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DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

National Institutes of Health
National Institute of
Environmental Health Sciences
P. O. Box 12233
Research Triangle Park, NC 27709

September 05, 2001

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Dear Document Control Office:

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 Inhalation study on DECALIN (91-17-8) 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.

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 & Mice
cc: Central Data Management

41-17-8
PWGCH-R
C93026

PATHOLOGY WORKING GROUP CHAIRPERSON'S REPORT

Two-Year Chronic Study of **Decalin** in F344 Rats

Participants: Drs. M. Stedham (PAI - PWG Chairperson), J. R. Hailey (NIEHS), A. Nyska (NIEHS), G. Flake (NIEHS), G. Pearse (NIEHS), C. Shackelford (EPL-QA Pathologist), G. Willson (EPL), D. Wolf (EPA), H. Wall (Glaxo-Smith Kline), H. White (observer) and R. Renne (Battelle Northwest – Study Pathologist).

Date: April 17, 2001
Site: NIEHS, Research Triangle Park, NC

The PWG was convened to evaluate selected slides from the two-year inhalation study of Decalin in F344 Rats. Exposure levels and numbers of animals examined microscopically per group were as follows:

Dose	M	F
0 ppm	50	50
25 ppm	50	50
50 ppm	49	---
100 ppm	50	50
400 ppm	20	50

The study was conducted at Battelle Toxicology Northwest. The Study Pathologist (SP) was Dr. R. Renne and the Quality Assessment Pathologist (QAP) was Dr. Cynthia C. Shackelford of EPL.

A number of organs were reviewed by the QAP for potential treatment-related effects: the QAP reviewed these organs in all animals for all diagnoses, neoplastic and non-neoplastic. Organs reviewed for all diagnoses were as follows:

Male Rats	Female Rats
Adrenal Medulla	Lung
Kidney	Pleura
Testes	

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

Male Rats	Female Rats
None	Thyroid Gland, C-Cell – Hyperplasia
	Thyroid Gland, C-Cell – Adenoma
	Thyroid Gland, C-Cell – Carcinoma

Additionally, sections of the following organs from the sex indicated were reviewed by the QAP when the specific diagnosis listed was present.

Male Rats

Pituitary Gland – Hyperplasia
Pituitary Gland – Adenoma
Pituitary Gland – Carcinoma
Pituitary Gland, Craniopharyngeal Duct – Adenoma
Pituitary Gland, Craniopharyngeal Duct – Craniopharyngioma
Prostate – Hyperplasia
Peritoneum, Mesothelium – Mesothelioma, Malignant
Skin – Sarcoma
Skin – Schwannoma, Benign
Skin, Pinna – Schwannoma, Malignant
Kidney, Cortex, Renal Tubule – Adenoma
Kidney, Cortex, Renal Tubule – Adenoma, Multiple

Female Rats

Kidney, Pelvis, Transitional Cell – Hyperplasia
Pituitary Gland – Hyperplasia
Pituitary Gland – Adenoma
Skin – Sarcoma
Skin – Schwannoma

All tumor diagnoses in all organs from all animals were also reviewed.

SUMMARY OF REVIEW FINDINGS

Male – Kidney

Neoplasms – Increased incidences of cortical tubular adenomas and carcinomas were seen in all dose groups (25, 50, 100 and 400 ppm) compared with the control group.

Non-neoplastic lesions – Increased incidences and/or severity of chronic nephropathy, cortical tubular hyperplasia, mineralization of the papilla, and hyperplasia of transitional epithelium were increased in most dose groups compared with the control group.

Male – Adrenal Medulla

Benign and malignant pheochromocytomas as well as hyperplasia were increased somewhat in most dose groups compared with controls. The magnitude of the increases awaits incorporation of revised diagnoses as a result of the review process.

Female – Lung

Several non-neoplastic lesions commonly seen as background lesions were modestly increased in incidence or, more frequently, severity for most dose groups compared with the controls. These included histiocytic cellular infiltration of alveoli, alveolar proteinosis, chronic inflammation of the interstitium, and fibrosis of the interstitium.

Female – Uterus

The incidence of stromal polyps was increased in the 100 and 400ppm groups compared with the control groups. However, the incidences of all groups are within the current National Toxicology Program (NTP) historic range.

CONDUCT OF THE PWG

Prior to the PWG, the PWG Chairperson reviewed the pathology tables, the SP's narrative, the Pathology Data Review, the Quality Assessment Report, and microslides of tissues selected for QA review. The PWG Chair then selected slides for review by the PWG, including representative examples of lesions, and lesions for which there was a difference in diagnosis among the SP, QAP, and PWG Chair.

RESULTS OF THE PWG REVIEW

KIDNEY-MALE

For those lesions in which there were differences between the Study Pathologist (SP) and the Quality Assessment Pathologist (QAP), the Pathology Working Group (PWG) diagnoses were roughly split between the SP and QAP findings. Increased incidences of cortical tubular neoplasms were seen in all dose groups compared with the control group. The QAP and the PWG Chairperson, as well as the PWG in those sections presented, considered many of the diagnoses of cortical tubular hyperplasia rendered by the SP to actually be a component of chronic nephropathy, which was increased in severity in all dose groups. Nevertheless, there were still increases in cortical tubular hyperplasia in all dose groups.

Mineralization of the papilla and hyperplasia of pelvic transitional epithelium were increased in incidence and/or severity in most dose groups compared to the control group.

Similar findings of increased proliferative renal tubular lesions were not seen in dosed female rats, nor was there an increase of mineralization of the papilla or hyperplasia of pelvic transitional epithelium.

It was considered highly likely that the difference between sexes in response to the test material was related to the production of alpha 2μ globulin in the male rat kidney.

ADRENAL MEDULLA-MALE

The SP found increased incidences of pheochromocytomas in all dose groups and found increased incidences and/or severity of hyperplasia in all dose groups except the highest dose (400ppm). The QAP and the PWG consensus findings resulted in alteration of some individual diagnoses, but the overall effect of increased proliferative lesions in dosed groups remained. The degree of increase awaits final tabulation and comparison to historical control data.

