	P=0.607N	P=0.505	(e)	(e)

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Kidney: Renal Tubule Lipoma								
TUMOR RATES								
OVERALL (a)	0/47 (0%)	0/50 (0%)	2/50 (4%)	0/48 (0%)	0/49 (0%)	0/49 (0%)	0/49 (0%)	0/47 (0%)
POLY-3 RATE (b)	0/37.91	0/42.41	2/42.31	0/24.20	0/42.42	0/42.07	0/45.12	0/42.03
POLY-3 PERCENT (g)	0.0%	0.0%	4.7%	0.0%	0.0%	0.0%	0.0%	0.0%
TERMINAL (d)	0/23 (0%)	0/27 (0%)	1/27 (4%)	0/0 (0%)	0/30 (0%)	0/31 (0%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	---	---	674	---	---	---	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.710	(e)	P=0.264	(e)	(e)	(e)	(e)	(e)
POLY 3	P=0.630	(e)	P=0.262	(e)	(e)	(e)	(e)	(e)
POLY 1.5	P=0.730N	(e)	P=0.259	(e)	(e)	(e)	(e)	(e)
POLY 6	P=0.354	(e)	P=0.264	(e)	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	P=0.793	(e)	P=0.261	(e)	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.655N	(e)	P=0.263	(e)	(e)	(e)	(e)	(e)

Dose	0.0%	0.25%	Males 1.0%	4.0%	0.0%	0.25%	Females 1.0%	4.0%
Lung Alveolar/Bronchiolar Adenoma								
TUMOR RATES								
OVERALL (a)	2/50 (4%)	3/49 (6%)	0/50 (0%)	1/49 (2%)	0/50 (0%)	2/50 (4%)	0/50 (0%)	0/49 (0%)
POLY-3 RATE (b)	2/40.21	3/42.45	0/42.10	1/25.37	0/43.16	2/43.04	0/45.88	0/43.15
POLY-3 PERCENT (g)	5.0%	7.1%	0.0%	3.9%	0.0%	4.7%	0.0%	0.0%
TERMINAL (d)	1/23 (4%)	2/27 (7%)	0/27 (0%)	0/0 (0%)	0/30 (0%)	2/31 (7%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	645	586	---	438	---	729 (T)	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.661	P=0.555	P=0.225N	P=0.589	P=0.390N	P=0.245	(e)	(e)
POLY 3	P=0.422N	P=0.525	P=0.227N	P=0.652N	P=0.396N	P=0.236	(e)	(e)
POLY 1.5	P=0.393N	P=0.512	P=0.230N	P=0.581N	P=0.394N	P=0.237	(e)	(e)
POLY 6	P=0.408N	P=0.543	P=0.224N	P=0.659	P=0.400N	P=0.235	(e)	(e)
LOGISTIC REGRESSION	P=0.299N	P=0.503	P=0.230N	P=0.469N	(e)	P=0.245	(e)	(e)
COCH-ARM / FISHERS	P=0.341N	P=0.490	P=0.247N	P=0.508N	P=0.394N	P=0.247	(e)	(e)

Dose	0.0%	0.25%	Males 1.0%	4.0%	0.0%	0.25%	Females 1.0%	4.0%
Lung Alveolar/Bronchiolar Carcinoma								
TUMOR RATES								
OVERALL (a)	1/50 (2%)	2/49 (4%)	2/50 (4%)	1/49 (2%)	1/50 (2%)	1/50 (2%)	1/50 (2%)	0/49 (0%)
POLY-3 RATE (b)	1/39.90	2/42.06	2/42.59	1/24.98	1/43.16	1/43.04	1/45.88	0/43.15
POLY-3 PERCENT (g)	2.5%	4.8%	4.7%	4.0%	2.3%	2.3%	2.2%	0.0%
TERMINAL (d)	1/23 (4%)	0/27 (0%)	1/27 (4%)	0/0 (0%)	1/30 (3%)	1/31 (3%)	1/38 (3%)	0/31 (0%)
FIRST INCIDENCE	729 (T)	711	583	617	729 (T)	729 (T)	729 (T)	---
STATISTICAL TESTS								
LIFE TABLE	P=0.251	P=0.577	P=0.553	P=0.310	P=0.331N	P=0.755N	P=0.708N	P=0.493N
POLY 3	P=0.582	P=0.518	P=0.523	P=0.647	P=0.336N	P=0.760	P=0.747N	P=0.500N
POLY 1.5	P=0.608N	P=0.509	P=0.515	P=0.705	P=0.335N	P=0.760N	P=0.752N	P=0.500N
POLY 6	P=0.424	P=0.533	P=0.532	P=0.542	P=0.338N	P=0.759	P=0.741N	P=0.501N
LOGISTIC REGRESSION	P=0.647	P=0.560	P=0.507	P=0.596	P=0.331N	P=0.755N	P=0.708N	(e)
COCH-ARM / FISHERS	P=0.518N	P=0.492	P=0.500	P=0.747	P=0.337N	P=0.753N	P=0.753N	P=0.505N

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Lung Alveolar/Bronchiolar Carcinoma or Alveolar/Bronchiolar Adenoma								
TUMOR RATES								
OVERALL (a)	3/50 (6%)	5/49 (10%)	2/50 (4%)	2/49 (4%)	1/50 (2%)	3/50 (6%)	1/50 (2%)	0/49 (0%)
POLY-3 RATE (b)	3/40.21	5/42.54	2/42.59	2/25.76	1/43.16	3/43.04	1/45.88	0/43.15
POLY-3 PERCENT (g)	7.5%	11.8%	4.7%	7.8%	2.3%	7.0%	2.2%	0.0%
TERMINAL (d)	2/23 (9%)	2/27 (7%)	1/27 (4%)	0/0 (0%)	1/30 (3%)	3/31 (10%)	1/38 (3%)	0/31 (0%)
FIRST INCIDENCE	645	586	583	438	729 (T)	729 (T)	729 (T)	---
STATISTICAL TESTS								
LIFE TABLE	P=0.277	P=0.448	P=0.446N	P=0.219	P=0.169N	P=0.316	P=0.708N	P=0.493N
POLY 3	P=0.474N	P=0.387	P=0.474N	P=0.660	P=0.175N	P=0.304	P=0.747N	P=0.500N
POLY 1.5	P=0.392N	P=0.371	P=0.482N	P=0.602N	P=0.175N	P=0.306	P=0.752N	P=0.500N
POLY 6	P=0.554N	P=0.411	P=0.465N	P=0.499	P=0.178N	P=0.302	P=0.741N	P=0.501N
LOGISTIC REGRESSION	P=0.356N	P=0.381	P=0.488N	P=0.590N	P=0.169N	P=0.316	P=0.708N	(e)
COCH-ARM / FISHERS	P=0.293N	P=0.346	P=0.500N	P=0.510N	P=0.177N	P=0.309	P=0.753N	P=0.505N

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Mammary Gland Carcinoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	4/50 (8%)	4/50 (8%)	2/50 (4%)	2/50 (4%)
POLY-3 RATE (b)	0/39.90	0/42.41	0/42.10	0/25.17	4/43.75	4/43.04	2/45.88	2/43.85
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	0.0%	9.1%	9.3%	4.4%	4.6%
TERMINAL (d)	0/23 (0%)	0/27 (0%)	0/27 (0%)	0/0 (0%)	3/30 (10%)	4/31 (13%)	2/38 (5%)	1/31 (3%)
FIRST INCIDENCE	---	---	---	---	542	729 (T)	729 (T)	681
STATISTICAL TESTS								
LIFE TABLE	(e)	(e)	(e)	(e)	P=0.272N	P=0.627N	P=0.248N	P=0.330N
POLY 3	(e)	(e)	(e)	(e)	P=0.273N	P=0.635	P=0.315N	P=0.336N
POLY 1.5	(e)	(e)	(e)	(e)	P=0.271N	P=0.640	P=0.323N	P=0.333N
POLY 6	(e)	(e)	(e)	(e)	P=0.279N	P=0.628	P=0.306N	P=0.342N
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)	P=0.269N	P=0.643	P=0.329N	P=0.335N
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	P=0.272N	P=0.643N	P=0.339N	P=0.339N