MULTIPLE ORGANS-MALE

The PWG (group) reviewed sections of **Pituitary, Lung, Testes** and **Skin** for a variety of lesions. The most consistent alteration of original diagnoses was from hyperplasia to adenoma of the pars distalis of the Pituitary Gland. These alterations occurred in several groups, including the control group, and do not affect interpretation of test article effects.

LUNGS-FEMALE

The SP found exposure-related increased incidences and/or severity of alveolar proteinosis and histiocytic cellular infiltration, as well as interstitial fibrosis and chronic inflammation, and chronic pleural inflammation. The QAP and the PWG Chairperson were in essential agreement with most of the SP diagnoses. As noted in the QA report, these lesions are common incidental findings in aged Fischer rats. Even those relatively few lesions rated as moderate or severe by the SP and QAP certainly had no clinical effect on the animals. Nevertheless, there were exposure-related increases.

UTERUS-FEMALE

An exposure-related increased incidence of uterine stromal tumors was found by the SP, especially in the 100ppm and 400ppm groups. The QAP and the PWG consensus altered a few of the SP diagnosis but did not affect the overall finding of exposure-related increases. The presence of endometrial carcinomas in rats in the 100ppm and 400ppm groups was noteworthy because of the relative rarity of this neoplasm in rats. It was seen in two animals in the 100ppm group and in one animal in the 400ppm group.

MULTIPLE ORGANS-FEMALE

Mammary Gland, Skin, Clitoral Gland, Pancreas, Pituitary Gland, Spleen, Lymph Nodes and Lung were reviewed by the PWG for a variety of proliferative lesions. None were considered exposure-related.

POST-PWG ACTION ITEMS

A neoplastic lesion in the cranial area of animal number 222 in the 25ppm group was inadvertently omitted from the PWG set. These slides were later reviewed by Drs. Hailey, Flake, Nyska, Pearse, Stedham, and Nold with unamimous agreement, and the findings were included with the PWG findings.

for Michael A. Stedham, DVM, MS
Diplomate, ACVP
PWG Chairperson

5/30/01
Date

PATHOLOGY WORKING GROUP CHAIRPERSON'S REPORT

Two-year Chronic Inhalation Toxicity and Carcinogenicity Study of Decalin (C930026) in B6C3F1 Mice

PWG Participants: Drs. P. H. Long (PAI - PWG Chairperson), J. R. Hailey (NIEHS), A. Nyska (NIEHS), G. Flake (NIEHS), A. E. Brix (EPL QA Pathologist), H. G. Wall (GlaxoWellcome), L. Tomlinson (NCSU Observer), and C. Houle (Observer).

Date: February 23, 2001
Site: NIEHS, Research Triangle Park, NC

INTRODUCTION

The Pathology Working Group (PWG) was convened to evaluate selected slides from B6C3F1 mice that were given Decalin administered by inhalation for 2-years.

Prior to convening the PWG, the original Post Experiment Information System Individual Animal Necropsy Records, the Toxicology Report, selected TDMS PEIRPT reports, and selected hematoxylin and eosin stained microscopic slides from the two-year chronic Decalin study were submitted to Pathology Associates International (PAI) for Pathology Working Group Chairperson review. The slides submitted were originally examined and the data reported by Battelle Pacific Northwest Laboratory. This was followed by an EPL Quality Assessment Pathologist (QAP) review of the data and slides. The study and quality assessment pathologists for the study were Drs. S. L. Grumbein from Battelle Pacific Northwest Laboratory and A. E. Brix from Experimental Pathology Laboratories, Inc. (EPL), respectively.

The PWG Chairperson examined all slides of all neoplasms that were diagnosed by the study pathologist and reviewed by the QA pathologist. The PWG Chairperson also examined liver sections from all mice from all groups, testis sections from all males from all groups, and sections of uterus from all females for which the lesion "hydrometra" or "hyperplasia, cystic" had been diagnosed by the study pathologist. Findings were tabulated using Slide Review Work Sheets (SRWS) as presented in the Pathology Quality Assessment report.

The experimental design for this study is presented below:

EXPERIMENTAL DESIGN

Target Exposure (ppm)	Males	Females
0	50	50
25	50	50
100	50	50
400	50	50

SUMMARY OF PWG FINDINGS

As expected in this type of review, some terms and diagnoses were changed; however, overall agreement between the study pathologist, QA pathologist, and PWG Chairperson was very good. This review confirmed the following treatment-related effects:

- In females, there was an increase in the incidence of hepatocellular adenomas in the 400 ppm group and an increase in the incidence of hepatocellular adenomas and carcinomas in the 25 ppm group. Also, when combined (adenomas plus carcinomas plus hepatoblastomas, single and multiple), there was a higher incidence in the 25 and 400 ppm groups relative to the control group.
- In males, there was an increase in the incidence of hepatocellular adenomas and carcinomas in the 400 ppm group. Also, when combined (adenomas plus carcinomas plus hepatoblastomas, single and multiple), there was a higher incidence in the 400 ppm group relative to the control group.
- Also in males, there were several non-neoplastic treatment-related liver alterations. There was an increase in the incidence of hepatocyte syncytial alteration, hepatocellular necrosis, and centrilobular hepatocyte hypertrophy in the 100 and 400 ppm groups. In addition, there was an increase in the incidence of eosinophilic foci and erythrophagocytosis in the 400 ppm group.

CONDUCT OF THE PWG

Prior to the PWG, the chairperson reviewed the laboratory reports and the original study pathologist's pathology narratives, the summary and individual animal pathology tables, the quality assessment reports, and selected microslides from the studies. In consultation with Dr. J. R. Hailey (NIEHS), the PWG chairperson then selected a set of slides for review by the PWG. This included representative examples of treatment related lesions as well as slides for which there were differences of opinion in diagnosis among the SP, QAP, and/or PWG chair. The PWG consensus opinion for each slide examined, including any additional diagnoses made by the PWG, was recorded on the PWG Chairperson's worksheets attached to this report. The pathology findings were then recorded on the PWG modules.

BACKGROUND INFORMATION

Survival

According to the study report, decreased survival was noted in the male 100 and 400 ppm exposure groups. In females, decreased survival was noted only in the 25 ppm exposure group.

Clinical Observations and Body Weights

According to the study report, the clinical observation of "thin" was recorded more frequently among the groups with decreased survival, however, there were no treatment-related effects on body weight or growth.

Neoplasms
According to the study report, hepatocellular carcinomas and adenomas occurred more frequently among females exposed to 25 and 400 ppm compared to other female groups. Also, according to the study report, the 400 ppm male group had increased incidences of hepatocellular carcinomas and adenomas.

Non-neoplastic alterations
According to the study report, males exposed to 100 or 400 ppm developed a spectrum of exposure-related non-neoplastic changes in the liver, including eosinophilic focus, necrosis, syncytial alteration, and centrilobular hypertrophy. Hepatocellular erythrophagocytosis only occurred in the males exposed to 400 ppm.

Results of the PWG Review

Liver.
In females, there was an increased incidence of hepatocellular adenoma in the 400 ppm group and an increased incidence of hepatocellular adenoma, as well as carcinoma, in the 25 ppm group. Also, when combined (adenomas plus carcinomas plus hepatoblastomas, single and multiple), there were higher incidences in the 25 and 400 ppm female groups relative to the female control group. In males, there was a slight increase in the incidence of hepatocellular adenoma and carcinoma in the 400 ppm group. Also, when combined (adenomas plus carcinomas plus hepatoblastomas, single and multiple), there were higher incidences in the 400 ppm male group relative to the male control group.

Microscopically, hepatocellular adenomas and carcinomas were similar to those reported for the B6C3F1 mouse (Harada, et. al., 1999). Adenomas tended to be larger than foci, lacked normal hepatic architecture, and compressed the surrounding liver tissue. Some adenomas exhibited a mild degree of cellular pleomorphism, but not as much as carcinomas. Hepatocellular carcinomas were also typical, with almost every malignant tumor exhibiting a trabecular growth pattern.

Chemical-related non-neoplastic lesions were noted in the livers of males only. These included an increase in the incidence of hepatocyte syncytial alteration, hepatocellular necrosis, and centrilobular hepatocyte hypertrophy in the 100 and 400 ppm groups and an increase in the incidence of eosinophilic foci and erythrophagocytosis in the 400 ppm exposure group.

The study pathologist and QA pathologist graded the severity of liver foci. Clear cell foci consisted of a circumscribed area of hepatocytes that had cytoplasm that was either finely vacuolated or expanded by large, discrete vacuoles (lipid). "Fatty change" was also diagnosed in this study, but fatty change was not a discrete lesion. Clear cell foci often had some areas of compression around them, in contrast to basophilic foci, which tended to be composed of cells that blended more with the surrounding hepatocytes. Eosinophilic foci were typical, with large, eosinophilic hepatocytes, minimal

compression of surrounding tissue, and little or no disruption of the normal hepatic architecture within the focus.

Centrilobular hypertrophy was characterized by enlarged hepatocytes in the centrilobular area. These hepatocytes had granular or vacuolated cytoplasm and their nuclei were often enlarged. Syncytial alteration was diagnosed when hepatocytes containing three or more (sometimes up to 20) nuclei were seen. This change was seen in all dose groups of male mice, but increased in a treatment-related manner. Erythrophagocytosis and hepatocyte necrosis were also seen with increased incidence in treated males. The necrosis was characterized by individual cell necrosis and/or foci of necrotic hepatocytes. The affected hepatocytes had brightly eosinophilic cytoplasm, and there was nuclear pyknosis and karyolysis. Erythrophagocytosis was characterized by enlarged hepatocytes that had engulfed erythrocytes. There was often a thin rim of remaining hepatocellular cytoplasm visible around clusters of erythrocytes.

Lung

In females, the incidence of alveolar/bronchiolar carcinoma was increased in the controls relative to the 25 ppm, 100 ppm, and 400 ppm groups. In contrast, the incidence of alveolar/bronchiolar adenoma was increased in the 400 and 25 ppm groups relative to the control and 100 ppm groups. However, when both alveolar/bronchiolar adenomas and carcinomas are combined, the incidence was comparable across all groups. When viewed in this way, the data indicate an absence of any treatment-related neoplastic lung effects.

In males, the incidence of alveolar/bronchiolar carcinoma was increased in the 400 ppm group relative to that noted in control, 25 ppm, and 100 ppm groups. However when both alveolar/bronchiolar adenomas and carcinomas were combined, the incidence was comparable across groups. When viewed in this way, the data indicate an absence of any treatment-related neoplastic lung effects.

Testes

Testes were examined because of the presence of three interstitial cell adenomas in the 400 ppm dose group. This review confirmed the incidence of interstitial cell adenomas; however, this review also confirmed the presence of interstitial cell hyperplasia in two control animals. While the incidence of three interstitial adenomas in the 400 ppm dose group was outside the range of historical control incidences, no interstitial cell hyperplasias were observed in the 400 ppm dose group while two were observed in the control male group. Hyperplasia and adenoma of the testicular interstitial cells form a morphological and biological continuum in the male B6C3F1 mouse. There are no clear morphologic features indicating the precise point at which hyperplasia has progressed to neoplasia, but the size of the lesion appears to be the best indicator to distinguish small adenomas from hyperplasias. Two of the interstitial cell tumors in this study were small but were definitely considered large enough to be classified as adenomas. The third interstitial cell tumor, however, while being considered to be large enough to be classified as an adenoma, was quite small and not substantially larger than the hyperplasias. Thus in this study, there were two small but definite adenomas and one small, borderline adenoma in the 400 ppm male group, and two hyperplasias in control

males. These findings did not appear to indicate the presence of a treatment effect in the testes.

Uterus
The PWG concurred with changing all diagnoses of "uterus, hydrometra" to "uterus, hyperplasia, cystic.