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Mammary Gland Fibroadenoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	1/50 (2%)	7/50 (14%)	1/50 (2%)	0/50 (0%)	36/50 (72%)	35/50 (70%)	30/50 (60%)	22/50 (44%)
POLY-3 RATE (b)	1/39.90	7/42.41	1/42.69	0/25.17	36/46.35	35/44.40	30/46.63	22/44.99
POLY-3 PERCENT (g)	2.5%	16.5%	2.3%	0.0%	77.7%	78.8%	64.3%	48.9%
TERMINAL (d)	1/23 (4%)	7/27 (26%)	0/27 (0%)	0/0 (0%)	25/30 (83%)	27/31 (87%)	26/38 (68%)	14/31 (45%)
FIRST INCIDENCE	729 (T)	729 (T)	543	---	247	585	597	626
STATISTICAL TESTS								
LIFE TABLE	P=0.413N	P=0.047 *	P=0.735N	P=1.000	P=0.003N**	P=0.444N	P=0.013N*	P=0.010N*
POLY 3	P=0.106N	P=0.036 *	P=0.746N	P=0.588N	P<0.001N**	P=0.551	P=0.107N	P=0.002N**
POLY 1.5	P=0.076N	P=0.034 *	P=0.751N	P=0.544N	P<0.001N**	P=0.593N	P=0.122N	P=0.002N**
POLY 6	P=0.143N	P=0.039 *	P=0.740N	P=0.654N	P<0.001N**	P=0.476	P=0.096N	P=0.003N**
LOGISTIC REGRESSION	P=0.206N	P=0.047 *	P=0.746	(e)	P<0.001N**	P=0.512N	P=0.073N	P=0.003N**
COCH-ARM / FISHERS	P=0.053N	P=0.030 *	P=0.753N	P=0.500N	P<0.001N**	P=0.500N	P=0.146N	P=0.004N**

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Mammary Gland Fibroma, Fibroadenoma, Carcinoma, or Adenoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	1/50 (2%)	7/50 (14%)	1/50 (2%)	0/50 (0%)	37/50 (74%)	37/50 (74%)	30/50 (60%)	23/50 (46%)
POLY-3 RATE (b)	1/39.90	7/42.41	1/42.69	0/25.17	37/46.94	37/44.40	30/46.63	23/44.99
POLY-3 PERCENT (g)	2.5%	16.5%	2.3%	0.0%	78.8%	83.3%	64.3%	51.1%
TERMINAL (d)	1/23 (4%)	7/27 (26%)	0/27 (0%)	0/0 (0%)	25/30 (83%)	29/31 (94%)	26/38 (68%)	15/31 (48%)
FIRST INCIDENCE	729 (T)	729 (T)	543	---	247	585	597	626
STATISTICAL TESTS								
LIFE TABLE	P=0.413N	P=0.047 *	P=0.735N	P=1.000N	P=0.003N**	P=0.518N	P=0.008N**	P=0.010N*
POLY 3	P=0.106N	P=0.036 *	P=0.746N	P=0.588N	P<0.001N**	P=0.379	P=0.083N	P=0.003N**
POLY 1.5	P=0.076N	P=0.034 *	P=0.751N	P=0.544N	P<0.001N**	P=0.473	P=0.090N	P=0.003N**
POLY 6	P=0.143N	P=0.039 *	P=0.740N	P=0.654N	P<0.001N**	P=0.261	P=0.081N	P=0.004N**
LOGISTIC REGRESSION	P=0.206N	P=0.047 *	P=0.746	(e)	P<0.001N**	P=0.591	P=0.054N	P=0.002N**
COCH-ARM / FISHERS	P=0.053N	P=0.030 *	P=0.753N	P=0.500N	P<0.001N**	P=0.590N	P=0.101N	P=0.004N**

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Mesentery Sarcoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	1/50 (2%)	2/50 (4%)
POLY-3 RATE (b)	0/39.90	0/42.41	0/42.10	0/25.17	0/43.16	0/43.04	1/46.21	2/44.41
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	4.5%
TERMINAL (d)	0/23 (0%)	0/27 (0%)	0/27 (0%)	0/0 (0%)	0/30 (0%)	0/31 (0%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	---	---	---	---	---	---	638	533
STATISTICAL TESTS								
LIFE TABLE	(e)	(e)	(e)	(e)	P=0.098	(e)	P=0.519	P=0.238
POLY 3	(e)	(e)	(e)	(e)	P=0.102	(e)	P=0.514	P=0.243
POLY 1.5	(e)	(e)	(e)	(e)	P=0.101	(e)	P=0.508	P=0.242
POLY 6	(e)	(e)	(e)	(e)	P=0.102	(e)	P=0.520	P=0.243
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)	P=0.071	(e)	P=0.475	P=0.180
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	P=0.097	(e)	P=0.500	P=0.247

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Oral Cavity (Oral Mucosa, Tongue, Pharynx, Tooth, Gingiva) Squamous Cell Carcinoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	2/50 (4%)	1/50 (2%)	0/50 (0%)	0/50 (0%)	1/50 (2%)
POLY-3 RATE (b)	0/39.90	0/42.41	0/42.10	2/26.03	1/43.16	0/43.04	0/45.88	1/44.20
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	7.7%	2.3%	0.0%	0.0%	2.3%
TERMINAL (d)	0/23 (0%)	0/27 (0%)	0/27 (0%)	0/0 (0%)	1/30 (3%)	0/31 (0%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	---	---	---	596	729 (T)	---	---	564
STATISTICAL TESTS								
LIFE TABLE	P=0.006 **	(e)	(e)	P=0.111	P=0.525	P=0.493N	P=0.453N	P=0.749N
POLY 3	P=0.025 *	(e)	(e)	P=0.157	P=0.526	P=0.501N	P=0.488N	P=0.755N
POLY 1.5	P=0.031 *	(e)	(e)	P=0.193	P=0.525	P=0.500N	P=0.492N	P=0.756N
POLY 6	P=0.020 *	(e)	(e)	P=0.112	P=0.525	P=0.502N	P=0.483N	P=0.757N
LOGISTIC REGRESSION	P=0.072	(e)	(e)	P=0.241	P=0.502	(e)	(e)	P=0.745
COCH-ARM / FISHERS	P=0.042 *	(e)	(e)	P=0.247	P=0.522	P=0.500N	P=0.500N	P=0.753N

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Oral Cavity (Oral Mucosa, Tongue, Pharynx, Tooth, Gingiva) Squamous Cell Carcinoma, Papilloma Squamous, or Papilloma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	0/50 (0%)	1/50 (2%)	1/50 (2%)	2/50 (4%)	1/50 (2%)	0/50 (0%)	1/50 (2%)	1/50 (2%)
POLY-3 RATE (b)	0/39.90	1/42.41	1/42.10	2/26.03	1/43.16	0/43.04	1/45.88	1/44.20
POLY-3 PERCENT (g)	0.0%	2.4%	2.4%	7.7%	2.3%	0.0%	2.2%	2.3%
TERMINAL (d)	0/23 (0%)	1/27 (4%)	1/27 (4%)	0/0 (0%)	1/30 (3%)	0/31 (0%)	1/38 (3%)	0/31 (0%)
FIRST INCIDENCE	---	729 (T)	729 (T)	596	729 (T)	---	729 (T)	564
STATISTICAL TESTS								
LIFE TABLE	P=0.005 **	P=0.532	P=0.532	P=0.111	P=0.566	P=0.493N	P=0.708N	P=0.749N
POLY 3	P=0.119	P=0.512	P=0.511	P=0.157	P=0.572	P=0.501N	P=0.747N	P=0.755N
POLY 1.5	P=0.159	P=0.508	P=0.507	P=0.193	P=0.570	P=0.500N	P=0.752N	P=0.756N
POLY 6	P=0.075	P=0.519	P=0.514	P=0.112	P=0.571	P=0.502N	P=0.741N	P=0.757N
LOGISTIC REGRESSION	P=0.115	P=0.532	P=0.532	P=0.241	P=0.557	(e)	P=0.708N	P=0.745
COCH-ARM / FISHERS	P=0.214	P=0.500	P=0.500	P=0.247	P=0.563	P=0.500N	P=0.753N	P=0.753N