SUMMARY

The PWG confirmed the liver as a target organ for Decalin. Differences in diagnoses/diagnostic terminology were minimal and did not alter the conclusion that there were treatment-related neoplastic changes in the livers of female mice and treatment-related neoplastic as well as non-neoplastic changes in the livers of male mice. There were no lung, uterine, or testicular effects that could be attributed to treatment.

Post-PWG Action Items
- None identified.

References:

1. Harada T, Enomoto A, Boorman GA, and Maronpot RR (1999). Liver and Gallbladder. In: *Pathology of The Mouse*. RR Maronpot (ed). Cache River Press, Vienna, IL.

for Philip H. Long, DVM, PhD 4/5/01
Date
Diplomate, ACVP
PWG Chairperson

NATIONAL TOXICOLOGY PROGRAM

TR-513 Decalin

Pathology Tables - Rats

P03 - Incidence Rates of Non-Neoplastic Lesions by Anatomic Site

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

P08 - Statistical Analysis of Primary Tumors

Pathology Tables - Mice

P03 - Incidence Rates of Non-Neoplastic Lesions

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

P08 - Statistical Analysis of Primary Tumors

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
WITH AVERAGE SEVERITY GRADES[b]
DECALIN

FINAL#1

Facility: Battelle Northwest

Chemical CAS #: 91-17-8

Lock Date: 05/31/00

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
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

FISCHER 344 RATS FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
DISPOSITION SUMMARY				
Animals Initially In Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	16	10	10	17
Natural Death	2	5		5
Accidently Killed			1	
Survivors				
Moribund Sacrifice			1	
Terminal Sacrifice	32	35	38	28
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Intestine Small, Jejunum	(48)	(46)	(49)	(45)
Muscularis, Inflammation, Chronic	1 [3.0]			
Liver	(50)	(48)	(49)	(50)
Angiectasis	1 [4.0]	2 [1.5]		1 [2.0]
Basophilic Focus		2 [3.0]	1 [2.0]	
Clear Cell Focus	7 [2.4]	5 [2.6]	4 [2.5]	2 [3.0]
Congestion	1 [3.0]		1 [4.0]	
Hepatodiaphragmatic Nodule	9 [4.0]	6 [4.0]	6 [4.0]	7 [4.0]
Inflammation, Granulomatous			1 [2.0]	
Necrosis	2 [2.0]	2 [2.5]		
Vacuolization Cytoplasmic	3 [3.0]		2 [4.0]	
Bile Duct, Hyperplasia	1 [3.0]			
Hepatocyte, Regeneration		1 [4.0]		
Periportal, Pigmentation			1 [3.0]	
Serosa, Hemorrhage		1 [4.0]		
Mesentery	(26)	(20)	(20)	(17)
Necrosis	26 [3.0]	20 [3.0]	20 [3.0]	16 [3.0]
Oral Mucosa	(1)			(2)
Inflammation, Chronic	1 [4.0]			
Pharyngeal, Hyperplasia, Squamous				2 [2.5]
Pancreas	(50)	(47)	(49)	(49)
Acinus, Atrophy	1 [3.0]			1 [3.0]
Stomach, Forestomach	(50)	(47)	(49)	(49)
Erosion				1 [4.0]
Hyperplasia, Squamous	1 [2.0]		1 [3.0]	1 [2.0]
Mineralization	1 [4.0]			
Ulcer	2 [4.0]	2 [3.5]	1 [4.0]	
Stomach, Glandular	(50)	(47)	(49)	(49)

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

FISCHER 344 RATS FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
ALIMENTARY SYSTEM - CONT				
Mineralization	1 [4.0]			
Tongue	(2)			(1)
Epithelium, Hyperplasia				1 [3.0]
Tooth	(1)			
Pulp, Inflammation, Suppurative	1 [3.0]			
CARDIOVASCULAR SYSTEM				
Heart	(50)	(50)	(49)	(50)
Cardiomyopathy	1 [2.0]		1 [2.0]	
Artery, Mineralization	1 [4.0]			
Atrium, Thrombosis	2 [3.0]	2 [4.0]	1 [4.0]	
Ventricle, Angiectasis	1 [4.0]			
ENDOCRINE SYSTEM				
Adrenal Cortex	(50)	(48)	(49)	(49)
Hyperplasia	3 [2.3]		2 [3.5]	2 [3.0]
Hypertrophy	1 [4.0]			
Necrosis				1 [4.0]
Vacuolization Cytoplasmic	7 [2.4]	7 [2.0]	11 [2.9]	8 [2.1]
Adrenal Medulla	(50)	(48)	(49)	(49)
Hyperplasia	3 [2.0]	2 [3.0]		
Islets, Pancreatic	(50)	(47)	(49)	(49)
Hyperplasia			1 [3.0]	
Parathyroid Gland	(49)	(48)	(48)	(47)
Hyperplasia	1 [2.0]			
Pituitary Gland	(50)	(49)	(49)	(50)
Angiectasis	1 [4.0]			
Cyst	1 [4.0]	4 [4.0]	3 [3.3]	
Hemorrhage		1 [4.0]		1 [4.0]
Pars Distalis, Angiectasis	2 [4.0]			
Pars Distalis, Hyperplasia	7 [2.4]	9 [3.2]	8 [3.0]	5 [3.2]
Thyroid Gland	(50)	(49)	(49)	(50)
C-Cell, Hyperplasia	15 [1.8]	7 [3.1]	6 [2.2]	6 [2.8]
GENERAL BODY SYSTEM				
None				