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Oral Mucosa Squamous Cell Carcinoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	2/50 (4%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/39.90	0/42.41	0/42.10	2/26.03	0/43.16	0/43.04	0/45.88	0/43.66
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	7.7%	0.0%	0.0%	0.0%	0.0%
TERMINAL (d)	0/23 (0%)	0/27 (0%)	0/27 (0%)	0/0 (0%)	0/30 (0%)	0/31 (0%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	---	---	---	596	---	---	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.006 **	(e)	(e)	P=0.111	(e)	(e)	(e)	(e)
POLY 3	P=0.025 *	(e)	(e)	P=0.157	(e)	(e)	(e)	(e)
POLY 1.5	P=0.031 *	(e)	(e)	P=0.193	(e)	(e)	(e)	(e)
POLY 6	P=0.020 *	(e)	(e)	P=0.112	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	P=0.072	(e)	(e)	P=0.241	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.042 *	(e)	(e)	P=0.247	(e)	(e)	(e)	(e)

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Pancreas								
Mixed Tumor Benign								
TUMOR RATES								
OVERALL (a)	2/44 (5%)	0/49 (0%)	0/50 (0%)	0/47 (0%)	0/47 (0%)	0/48 (0%)	0/48 (0%)	0/48 (0%)
POLY-3 RATE (b)	2/36.72	0/41.98	0/42.10	0/23.65	0/41.03	0/41.44	0/45.05	0/42.76
POLY-3 PERCENT (g)	5.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TERMINAL (d)	0/23 (0%)	0/27 (0%)	0/27 (0%)	0/0 (0%)	0/30 (0%)	0/31 (0%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	584	---	---	---	---	---	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.504N	P=0.214N	P=0.216N	P=0.578N	(e)	(e)	(e)	(e)
POLY 3	P=0.309N	P=0.207N	P=0.207N	P=0.346N	(e)	(e)	(e)	(e)
POLY 1.5	P=0.319N	P=0.208N	P=0.206N	P=0.280N	(e)	(e)	(e)	(e)
POLY 6	P=0.238N	P=0.207N	P=0.210N	P=0.466N	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	P=0.268N	P=0.228N	P=0.222N	P=0.236N	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.305N	P=0.221N	P=0.216N	P=0.231N	(e)	(e)	(e)	(e)

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Parathyroid Gland								
Adenoma								
TUMOR RATES								
OVERALL (a)	1/45 (2%)	2/48 (4%)	0/49 (0%)	0/50 (0%)	0/49 (0%)	0/47 (0%)	0/47 (0%)	0/49 (0%)
POLY-3 RATE (b)	1/36.39	2/40.78	0/41.10	0/25.17	0/42.42	0/40.75	0/43.81	0/43.15
POLY-3 PERCENT (g)	2.8%	4.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TERMINAL (d)	1/22 (5%)	1/26 (4%)	0/26 (0%)	0/0 (0%)	0/30 (0%)	0/30 (0%)	0/36 (0%)	0/31 (0%)
FIRST INCIDENCE	729 (T)	649	---	---	---	---	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.728N	P=0.548	P=0.467N	P=1.000N	(e)	(e)	(e)	(e)
POLY 3	P=0.270N	P=0.540	P=0.476N	P=0.571N	(e)	(e)	(e)	(e)
POLY 1.5	P=0.255N	P=0.533	P=0.478N	P=0.525N	(e)	(e)	(e)	(e)
POLY 6	P=0.249N	P=0.551	P=0.474N	P=0.641N	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	P=0.401N	P=0.540	(e)	(e)	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.226N	P=0.524	P=0.479N	P=0.474N	(e)	(e)	(e)	(e)

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Pituitary Gland: Pars Distalis or Unspecified Site Adenoma								
TUMOR RATES								
OVERALL (a)	15/47 (32%)	21/49 (43%)	18/50 (36%)	7/49 (14%)	20/48 (42%)	18/45 (40%)	20/50 (40%)	13/47 (28%)
POLY-3 RATE (b)	15/40.01	21/44.40	18/45.08	7/27.83	20/43.11	18/41.74	20/46.97	13/43.05
POLY-3 PERCENT (g)	37.5%	47.3%	39.9%	25.2%	46.4%	43.1%	42.6%	30.2%
TERMINAL (d)	9/23 (39%)	12/27 (44%)	9/27 (33%)	0/0 (0%)	15/30 (50%)	10/31 (32%)	16/38 (42%)	9/31 (29%)
FIRST INCIDENCE	582	417	562	431	413	542	598	577
STATISTICAL TESTS								
LIFE TABLE	P=0.011 *	P=0.342	P=0.504	P=0.002 **	P=0.099N	P=0.402N	P=0.273N	P=0.100N
POLY 3	P=0.100N	P=0.242	P=0.497	P=0.209N	P=0.068N	P=0.466N	P=0.439N	P=0.089N
POLY 1.5	P=0.024N*	P=0.221	P=0.468	P=0.091N	P=0.068N	P=0.487N	P=0.470N	P=0.094N
POLY 6	P=0.367N	P=0.272	P=0.532	P=0.535N	P=0.072N	P=0.430N	P=0.401N	P=0.084N
LOGISTIC REGRESSION	P=0.058N	P=0.214	P=0.441	P=0.451N	P=0.067N	P=0.509N	P=0.443N	P=0.094N
COCH-ARM / FISHERS	P=0.003N**	P=0.185	P=0.417	P=0.034N*	P=0.076N	P=0.519N	P=0.515N	P=0.111N

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Pituitary Gland: Pars Distalis or Unspecified Site Carcinoma or Adenoma								
TUMOR RATES								
OVERALL (a)	15/47 (32%)	21/49 (43%)	19/50 (38%)	7/49 (14%)	21/48 (44%)	18/45 (40%)	21/50 (42%)	13/47 (28%)
POLY-3 RATE (b)	15/40.01	21/44.40	19/45.67	7/27.83	21/43.69	18/41.74	21/47.42	13/43.05
POLY-3 PERCENT (g)	37.5%	47.3%	41.6%	25.2%	48.1%	43.1%	44.3%	30.2%
TERMINAL (d)	9/23 (39%)	12/27 (44%)	9/27 (33%)	0/0 (0%)	15/30 (50%)	10/31 (32%)	16/38 (42%)	9/31 (29%)
FIRST INCIDENCE	582	417	543	431	413	542	597	577
STATISTICAL TESTS								
LIFE TABLE	P=0.014 *	P=0.342	P=0.431	P=0.002 **	P=0.079N	P=0.332N	P=0.273N	P=0.072N
POLY 3	P=0.104N	P=0.242	P=0.433	P=0.209N	P=0.054N	P=0.404N	P=0.440N	P=0.065N
POLY 1.5	P=0.025N*	P=0.221	P=0.397	P=0.091N	P=0.053N	P=0.417N	P=0.469N	P=0.067N
POLY 6	P=0.384N	P=0.272	P=0.477	P=0.535N	P=0.060N	P=0.378N	P=0.402N	P=0.064N
LOGISTIC REGRESSION	P=0.043N*	P=0.214	P=0.356	P=0.451N	P=0.052N	P=0.430N	P=0.471N	P=0.067N
COCH-ARM / FISHERS	P=0.003N**	P=0.185	P=0.340	P=0.034N*	P=0.057N	P=0.438N	P=0.512N	P=0.077N

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Prostate								
Adenoma								
TUMOR RATES								
OVERALL (a)	1/48 (2%)	1/50 (2%)	2/50 (4%)	0/50 (0%)				
POLY-3 RATE (b)	1/38.81	1/42.41	2/42.10	0/25.17				
POLY-3 PERCENT (g)	2.6%	2.4%	4.8%	0.0%				
TERMINAL (d)	0/23 (0%)	1/27 (4%)	2/27 (7%)	0/0 (0%)				
FIRST INCIDENCE	676	729 (T)	729 (T)	---				
STATISTICAL TESTS								
LIFE TABLE	P=0.860	P=0.726N	P=0.541	P=0.970N				
POLY 3	P=0.471N	P=0.741N	P=0.528	P=0.582N				
POLY 1.5	P=0.394N	P=0.744N	P=0.525	P=0.537N				
POLY 6	P=0.588N	P=0.736N	P=0.530	P=0.651N				
LOGISTIC REGRESSION	P=0.811N	P=0.741N	P=0.535	P=0.722N				
COCH-ARM / FISHERS	P=0.312N	P=0.742N	P=0.515	P=0.490N				

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Salivary Glands								
Sarcoma								
TUMOR RATES								
OVERALL (a)	0/49 (0%)	1/49 (2%)	3/50 (6%)	0/50 (0%)	0/49 (0%)	1/50 (2%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/38.94	1/41.82	3/42.48	0/25.17	0/42.42	1/43.04	0/45.88	0/43.66
POLY-3 PERCENT (g)	0.0%	2.4%	7.1%	0.0%	0.0%	2.3%	0.0%	0.0%
TERMINAL (d)	0/23 (0%)	0/27 (0%)	1/27 (4%)	0/0 (0%)	0/30 (0%)	1/31 (3%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	---	614	627	---	---	729 (T)	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.664	P=0.510	P=0.148	(e)	P=0.612N	P=0.507	(e)	(e)
POLY 3	P=0.646N	P=0.514	P=0.134	(e)	P=0.611N	P=0.503	(e)	(e)
POLY 1.5	P=0.539N	P=0.509	P=0.130	(e)	P=0.608N	P=0.504	(e)	(e)
POLY 6	P=0.388	P=0.522	P=0.139	(e)	P=0.615N	P=0.501	(e)	(e)
LOGISTIC REGRESSION	P=0.552N	P=0.470	P=0.132	(e)	(e)	P=0.507	(e)	(e)
COCH-ARM / FISHERS	P=0.431N	P=0.500	P=0.125	(e)	P=0.607N	P=0.505	(e)	(e)

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Salivary Glands								
Schwannoma Malignant								
TUMOR RATES								
OVERALL (a)	0/49 (0%)	2/49 (4%)	0/50 (0%)	0/50 (0%)	0/49 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/38.94	2/42.56	0/42.10	0/25.17	0/42.42	0/43.04	0/45.88	0/43.66
POLY-3 PERCENT (g)	0.0%	4.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TERMINAL (d)	0/23 (0%)	0/27 (0%)	0/27 (0%)	0/0 (0%)	0/30 (0%)	0/31 (0%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	---	505	---	---	---	---	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.452N	P=0.250	(e)	(e)	(e)	(e)	(e)	(e)
POLY 3	P=0.416N	P=0.257	(e)	(e)	(e)	(e)	(e)	(e)
POLY 1.5	P=0.407N	P=0.250	(e)	(e)	(e)	(e)	(e)	(e)
POLY 6	P=0.387N	P=0.268	(e)	(e)	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	P=0.285N	P=0.146	(e)	(e)	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.386N	P=0.247	(e)	(e)	(e)	(e)	(e)	(e)

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Skin								
Basal or Sq. Cell Carcinoma, Carcinoma, Basosq. Tumor (M or B), Basal Cell Adenoma, Adenoma, Papilloma, Sq Papilloma, Keratoacanthoma, Trichoepitheliom								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	1/50 (2%)	5/50 (10%)	4/50 (8%)	0/50 (0%)	0/50 (0%)	1/50 (2%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	1/39.90	5/42.97	4/42.36	0/25.17	0/43.16	1/43.04	0/45.88	0/43.66
POLY-3 PERCENT (g)	2.5%	11.6%	9.4%	0.0%	0.0%	2.3%	0.0%	0.0%
TERMINAL (d)	1/23 (4%)	4/27 (15%)	2/27 (7%)	0/0 (0%)	0/30 (0%)	1/31 (3%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	729 (T)	554	674	---	---	729 (T)	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.759	P=0.134	P=0.231	P=1.000N	P=0.612N	P=0.507	(e)	(e)
POLY 3	P=0.262N	P=0.118	P=0.196	P=0.588N	P=0.612N	P=0.499	(e)	(e)
POLY 1.5	P=0.167N	P=0.112	P=0.191	P=0.544N	P=0.610N	P=0.500	(e)	(e)
POLY 6	P=0.453N	P=0.128	P=0.203	P=0.654N	P=0.616N	P=0.498	(e)	(e)
LOGISTIC REGRESSION	P=0.395N	P=0.117	P=0.205	(e)	(e)	P=0.507	(e)	(e)
COCH-ARM / FISHERS	P=0.097N	P=0.102	P=0.181	P=0.500N	P=0.608N	P=0.500	(e)	(e)

E 02

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Skin Fibroma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	6/50 (12%)	5/50 (10%)	3/50 (6%)	1/50 (2%)	1/50 (2%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	6/40.71	5/42.95	3/42.15	1/25.33	1/43.16	0/43.04	0/45.88	0/43.66
POLY-3 PERCENT (g)	14.7%	11.6%	7.1%	4.0%	2.3%	0.0%	0.0%	0.0%
TERMINAL (d)	3/23 (13%)	4/27 (15%)	2/27 (7%)	0/0 (0%)	1/30 (3%)	0/31 (0%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	569	564	718	690	729 (T)	---	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.680	P=0.409N	P=0.180N	P=0.481	P=0.550N	P=0.493N	P=0.453N	P=0.493N
POLY 3	P=0.143N	P=0.462N	P=0.223N	P=0.175N	P=0.551N	P=0.501N	P=0.488N	P=0.498N
POLY 1.5	P=0.091N	P=0.475N	P=0.228N	P=0.102N	P=0.550N	P=0.500N	P=0.492N	P=0.497N
POLY 6	P=0.218N	P=0.444N	P=0.220N	P=0.361N	P=0.553N	P=0.502N	P=0.483N	P=0.500N
LOGISTIC REGRESSION	P=0.242N	P=0.467N	P=0.212N	P=0.450N	P=0.550N	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.047N*	P=0.500N	P=0.243N	P=0.056N	P=0.547N	P=0.500N	P=0.500N	P=0.500N

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Skin Fibroma, Fibrosarcoma, Sarcoma, Myxoma, Myxosarcoma, or Fibrous Histiocytoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	9/50 (18%)	5/50 (10%)	7/50 (14%)	1/50 (2%)	1/50 (2%)	2/50 (4%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)	9/41.54	5/42.95	7/42.15	1/25.33	1/43.16	2/43.21	2/46.12	0/43.66
POLY-3 PERCENT (g)	21.7%	11.6%	16.6%	4.0%	2.3%	4.6%	4.3%	0.0%
TERMINAL (d)	3/23 (13%)	4/27 (15%)	6/27 (22%)	0/0 (0%)	1/30 (3%)	1/31 (3%)	1/38 (3%)	0/31 (0%)
FIRST INCIDENCE	511	564	718	690	729 (T)	683	665	---
STATISTICAL TESTS								
LIFE TABLE	P=0.627	P=0.138N	P=0.283N	P=0.717	P=0.237N	P=0.498	P=0.566	P=0.493N
POLY 3	P=0.107N	P=0.171N	P=0.378N	P=0.058N	P=0.232N	P=0.500	P=0.523	P=0.498N
POLY 1.5	P=0.047N*	P=0.177N	P=0.378N	P=0.023N*	P=0.231N	P=0.501	P=0.514	P=0.497N
POLY 6	P=0.258N	P=0.161N	P=0.385N	P=0.205N	P=0.237N	P=0.500	P=0.534	P=0.500N
LOGISTIC REGRESSION	P=0.136N	P=0.180N	P=0.348N	P=0.068N	P=0.231N	P=0.498	P=0.516	(e)
COCH-ARM / FISHERS	P=0.016N*	P=0.194N	P=0.393N	P=0.008N**	P=0.233N	P=0.500	P=0.500	P=0.500N