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

FISCHER 344 RATS FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
GENITAL SYSTEM				
Clitoral Gland	(48)	(49)	(49)	(50)
Cyst	2 [2.5]	3 [2.3]	2 [3.0]	1 [3.0]
Hyperplasia	3 [3.7]	3 [3.7]	1 [4.0]	3 [3.7]
Inflammation, Chronic	1 [4.0]			1 [4.0]
Ovary	(50)	(50)	(49)	(50)
Cyst	3 [3.0]	4 [2.8]	6 [3.5]	3 [3.0]
Uterus	(50)	(49)	(49)	(50)
Atrophy			1 [3.0]	
Hemorrhage				1 [4.0]
Endometrium, Hyperplasia		3 [2.3]		1 [4.0]
Endometrium, Inflammation, Suppurative			1 [3.0]	
Endometrium, Metaplasia, Squamous		1 [3.0]		
Vagina	(1)			(2)
Epithelium, Hyperplasia				1 [3.0]
HEMATOPOIETIC SYSTEM				
Lymph Node	(6)		(4)	(2)
Hyperplasia, Lymphoid	1 [4.0]			
Deep Cervical, Ectasia	1 [4.0]			1 [4.0]
Deep Cervical, Hyperplasia, Lymphoid			1 [2.0]	
Deep Cervical, Infiltration Cellular, Histiocyte	1 [4.0]			
Deep Cervical, Pigmentation	1 [3.0]			
Pancreatic, Pigmentation			1 [3.0]	
Thoracic, Hyperplasia, Plasma Cell				1 [4.0]
Lymph Node, Bronchial	(2)	(10)	(7)	(5)
Ectasia	1 [4.0]	1 [4.0]		
Infiltration Cellular, Histiocyte			1 [2.0]	
Inflammation, Suppurative	1 [3.0]			
Pigmentation		2 [3.0]		1 [3.0]
Lymph Node, Mediastinal	(45)	(46)	(49)	(44)
Angiectasis	1 [3.0]	2 [4.0]		1 [4.0]
Hyperplasia, Plasma Cell				1 [3.0]
Inflammation, Suppurative	1 [3.0]			
Pigmentation		1 [4.0]		
Spleen	(50)	(49)	(49)	(50)
Accessory Spleen	1	1		1
Fibrosis	1 [3.0]			3 [2.7]
Hematopoietic Cell Proliferation	1 [4.0]		1 [4.0]	2 [4.0]

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

FISCHER 344 RATS FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
HEMATOPOIETIC SYSTEM - CONT				
Hemorrhage	3 [3.7]			
Necrosis		1 [4.0]	1 [4.0]	1 [4.0]
INTEGUMENTARY SYSTEM				
Mammary Gland	(50)	(50)	(49)	(50)
Galactocele	3 [2.0]	1 [4.0]	5 [3.4]	1 [4.0]
Skin	(50)	(50)	(49)	(50)
Cyst Epithelial Inclusion		1 [4.0]		
Erosion				1 [3.0]
Ulcer				1 [4.0]
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Fracture			1 [4.0]	
Cranium, Hemorrhage		1 [2.0]		
NERVOUS SYSTEM				
Brain	(50)	(49)	(49)	(50)
Compression	6 [4.0]	5 [2.8]	6 [3.0]	3 [3.3]
Hemorrhage	1 [3.0]	1 [3.0]	3 [2.3]	6 [3.0]
Thrombosis			1 [4.0]	
Cerebrum, Gliosis			1 [4.0]	
RESPIRATORY SYSTEM				
Larynx	(50)	(49)	(49)	(48)
Foreign Body		1 [3.0]		3 [2.7]
Inflammation, Chronic	2 [2.5]	4 [1.8]	2 [2.0]	2 [2.5]
Inflammation, Suppurative		2 [3.0]		4 [2.3]
Epiglottis, Metaplasia, Squamous		1 [2.0]	1 [1.0]	
Respiratory Epithelium, Hyperplasia		1 [3.0]		
Respiratory Epithelium, Metaplasia, Squamous				1 [2.0]
Respiratory Epithelium, Epiglottis, Degeneration		1 [1.0]	1 [1.0]	
Squamous Epithelium, Hyperplasia				1 [2.0]
Lung	(50)	(50)	(49)	(50)

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

FISCHER 344 RATS FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
RESPIRATORY SYSTEM - CONT				
Congestion				1 [2.0]
Foreign Body				1 [2.0]
Alveolar Epithelium, Hyperplasia	9 [1.7]	14 [1.6]	8 [1.3]	14 [1.7]
Alveolar Epithelium, Metaplasia, Squamous			1 [2.0]	2 [1.0]
Alveolus, Infiltration Cellular, Histiocyte	21 [1.7]	26 [1.6]	29 [1.7]	29 [2.0]
Alveolus, Pigmentation				1 [4.0]
Alveolus, Proteinosis	11 [1.4]	16 [1.8]	15 [1.8]	23 [1.9]
Bronchiole, Mineralization	1 [4.0]			
Interstitium, Fibrosis	16 [1.4]	24 [1.7]	23 [1.6]	28 [2.1]
Interstitium, Inflammation, Chronic	1 [2.0]	6 [2.5]	6 [1.7]	4 [2.0]
Mediastinum, Hyperplasia, Histiocytic				1 [3.0]
Mediastinum, Pigmentation				1 [2.0]
Perivascular, Pigmentation	1 [4.0]			
Nose	(50)	(48)	(49)	(49)
Foreign Body	1	4	3	1
Inflammation, Suppurative	3 [2.0]	5 [2.0]	7 [1.9]	3 [2.0]
Goblet Cell, Hyperplasia	1 [1.0]	1 [1.0]	5 [1.8]	2 [2.0]
Nasolacrimal Duct, Inflammation, Suppurative	3 [2.7]	1 [2.0]	1 [2.0]	3 [2.7]
Olfactory Epithelium, Degeneration, Hyaline				1 [3.0]
Respiratory Epithelium, Hyperplasia		1 [2.0]	1 [2.0]	2 [1.5]
Respiratory Epithelium, Metaplasia, Squamous	1 [2.0]	2 [2.5]	2 [1.0]	1 [2.0]
Pleura	(20)	(25)	(25)	(28)
Inflammation, Chronic	15	17	23	27
Mesothelium, Hyperplasia	2 [1.0]	7 [1.1]	8 [1.5]	2 [2.0]
SPECIAL SENSES SYSTEM				
Eye	(1)	(2)	(5)	(4)
Atrophy		2 [4.0]		
Anterior Chamber, Hemorrhage				1 [3.0]
Choroid, Sclera, Mineralization			1 [3.0]	
Cornea, Hyperplasia				1 [1.0]
Cornea, Inflammation, Suppurative		1 [2.0]		
Lens, Cataract	1 [3.0]		3 [2.7]	2 [3.5]
Harderian Gland	(1)			
Inflammation, Suppurative	1 [4.0]			
URINARY SYSTEM				
Kidney	(50)	(46)	(49)	(50)
Cyst	1 [4.0]	2 [3.5]	1 [2.0]	