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Skin Keratoacanthoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	1/50 (2%)	3/50 (6%)	4/50 (8%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	1/39.90	3/42.97	4/42.36	0/25.17	0/43.16	0/43.04	0/45.88	0/43.66
POLY-3 PERCENT (g)	2.5%	7.0%	9.4%	0.0%	0.0%	0.0%	0.0%	0.0%
TERMINAL (d)	1/23 (4%)	2/27 (7%)	2/27 (7%)	0/0 (0%)	0/30 (0%)	0/31 (0%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	729 (T)	554	674	---	---	---	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.704	P=0.347	P=0.231	P=1.000	(e)	(e)	(e)	(e)
POLY 3	P=0.378N	P=0.332	P=0.196	P=0.588N	(e)	(e)	(e)	(e)
POLY 1.5	P=0.264N	P=0.322	P=0.191	P=0.544N	(e)	(e)	(e)	(e)
POLY 6	P=0.578	P=0.347	P=0.203	P=0.654N	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	P=0.448N	P=0.315	P=0.205	(e)	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.168N	P=0.309	P=0.181	P=0.500N	(e)	(e)	(e)	(e)

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Skin Sarcoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	3/50 (6%)	0/50 (0%)	5/50 (10%)	0/50 (0%)	0/50 (0%)	2/50 (4%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)	3/40.73	0/42.41	5/42.15	0/25.17	0/43.16	2/43.21	2/46.12	0/43.66
POLY-3 PERCENT (g)	7.4%	0.0%	11.9%	0.0%	0.0%	4.6%	4.3%	0.0%
TERMINAL (d)	0/23 (0%)	0/27 (0%)	4/27 (15%)	0/0 (0%)	0/30 (0%)	1/31 (3%)	1/38 (3%)	0/31 (0%)
FIRST INCIDENCE	511	---	718	---	---	683	665	---
STATISTICAL TESTS								
LIFE TABLE	P=0.658	P=0.101N	P=0.444	P=0.537N	P=0.352N	P=0.234	P=0.277	(e)
POLY 3	P=0.425N	P=0.111N	P=0.374	P=0.228N	P=0.343N	P=0.237	P=0.252	(e)
POLY 1.5	P=0.293N	P=0.114N	P=0.371	P=0.166N	P=0.342N	P=0.238	P=0.246	(e)
POLY 6	P=0.504	P=0.107N	P=0.377	P=0.357N	P=0.348N	P=0.237	P=0.259	(e)
LOGISTIC REGRESSION	P=0.433N	P=0.130N	P=0.382	P=0.127N	P=0.344N	P=0.237	P=0.239	(e)
COCH-ARM / FISHERS	P=0.183N	P=0.121N	P=0.357	P=0.121N	P=0.346N	P=0.247	P=0.247	(e)

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Skin Squamous Cell Carcinoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	0/50 (0%)	2/50 (4%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/39.90	2/42.41	0/42.10	0/25.17	0/43.16	0/43.04	0/45.88	0/43.66
POLY-3 PERCENT (g)	0.0%	4.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TERMINAL (d)	0/23 (0%)	2/27 (7%)	0/27 (0%)	0/0 (0%)	0/30 (0%)	0/31 (0%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	---	729 (T)	---	---	---	---	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.970N	P=0.274	(e)	(e)	(e)	(e)	(e)	(e)
POLY 3	P=0.423N	P=0.251	(e)	(e)	(e)	(e)	(e)	(e)
POLY 1.5	P=0.413N	P=0.246	(e)	(e)	(e)	(e)	(e)	(e)
POLY 6	P=0.395N	P=0.258	(e)	(e)	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	(e)	P=0.274	(e)	(e)	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.390N	P=0.247	(e)	(e)	(e)	(e)	(e)	(e)

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Skin Squamous Cell Papilloma, Papilloma, Squamous Cell Carcinoma or Keratoacanthoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	1/50 (2%)	5/50 (10%)	4/50 (8%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	1/39.90	5/42.97	4/42.36	0/25.17	0/43.16	0/43.04	0/45.88	0/43.66
POLY-3 PERCENT (g)	2.5%	11.6%	9.4%	0.0%	0.0%	0.0%	0.0%	0.0%
TERMINAL (d)	1/23 (4%)	4/27 (15%)	2/27 (7%)	0/0 (0%)	0/30 (0%)	0/31 (0%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	729 (T)	554	674	---	---	---	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.759	P=0.134	P=0.231	P=1.000N	(e)	(e)	(e)	(e)
POLY 3	P=0.262N	P=0.118	P=0.196	P=0.588N	(e)	(e)	(e)	(e)
POLY 1.5	P=0.167N	P=0.112	P=0.191	P=0.544N	(e)	(e)	(e)	(e)
POLY 6	P=0.453N	P=0.128	P=0.203	P=0.654N	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	P=0.395N	P=0.117	P=0.205	(e)	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.097N	P=0.102	P=0.181	P=0.500N	(e)	(e)	(e)	(e)

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Stomach, Forestomach Squamous Cell Carcinoma or Papilloma Squamous								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	2/50 (4%)	1/50 (2%)	0/50 (0%)	1/50 (2%)
POLY-3 RATE (b)	0/39.90	0/42.41	0/42.10	0/25.17	2/44.12	1/43.04	0/45.88	1/43.66
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	0.0%	4.5%	2.3%	0.0%	2.3%
TERMINAL (d)	0/23 (0%)	0/27 (0%)	0/27 (0%)	0/0 (0%)	1/30 (3%)	1/31 (3%)	0/38 (0%)	1/31 (3%)
FIRST INCIDENCE	---	---	---	---	247	729 (T)	---	729 (T)
STATISTICAL TESTS								
LIFE TABLE	(e)	(e)	(e)	(e)	P=0.566N	P=0.492N	P=0.214N	P=0.492N
POLY 3	(e)	(e)	(e)	(e)	P=0.566N	P=0.509N	P=0.229N	P=0.504N
POLY 1.5	(e)	(e)	(e)	(e)	P=0.563N	P=0.506N	P=0.233N	P=0.501N
POLY 6	(e)	(e)	(e)	(e)	P=0.570N	P=0.511N	P=0.223N	P=0.508N
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)	P=0.631N	P=0.549N	P=0.308N	P=0.647N
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	P=0.563N	P=0.500N	P=0.247N	P=0.500N

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Stomach, Forestomach Squamous Cell Papilloma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	2/50 (4%)	1/50 (2%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/39.90	0/42.41	0/42.10	0/25.17	2/44.12	1/43.04	0/45.88	0/43.66
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	0.0%	4.5%	2.3%	0.0%	0.0%
TERMINAL (d)	0/23 (0%)	0/27 (0%)	0/27 (0%)	0/0 (0%)	1/30 (3%)	1/31 (3%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	---	---	---	---	247	729 (T)	---	---
STATISTICAL TESTS								
LIFE TABLE	(e)	(e)	(e)	(e)	P=0.211N	P=0.492N	P=0.214N	P=0.236N
POLY 3	(e)	(e)	(e)	(e)	P=0.214N	P=0.509N	P=0.229N	P=0.239N
POLY 1.5	(e)	(e)	(e)	(e)	P=0.213N	P=0.506N	P=0.233N	P=0.238N
POLY 6	(e)	(e)	(e)	(e)	P=0.217N	P=0.511N	P=0.223N	P=0.242N
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)	P=0.266N	P=0.549N	P=0.308N	P=0.414N
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	P=0.212N	P=0.500N	P=0.247N	P=0.247N

E 06

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Testes								
Adenoma								
TUMOR RATES								
OVERALL (a)	45/50 (90%)	45/50 (90%)	43/50 (86%)	48/50 (96%)				
POLY-3 RATE (b)	45/46.66	45/47.76	43/46.59	48/48.38				
POLY-3 PERCENT (g)	96.5%	94.2%	92.3%	99.2%				
TERMINAL (d)	23/23 (100%)	25/27 (93%)	27/27 (100%)	0/0 (0%)				
FIRST INCIDENCE	511	528	562	398				
STATISTICAL TESTS								
LIFE TABLE	P<0.001 **	P=0.221N	P=0.151N	P<0.001 **				
POLY 3	P=0.145	P=0.488N	P=0.297N	P=0.385				
POLY 1.5	P=0.140	P=0.517N	P=0.278N	P=0.310				
POLY 6	P=0.168	P=0.474N	P=0.477N	P=0.496				
LOGISTIC REGRESSION	P=0.002 **	P=0.429N	P=0.101N	P=0.038 *				
COCH-ARM / FISHERS	P=0.139	P=0.630N	P=0.380N	P=0.218				

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Thyroid Gland: C-Cell								
Adenoma								
TUMOR RATES								
OVERALL (a)	4/42 (10%)	4/47 (9%)	6/48 (13%)	0/47 (0%)	6/45 (13%)	8/45 (18%)	3/46 (7%)	3/46 (7%)
POLY-3 RATE (b)	4/36.69	4/40.42	6/42.61	0/23.82	6/39.85	8/39.85	3/44.27	3/41.30
POLY-3 PERCENT (g)	10.9%	9.9%	14.1%	0.0%	15.1%	20.1%	6.8%	7.3%
TERMINAL (d)	1/23 (4%)	2/27 (7%)	3/27 (11%)	0/0 (0%)	5/30 (17%)	6/31 (19%)	2/38 (5%)	1/31 (3%)
FIRST INCIDENCE	568	649	562	---	626	721	598	681
STATISTICAL TESTS								
LIFE TABLE	P=0.544N	P=0.570N	P=0.422	P=0.461N	P=0.129N	P=0.411	P=0.157N	P=0.237N
POLY 3	P=0.175N	P=0.590N	P=0.466	P=0.138N	P=0.117N	P=0.385	P=0.192N	P=0.223N
POLY 1.5	P=0.090N	P=0.587N	P=0.463	P=0.083N	P=0.115N	P=0.389	P=0.204N	P=0.222N
POLY 6	P=0.376N	P=0.589N	P=0.467	P=0.275N	P=0.122N	P=0.377	P=0.180N	P=0.228N
LOGISTIC REGRESSION	P=0.043N*	P=0.581N	P=0.427	P=0.054N	P=0.115N	P=0.387	P=0.222N	P=0.223N
COCH-ARM / FISHERS	P=0.036N*	P=0.578N	P=0.458	P=0.046N*	P=0.117N	P=0.386	P=0.231N	P=0.231N

E 07

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Thyroid Gland: C-Cell Carcinoma								
TUMOR RATES								
OVERALL (a)	2/42 (5%)	3/47 (6%)	2/48 (4%)	0/47 (0%)	1/45 (2%)	1/45 (2%)	2/46 (4%)	1/46 (2%)
POLY-3 RATE (b)	2/36.20	3/40.10	2/41.39	0/23.82	1/39.48	1/39.80	2/43.82	1/41.10
POLY-3 PERCENT (g)	5.5%	7.5%	4.8%	0.0%	2.5%	2.5%	4.6%	2.4%
TERMINAL (d)	1/23 (4%)	2/27 (7%)	1/27 (4%)	0/0 (0%)	1/30 (3%)	1/31 (3%)	2/38 (5%)	1/31 (3%)
FIRST INCIDENCE	569	717	726	---	729 (T)	729 (T)	729 (T)	729 (T)
STATISTICAL TESTS								
LIFE TABLE	P=0.617N	P=0.566	P=0.637N	P=0.574N	P=0.639N	P=0.755N	P=0.583	P=0.755N
POLY 3	P=0.222N	P=0.547	P=0.646N	P=0.341N	P=0.622N	P=0.759N	P=0.536	P=0.752N
POLY 1.5	P=0.164N	P=0.548	P=0.644N	P=0.274N	P=0.620N	P=0.759N	P=0.527	P=0.752N
POLY 6	P=0.307N	P=0.551	P=0.649N	P=0.460N	P=0.626N	P=0.760N	P=0.546	P=0.754N
LOGISTIC REGRESSION	P=0.295N	P=0.552	P=0.646N	P=0.233N	P=0.639N	P=0.755N	P=0.583	P=0.755N
COCH-ARM / FISHERS	P=0.106N	P=0.554	P=0.640N	P=0.220N	P=0.625N	P=0.753N	P=0.508	P=0.747N

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Thyroid Gland: C-Cell Carcinoma or Adenoma								
TUMOR RATES								
OVERALL (a)	6/42 (14%)	7/47 (15%)	8/48 (17%)	0/47 (0%)	7/45 (16%)	9/45 (20%)	5/46 (11%)	4/46 (9%)
POLY-3 RATE (b)	6/37.21	7/40.47	8/42.62	0/23.82	7/39.85	9/39.85	5/44.27	4/41.30
POLY-3 PERCENT (g)	16.1%	17.3%	18.8%	0.0%	17.6%	22.6%	11.3%	9.7%
TERMINAL (d)	2/23 (9%)	4/27 (15%)	4/27 (15%)	0/0 (0%)	6/30 (20%)	7/31 (23%)	4/38 (11%)	2/31 (7%)
FIRST INCIDENCE	568	649	562	---	626	721	598	681
STATISTICAL TESTS								
LIFE TABLE	P=0.426N	P=0.598	P=0.466	P=0.277N	P=0.143N	P=0.419	P=0.244N	P=0.252N
POLY 3	P=0.077N	P=0.566	P=0.494	P=0.059N	P=0.128N	P=0.390	P=0.307N	P=0.238N
POLY 1.5	P=0.027N*	P=0.573	P=0.496	P=0.026N*	P=0.126N	P=0.395	P=0.325N	P=0.238N
POLY 6	P=0.246N	P=0.563	P=0.489	P=0.176N	P=0.133N	P=0.382	P=0.289N	P=0.244N
LOGISTIC REGRESSION	P=0.017N*	P=0.587	P=0.471	P=0.010N*	P=0.127N	P=0.392	P=0.330N	P=0.240N
COCH-ARM / FISHERS	P=0.007N**	P=0.588	P=0.494	P=0.009N**	P=0.129N	P=0.392	P=0.363N	P=0.248N

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Uterus Polyp Stromal								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)					8/50 (16%)	12/50 (24%)	6/50 (12%)	12/50 (24%)
POLY-3 RATE (b)					8/43.19	12/44.68	6/46.50	12/45.31
POLY-3 PERCENT (g)					18.5%	26.9%	12.9%	26.5%
TERMINAL (d)					6/30 (20%)	7/31 (23%)	4/38 (11%)	7/31 (23%)
FIRST INCIDENCE					724	585	600	536
STATISTICAL TESTS								
LIFE TABLE					P=0.258	P=0.256	P=0.245N	P=0.259
POLY 3					P=0.281	P=0.249	P=0.330N	P=0.260
POLY 1.5					P=0.279	P=0.240	P=0.352N	P=0.251
POLY 6					P=0.277	P=0.263	P=0.303N	P=0.267
LOGISTIC REGRESSION					P=0.267	P=0.223	P=0.327N	P=0.234
COCH-ARM / FISHERS					P=0.262	P=0.227	P=0.387N	P=0.227

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
Uterus Sarcoma Stromal								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)					1/50 (2%)	0/50 (0%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)					1/43.16	0/43.04	2/46.31	0/43.66
POLY-3 PERCENT (g)					2.3%	0.0%	4.3%	0.0%
TERMINAL (d)					1/30 (3%)	0/31 (0%)	1/38 (3%)	0/31 (0%)
FIRST INCIDENCE					729 (T)	---	604	---
STATISTICAL TESTS								
LIFE TABLE					P=0.441N	P=0.493N	P=0.562	P=0.493N
POLY 3					P=0.432N	P=0.501N	P=0.524	P=0.498N
POLY 1.5					P=0.432N	P=0.500N	P=0.515	P=0.497N
POLY 6					P=0.435N	P=0.502N	P=0.536	P=0.500N
LOGISTIC REGRESSION					P=0.437N	(e)	P=0.495	(e)
COCH-ARM / FISHERS					P=0.437N	P=0.500N	P=0.500	P=0.500N