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

FISCHER 344 RATS FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
URINARY SYSTEM - CONT				
Cytoplasmic Alteration	1 [4.0]			1 [4.0]
Nephropathy, Chronic	44 [1.6]	45 [1.6]	48 [1.9]	48 [1.6]
Cortex, Renal Tubule, Hyperplasia	1 [4.0]	4 [2.8]	4 [2.5]	2 [2.0]
Papilla, Mineralization	3 [1.0]	2 [1.0]	4 [1.0]	4 [1.3]
Pelvis, Dilatation	1 [4.0]		1 [4.0]	1 [4.0]
Pelvis, Mineralization	11 [1.5]	16 [1.6]	19 [1.3]	18 [1.2]
Pelvis, Transitional Epithelium, Hyperplasia		2 [1.5]	2 [2.0]	2 [2.0]
Renal Tubule, Mineralization	1 [4.0]			
Renal Tubule, Pigmentation				1 [4.0]
Ureter	(1)			
Mineralization	1 [4.0]			
Necrosis	1 [4.0]			
Urinary Bladder	(50)	(47)	(49)	(50)
Degeneration		1 [4.0]		
Necrosis	1 [4.0]			
Transitional Epithelium, Hyperplasia	1 [3.0]	1 [4.0]		

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

FISCHER 344 RATS MALE	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
DISPOSITION SUMMARY					
Animals Initially In Study	50	50	50	50	20
Early Deaths					
Moribund Sacrifice	17	21	23	23	6
Natural Death	5	6	3	7	
Survivors					
Terminal Sacrifice	28	23	23	20	14
Other			1		
Animals Examined Microscopically	50	50	49	50	20
ALIMENTARY SYSTEM					
Intestine Large, Colon	(48)	(47)	(48)	(49)	(20)
Ulcer			1 [3.0]		
Liver	(50)	(50)	(49)	(50)	(20)
Angiectasis				1 [3.0]	1 [4.0]
Clear Cell Focus	2 [1.5]	1 [2.0]	3 [2.0]	3 [2.0]	
Congestion			1 [2.0]		
Cyst	1 [1.0]		1 [4.0]		
Degeneration, Cystic	1 [2.0]				
Hepatodiaphragmatic Nodule	7 [1.7]	5 [3.4]	7 [3.6]	4 [3.3]	4 [3.3]
Infiltration Cellular, Lymphohistiocytic					2 [1.5]
Mixed Cell Focus	3 [2.3]		1 [2.0]		
Necrosis	1 [4.0]	1 [4.0]	2 [3.5]		
Thrombosis		1	1		
Vacuolization Cytoplasmic		2 [3.5]	1 [4.0]	1 [3.0]	
Bile Duct, Hyperplasia			2 [2.5]	1 [2.0]	3 [2.3]
Hepatocyte, Regeneration	2 [3.5]	1 [4.0]	4 [4.0]	2 [4.0]	1 [4.0]
Mesentery	(16)	(19)	(20)	(13)	(10)
Necrosis	7 [3.1]	9 [3.0]	12 [3.1]	4 [3.0]	2 [3.0]
Artery, Inflammation					1 [4.0]
Fat, Hemorrhage			2 [3.0]		2 [3.0]
Fat, Necrosis	9 [2.9]	6 [3.2]	6 [2.8]	6 [2.3]	5 [2.0]
Oral Mucosa		(2)	(2)	(1)	
Inflammation, Chronic				1 [4.0]	
Pharyngeal, Hyperplasia, Squamous		1 [3.0]			
Pancreas	(50)	(50)	(49)	(50)	(20)
Acinus, Atrophy	1 [2.0]	2 [3.0]	3 [3.3]	2 [3.0]	2 [3.0]
Acinus, Hyperplasia				1 [4.0]	
Salivary Glands	(50)	(50)	(49)	(50)	(20)
Inflammation, Suppurative			1 [3.0]		

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
WITH AVERAGE SEVERITY GRADES[b]
DECALIN

FISCHER 344 RATS MALE	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
ALIMENTARY SYSTEM - CONT					
Stomach, Forestomach	(50)	(50)	(49)	(50)	(20)
Erosion	1 [2.0]				
Hyperplasia, Squamous				1 [3.0]	
Inflammation, Suppurative				1 [4.0]	1 [2.0]
Ulcer		5 [3.2]	4 [3.8]	3 [3.7]	1 [4.0]
Stomach, Glandular	(50)	(50)	(49)	(50)	(20)
Erosion		1 [3.0]	1 [4.0]		
Necrosis				1 [2.0]	
Ulcer		1 [4.0]	2 [4.0]		
Tongue		(1)	(2)	(1)	
Inflammation			1 [2.0]		
Tooth	(1)		(1)		(1)
Inflammation			1 [4.0]		
Peridontal Tissue, Inflammation	1 [3.0]				1 [3.0]
CARDIOVASCULAR SYSTEM					
Blood Vessel	(44)	(50)	(49)	(45)	(11)
Thrombosis					1 [4.0]
Pulmonary Artery, Inflammation					1 [3.0]
Heart	(50)	(50)	(49)	(50)	(20)
Cardiomyopathy	5 [2.0]	5 [2.6]	4 [2.3]	9 [1.9]	3 [1.7]
Atrium, Thrombosis	2 [2.5]	2 [3.5]	5 [3.3]	2 [4.0]	1 [3.0]
Valve, Thrombosis	1 [3.0]				
ENDOCRINE SYSTEM					
Adrenal Cortex	(50)	(50)	(49)	(50)	(20)
Hyperplasia	1 [3.0]	1 [2.0]	3 [2.0]		
Necrosis			1 [4.0]	2 [3.5]	
Vacuolization Cytoplasmic	2 [2.5]	6 [2.3]	5 [2.8]	2 [2.0]	1 [1.0]
Adrenal Medulla	(49)	(49)	(49)	(49)	(20)
Hyperplasia	10 [2.5]	13 [2.9]	26 [2.5]	17 [2.4]	4 [2.3]
Necrosis		1 [4.0]		1 [4.0]	
Islets, Pancreatic	(50)	(50)	(49)	(50)	(20)
Hyperplasia	1 [2.0]		1 [4.0]		
Parathyroid Gland	(49)	(48)	(49)	(49)	(20)
Hyperplasia				1 [3.0]	
Pituitary Gland	(50)	(50)	(49)	(49)	(20)
Cyst	1 [3.0]	1 [4.0]	1 [4.0]		1 [1.0]
Hemorrhage	1 [4.0]			2 [4.0]	