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Dose	0.0%	0.25%	Males 1.0%	4.0%	0.0%	0.25%	Females 1.0%	4.0%
Uterus								
Sarcoma Stromal or Polyp Stromal								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)					9/50 (18%)	12/50 (24%)	8/50 (16%)	12/50 (24%)
POLY-3 RATE (b)					9/43.19	12/44.68	8/46.93	12/45.31
POLY-3 PERCENT (g)					20.8%	26.9%	17.1%	26.5%
TERMINAL (d)					7/30 (23%)	7/31 (23%)	5/38 (13%)	7/31 (23%)
FIRST INCIDENCE					724	585	600	536
STATISTICAL TESTS								
LIFE TABLE					P=0.336	P=0.342	P=0.328N	P=0.346
POLY 3					P=0.367	P=0.340	P=0.425N	P=0.354
POLY 1.5					P=0.364	P=0.330	P=0.455N	P=0.342
POLY 6					P=0.362	P=0.358	P=0.388N	P=0.363
LOGISTIC REGRESSION					P=0.348	P=0.307	P=0.448N	P=0.320
COCH-ARM / FISHERS					P=0.343	P=0.312	P=0.500N	P=0.312

Dose	0.0%	0.25%	Males 1.0%	4.0%	0.0%	0.25%	Females 1.0%	4.0%
Zymbal's Gland								
Carcinoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	3/50 (6%)	2/50 (4%)	1/50 (2%)	1/50 (2%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	3/41.42	2/43.08	1/42.17	1/25.96	0/43.16	0/43.04	0/45.88	0/43.66
POLY-3 PERCENT (g)	7.2%	4.6%	2.4%	3.9%	0.0%	0.0%	0.0%	0.0%
TERMINAL (d)	0/23 (0%)	0/27 (0%)	0/27 (0%)	0/0 (0%)	0/30 (0%)	0/31 (0%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	376	558	712	438	---	---	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.601N	P=0.460N	P=0.272N	P=0.533N	(e)	(e)	(e)	(e)
POLY 3	P=0.423N	P=0.482N	P=0.298N	P=0.484N	(e)	(e)	(e)	(e)
POLY 1.5	P=0.371N	P=0.489N	P=0.300N	P=0.392N	(e)	(e)	(e)	(e)
POLY 6	P=0.456N	P=0.470N	P=0.297N	P=0.632N	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	P=0.147N	P=0.615N	P=0.383N	P=0.180N	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.299N	P=0.500N	P=0.309N	P=0.309N	(e)	(e)	(e)	(e)

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
All Organs								
Hemangiosarcoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	0/50 (0%)	1/50 (2%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	2/50 (4%)
POLY-3 RATE (b)	0/39.90	1/42.42	0/42.10	0/25.17	0/43.16	0/43.04	0/45.88	2/44.11
POLY-3 PERCENT (g)	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	4.5%
TERMINAL (d)	0/23 (0%)	0/27 (0%)	0/27 (0%)	0/0 (0%)	0/30 (0%)	0/31 (0%)	0/38 (0%)	1/31 (3%)
FIRST INCIDENCE	---	726	---	---	---	---	---	597
STATISTICAL TESTS								
LIFE TABLE	P=0.999N	P=0.546	(e)	(e)	P=0.040 *	(e)	(e)	P=0.246
POLY 3	P=0.605N	P=0.512	(e)	(e)	P=0.042 *	(e)	(e)	P=0.242
POLY 1.5	P=0.614N	P=0.508	(e)	(e)	P=0.042 *	(e)	(e)	P=0.242
POLY 6	P=0.541N	P=0.519	(e)	(e)	P=0.042 *	(e)	(e)	P=0.241
LOGISTIC REGRESSION	P=0.995N	P=0.543	(e)	(e)	P=0.038 *	(e)	(e)	P=0.224
COCH-ARM / FISHERS	P=0.608N	P=0.500	(e)	(e)	P=0.042 *	(e)	(e)	P=0.247

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
All Organs								
Histiocytic Sarcoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)	0/39.90	0/42.41	0/42.10	0/25.17	0/43.16	0/43.04	2/46.32	0/43.66
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%
TERMINAL (d)	0/23 (0%)	0/27 (0%)	0/27 (0%)	0/0 (0%)	0/30 (0%)	0/31 (0%)	1/38 (3%)	0/31 (0%)
FIRST INCIDENCE	---	---	---	---	---	---	600	---
STATISTICAL TESTS								
LIFE TABLE	(e)	(e)	(e)	(e)	P=0.659N	(e)	P=0.276	(e)
POLY 3	(e)	(e)	(e)	(e)	P=0.646N	(e)	P=0.253	(e)
POLY 1.5	(e)	(e)	(e)	(e)	P=0.647N	(e)	P=0.247	(e)
POLY 6	(e)	(e)	(e)	(e)	P=0.649N	(e)	P=0.261	(e)
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)	P=0.662N	(e)	P=0.220	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	P=0.652N	(e)	P=0.247	(e)

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
All Organs Leukemia: Lymphocytic, Monocytic, Mononuclear, or Undifferentiated								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	16/50 (32%)	20/50 (40%)	22/50 (44%)	5/50 (10%)	10/50 (20%)	10/50 (20%)	4/50 (8%)	13/50 (26%)
POLY-3 RATE (b)	16/42.81	20/44.92	22/44.59	5/27.46	10/44.54	10/46.53	4/47.17	13/46.05
POLY-3 PERCENT (g)	37.4%	44.5%	49.3%	18.2%	22.5%	21.5%	8.5%	28.2%
TERMINAL (d)	6/23 (26%)	8/27 (30%)	12/27 (44%)	0/0 (0%)	5/30 (17%)	4/31 (13%)	2/38 (5%)	4/31 (13%)
FIRST INCIDENCE	564	550	584	408	543	417	295	597
STATISTICAL TESTS								
LIFE TABLE	P=0.043 *	P=0.467	P=0.307	P=0.154	P=0.175	P=0.577N	P=0.046N*	P=0.335
POLY 3	P=0.055N	P=0.320	P=0.176	P=0.075N	P=0.166	P=0.556N	P=0.056N	P=0.348
POLY 1.5	P=0.007N**	P=0.301	P=0.171	P=0.022N*	P=0.167	P=0.568N	P=0.061N	P=0.341
POLY 6	P=0.384N	P=0.354	P=0.179	P=0.320N	P=0.166	P=0.548N	P=0.052N	P=0.356
LOGISTIC REGRESSION	P=0.022N*	P=0.305	P=0.184	P=0.042N*	P=0.131	P=0.590	P=0.095N	P=0.310
COCH-ARM / FISHERS	P<0.001N**	P=0.266	P=0.151	P=0.006N**	P=0.168	P=0.598N	P=0.074N	P=0.318

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
All Organs Mesothelioma: Benign, Malignant, NOS								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	6/50 (12%)	2/50 (4%)	2/50 (4%)	2/50 (4%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	6/41.07	2/43.51	2/42.10	2/25.99	0/43.16	0/43.04	0/45.88	0/43.66
POLY-3 PERCENT (g)	14.6%	4.6%	4.8%	7.7%	0.0%	0.0%	0.0%	0.0%
TERMINAL (d)	2/23 (9%)	0/27 (0%)	2/27 (7%)	0/0 (0%)	0/30 (0%)	0/31 (0%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	569	554	729 (T)	610	---	---	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.432	P=0.120N	P=0.111N	P=0.396	(e)	(e)	(e)	(e)
POLY 3	P=0.412N	P=0.113N	P=0.123N	P=0.328N	(e)	(e)	(e)	(e)
POLY 1.5	P=0.338N	P=0.120N	P=0.125N	P=0.217N	(e)	(e)	(e)	(e)
POLY 6	P=0.473N	P=0.105N	P=0.123N	P=0.546N	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	P=0.241N	P=0.151N	P=0.123N	P=0.315N	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.242N	P=0.134N	P=0.134N	P=0.134N	(e)	(e)	(e)	(e)

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
All Organs								
Mesothelioma: Malignant								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	6/50 (12%)	2/50 (4%)	2/50 (4%)	2/50 (4%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	6/41.07	2/43.51	2/42.10	2/25.99	0/43.16	0/43.04	0/45.88	0/43.66
POLY-3 PERCENT (g)	14.6%	4.6%	4.8%	7.7%	0.0%	0.0%	0.0%	0.0%
TERMINAL (d)	2/23 (9%)	0/27 (0%)	2/27 (7%)	0/0 (0%)	0/30 (0%)	0/31 (0%)	0/38 (0%)	0/31 (0%)
FIRST INCIDENCE	569	554	729 (T)	610	---	---	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.432	P=0.120N	P=0.111N	P=0.396	(e)	(e)	(e)	(e)
POLY 3	P=0.412N	P=0.113N	P=0.123N	P=0.328N	(e)	(e)	(e)	(e)
POLY 1.5	P=0.338N	P=0.120N	P=0.125N	P=0.217N	(e)	(e)	(e)	(e)
POLY 6	P=0.473N	P=0.105N	P=0.123N	P=0.546N	(e)	(e)	(e)	(e)
LOCISTIC REGRESSION	P=0.241N	P=0.151N	P=0.123N	P=0.315N	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.242N	P=0.134N	P=0.134N	P=0.134N	(e)	(e)	(e)	(e)

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
All Organs								
Benign Tumors								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	47/50 (94%)	49/50 (98%)	50/50 (100%)	49/50 (98%)	44/50 (88%)	45/50 (90%)	40/50 (80%)	36/50 (72%)
POLY-3 RATE (b)	47/47.27	49/49.25	50/50.00	49/49.18	44/47.54	45/47.12	40/47.71	36/46.69
POLY-3 PERCENT (g)	99.4%	99.5%	100.0%	99.6%	92.6%	95.5%	83.8%	77.1%
TERMINAL (d)	23/23 (100%)	27/27 (100%)	27/27 (100%)	0/0 (0%)	30/30 (100%)	30/31 (97%)	33/38 (87%)	25/31 (81%)
FIRST INCIDENCE	511	417	340	398	247	542	597	536
STATISTICAL TESTS								
LIFE TABLE	P<0.001 **	P=0.306N	P=0.405N	P<0.001 **	P=0.061N	P=0.562	P=0.012N*	P=0.080N
POLY 3	P=0.993	P=0.999	P=1.000	P=1.000	P=0.003N**	P=0.417	P=0.137N	P=0.021N*
POLY 1.5	P=0.763	P=0.792	P=0.577	P=0.778	P=0.004N**	P=0.425	P=0.174N	P=0.027N*
POLY 6	P=1.000	P=1.000N	P=1.000	P=1.000N	P=0.003N**	P=0.507	P=0.095N	P=0.019N*
LOGISTIC REGRESSION	P=0.376	P=0.895	P=0.274	P=0.980	P=0.004N**	P=0.516	P=0.104N	P=0.022N*
COCH-ARM / FISHERS	P=0.409	P=0.309	P=0.121	P=0.309	P=0.010N*	P=0.500	P=0.207N	P=0.039N*

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
All Organs Malignant Tumors								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	35/50 (70%)	34/50 (68%)	35/50 (70%)	14/50 (28%)	25/50 (50%)	24/50 (48%)	20/50 (40%)	21/50 (42%)
POLY-3 RATE (b)	35/48.06	34/49.10	35/47.55	14/31.54	25/46.20	24/47.47	20/49.30	21/47.92
POLY-3 PERCENT (g)	72.8%	69.2%	73.6%	44.4%	54.1%	50.6%	40.6%	43.8%
TERMINAL (d)	12/23 (52%)	14/27 (52%)	18/27 (67%)	0/0 (0%)	15/30 (50%)	13/31 (42%)	12/38 (32%)	8/31 (26%)
FIRST INCIDENCE	323	456	340	408	540	417	295	533
STATISTICAL TESTS								
LIFE TABLE	P=0.014 *	P=0.287N	P=0.344N	P=0.027 *	P=0.326N	P=0.468N	P=0.085N	P=0.294N
POLY 3	P=0.007N**	P=0.434N	P=0.559	P=0.006N**	P=0.245N	P=0.445N	P=0.130N	P=0.212N
POLY 1.5	P<0.001N**	P=0.455N	P=0.587	P<0.001N**	P=0.253N	P=0.458N	P=0.154N	P=0.229N
POLY 6	P=0.238N	P=0.405N	P=0.505	P=0.171N	P=0.237N	P=0.436N	P=0.107N	P=0.197N
LOGISTIC REGRESSION	P<0.001N**	P=0.565N	P=0.561	P<0.001N**	P=0.295N	P=0.501N	.244N	P=0.284N
COCH-ARM / FISHERS	P<0.001N**	P=0.500N	P=0.586N	P<0.001N**	P=0.277N	P=0.500N	.211N	P=0.274N

Dose	Males 0.0%	0.25%	1.0%	4.0%	Females 0.0%	0.25%	1.0%	4.0%
All Organs Malignant and Benign Tumors								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	49/50 (98%)	50/50 (100%)	50/50 (100%)	50/50 (100%)	50/50 (100%)	49/50 (98%)	46/50 (92%)	46/50 (92%)
POLY-3 RATE (b)	49/49.05	50/50.00	50/50.00	50/50.00	50/50.00	49/49.20	46/50.00	46/49.51
POLY-3 PERCENT (g)	99.9%	100.0%	100.0%	100.0%	100.0%	99.6%	92.0%	92.9%
TERMINAL (d)	23/23 (100%)	27/27 (100%)	27/27 (100%)	0/0 (0%)	30/30 (100%)	31/31 (100%)	34/38 (90%)	28/31 (90%)
FIRST INCIDENCE	323	417	340	398	247	417	295	533
STATISTICAL TESTS								
LIFE TABLE	P<0.001 **	P=0.261N	P=0.299N	P<0.001 **	P=0.342N	P=0.443N	P=0.022N*	P=0.274N
POLY 3	P=1.000	P=1.000	P=1.000	P=1.000	P=0.061N	P=1.000N	P=0.061N	P=0.075N
POLY 1.5	P=1.000	P=1.000	P=1.000	P=1.000	P=0.058N	P=0.891N	P=0.061N	P=0.067N
POLY 6	P=1.000	P=1.000	P=1.000	P=1.000	P=0.073N	P=1.000N	P=0.061N	P=0.091N
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)	P=0.066N	P=0.363N	(e)	P=0.063N
COCH-ARM / FISHERS	P=0.547	P=0.500	P=0.500	P=0.500	P=0.069N	P=0.500N	P=0.059N	P=0.059N

(a) Number of tumor-bearing animals / number of animals examined at site.
(b) Number of tumor-bearing animals / Poly-3 number
(d) Observed incidence at terminal kill.
(f) Beneath the control incidence are the P-values associated with the trend test. Beneath the dosed group incidence are the P-values corresponding to

pairwise comparisons between the controls and that dosed group. The life table analysis regards tumors in animals dying prior to terminal kill as being (directly or indirectly) the cause of death.
Logistic regression is an alternative method for analyzing the incidence of non-fatal tumors. The Cochran-Armitage and Fishers exact tests compare directly the overall incidence rates
For all tests a negative trend is indicated by N
(e) Value of Statistic cannot be computed.
(g) Poly-3 adjusted lifetime tumor incidence.
(I) Interim sacrifice
(T) Terminal sacrifice
Tumor rates based on number of animals necropsied.
* To the right of any statistical result, indicates significance at (P<=0.05).
** To the right of any statistical result, indicates significance at (P<=0.01).

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CERTIFICATE OF AUTHENTICITY

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Place Syracuse (City) New York (State)

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