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

FISCHER 344 RATS MALE	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
ENDOCRINE SYSTEM - CONT					
Pars Distalis, Hyperplasia	7 [2.4]	4 [2.8]	5 [2.8]	6 [3.2]	1 [2.0]
Pars Intermedia, Hyperplasia				1 [3.0]	
Thyroid Gland	(50)	(50)	(49)	(49)	(20)
C-Cell, Hyperplasia	6 [2.8]	6 [2.7]	6 [3.0]		7 [2.4]
Follicular Cell, Hyperplasia		1 [4.0]	2 [2.0]		
GENERAL BODY SYSTEM					
None					
GENITAL SYSTEM					
Epididymis	(50)	(50)	(49)	(50)	(20)
Spermatocele				1 [3.0]	
Preputial Gland	(50)	(49)	(49)	(50)	(20)
Hyperplasia	1 [4.0]	1 [2.0]	2 [2.0]	1 [3.0]	
Inflammation, Suppurative	1 [4.0]	1 [4.0]		1 [3.0]	
Prostate, NOS	(50)	(50)	(49)	(50)	(20)
Hyperplasia	1 [2.0]	3 [2.0]			
Hypertrophy				1 [3.0]	
Inflammation					2 [2.0]
Inflammation, Suppurative	18 [2.2]	21 [2.2]	14 [2.0]	24 [2.2]	9 [2.3]
Epithelium, Dorsal, Hyperplasia					1 [1.0]
Epithelium, Ventral, Hyperplasia			1 [3.0]	1 [3.0]	
Seminal Vesicle	(50)	(50)	(49)	(50)	(20)
Dilatation				1 [4.0]	
Testes	(50)	(50)	(49)	(50)	(20)
Artery, Inflammation				1 [3.0]	
Germinal Epithelium, Atrophy	6 [3.2]	4 [3.0]	8 [3.6]	7 [3.1]	4 [3.5]
Interstitial Cell, Hyperplasia	9 [2.6]	17 [2.2]	7 [2.4]	16 [2.3]	1 [2.0]
HEMATOPOIETIC SYSTEM					
Bone Marrow	(50)	(50)	(49)	(50)	(20)
Hyperplasia, Reticulum Cell				1 [3.0]	
Myelofibrosis			1 [3.0]		1 [3.0]
Lymph Node	(8)	(10)	(14)	(11)	(1)
Ectasia			1 [3.0]		
Deep Cervical, Infiltration Cellular, Histiocyte			1 [3.0]		

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
WITH AVERAGE SEVERITY GRADES[b]
DECALIN

FISCHER 344 RATS MALE	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
HEMATOPOIETIC SYSTEM - CONT					
Deep Cervical, Inflammation, Suppurative				1 [3.0]	
Pancreatic, Ectasia	1 [3.0]			1 [4.0]	
Pancreatic, Pigmentation			1 [4.0]		
Lymph Node, Bronchial	(7)	(8)	(18)	(17)	(7)
Ectasia			1 [2.0]		1 [4.0]
Inflammation, Chronic					1 [4.0]
Pigmentation				1 [2.0]	
Lymph Node, Mesenteric	(50)	(50)	(49)	(49)	(20)
Ectasia			1 [4.0]	1 [4.0]	
Hyperplasia, Lymphohistiocytic			1 [2.0]		
Lymph Node, Mediastinal	(48)	(45)	(44)	(48)	(16)
Angiectasis		3 [3.7]	1 [4.0]	2 [4.0]	1 [3.0]
Inflammation	1 [3.0]				
Inflammation, Chronic				1 [3.0]	
Pigmentation				1 [3.0]	
Spleen	(50)	(50)	(49)	(50)	(20)
Accessory Spleen	1 [1.0]			2 [4.0]	2 [1.0]
Congestion			4 [2.3]		
Fibrosis	3 [3.0]	3 [3.0]	4 [3.3]	5 [2.8]	2 [2.0]
Hematopoietic Cell Proliferation		1 [4.0]		3 [3.0]	
Hemorrhage		5 [4.0]	2 [3.5]	2 [3.5]	1 [4.0]
Hyperplasia, Lymphoid					1 [2.0]
Hyperplasia, Lymphohistiocytic			1 [3.0]		1 [4.0]
Necrosis	1 [4.0]	1 [4.0]	2 [3.5]	2 [3.5]	1 [4.0]
Thymus	(50)	(48)	(47)	(50)	(20)
Cyst		1 [2.0]		1 [2.0]	
Metaplasia, Squamous				1 [4.0]	
INTEGUMENTARY SYSTEM					
Mammary Gland	(50)	(50)	(49)	(50)	(20)
Galactocele		2 [3.0]			1 [4.0]
Epithelium, Hyperplasia		1 [4.0]			
Skin	(50)	(50)	(49)	(50)	(20)
Cyst	3 [2.7]	1 [3.0]			
Cyst Epithelial Inclusion	2 [4.0]	2 [4.0]	5 [4.0]		
Hyperkeratosis	2 [3.5]	1 [2.0]		1 [3.0]	1 [4.0]
Hyperplasia		1 [4.0]			
Inflammation, Acute			1 [3.0]		
Inflammation, Chronic					1 [4.0]
Ulcer		1 [4.0]		2 [3.0]	
Subcutaneous Tissue, Fibrosis		1 [3.0]			

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
WITH AVERAGE SEVERITY GRADES[b]
DECALIN

FISCHER 344 RATS MALE	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
INTEGUMENTARY SYSTEM - CONT					
Subcutaneous Tissue, Hemorrhage				1 [4.0]	
Subcutaneous Tissue, Inflammation, Suppurative	1 [4.0]				
MUSCULOSKELETAL SYSTEM					
Bone	(50)	(50)	(49)	(50)	(20)
Femur, Degeneration			1 [4.0]		
Joint, Femur, Tibia, Fracture			1 [4.0]		
Vertebra, Fracture	1 [4.0]				
Skeletal Muscle		(1)		(5)	
Inflammation, Chronic				1 [4.0]	
NERVOUS SYSTEM					
Brain	(50)	(50)	(49)	(50)	(20)
Compression	2 [3.5]	2 [3.5]	5 [2.8]	5 [3.2]	1 [2.0]
Hemorrhage	2 [2.0]	1 [4.0]	2 [3.0]	3 [2.3]	
Inflammation, Suppurative			1 [4.0]		
RESPIRATORY SYSTEM					
Larynx	(50)	(50)	(49)	(49)	(20)
Foreign Body	2 [1.5]	1 [3.0]	3 [3.3]	2 [3.0]	
Inflammation, Chronic	2 [3.0]		3 [3.0]	2 [2.5]	1 [2.0]
Inflammation, Suppurative	1 [3.0]	1 [4.0]	1 [3.0]	1 [1.0]	1 [1.0]
Metaplasia, Squamous	1 [3.0]				
Epiglottis, Hyperplasia			1 [1.0]		1 [1.0]
Epiglottis, Metaplasia, Squamous					1 [1.0]
Glands, Degeneration		1 [4.0]			
Squamous Epithelium, Hyperplasia			1 [2.0]		
Lung	(50)	(50)	(49)	(50)	(20)
Hemorrhage	1 [1.0]		4 [1.5]	3 [2.3]	
Inflammation, Suppurative		1 [1.0]	1 [3.0]	2 [1.5]	
Mineralization			1 [3.0]		
Alveolar Epithelium, Hyperplasia	10 [1.9]	8 [1.8]	6 [2.7]	9 [2.0]	4 [2.5]
Alveolar Epithelium, Metaplasia, Squamous	1 [2.0]	1 [2.0]	1 [4.0]		1 [1.0]
Alveolus, Infiltration Cellular, Histiocyte	14 [1.6]	15 [1.8]	6 [1.3]	11 [1.8]	10 [1.5]
Alveolus, Pigmentation	1 [1.0]				
Alveolus, Proteinosis	6 [1.5]	7 [1.7]	2 [1.5]	4 [1.0]	2 [1.0]

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
WITH AVERAGE SEVERITY GRADES[b]
DECALIN

FISCHER 344 RATS MALE	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
RESPIRATORY SYSTEM - CONT					
Bronchiole, Hyperplasia	1 [3.0]				
Bronchiole, Metaplasia, Squamous		1 [4.0]			
Goblet Cell, Hyperplasia				1 [3.0]	
Interstitium, Fibrosis	9 [1.8]	10 [1.6]	7 [1.4]	6 [1.7]	4 [1.8]
Interstitium, Inflammation, Chronic	5 [1.6]	2 [1.5]	2 [1.5]	1 [2.0]	1 [3.0]
Nose	(49)	(49)	(49)	(50)	(20)
Foreign Body	1 [3.0]	4 [2.5]	2 [2.5]		1 [1.0]
Inflammation, Suppurative	2 [2.0]	4 [2.3]	8 [2.0]	4 [2.0]	
Goblet Cell, Hyperplasia		1 [2.0]	2 [3.0]	2 [2.0]	1 [2.0]
Nasolacrimal Duct, Inflammation, Suppurative	1 [2.0]				
Respiratory Epithelium, Hyperplasia	1 [2.0]			1 [2.0]	
Respiratory Epithelium, Metaplasia, Squamous			1 [2.0]		
Respiratory Epithelium, Necrosis	1 [4.0]				
Pleura	(9)	(8)	(8)	(5)	(6)
Inflammation, Chronic	9 [1.3]	7 [2.1]	6 [1.5]	4 [1.8]	5 [2.2]
Mesothelium, Hyperplasia		1 [2.0]	3 [2.7]		1 [1.0]
Trachea	(50)	(50)	(49)	(49)	(20)
Inflammation, Suppurative				1 [3.0]	
Metaplasia, Squamous			1 [2.0]		
SPECIAL SENSES SYSTEM					
Eye		(2)	(2)	(2)	(1)
Atrophy				1 [3.0]	
Inflammation, Suppurative		1 [4.0]			
Anterior Chamber, Hemorrhage		1 [4.0]			
Lens, Cataract		1 [4.0]	1 [4.0]	2 [3.5]	1 [4.0]
Harderian Gland	(1)			(2)	
Inflammation, Chronic	1 [2.0]				
URINARY SYSTEM					
Kidney	(50)	(50)	(49)	(50)	(20)
Cyst			2 [4.0]	1 [3.0]	
Glomerulosclerosis			1 [3.0]		
Hydronephrosis		1 [2.0]			
Infarct	1 [4.0]	1 [4.0]	1 [4.0]		1 [4.0]
Inflammation, Suppurative				1 [1.0]	
Nephropathy, Chronic	48 [1.4]	48 [2.3]	49 [2.6]	50 [2.3]	20 [3.0]
Cortex, Renal Tubule, Accumulation, Hyaline Droplet	2 [1.5]	9 [2.9]	7 [2.0]	11 [2.6]	2 [2.5]

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

FISCHER 344 RATS MALE	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
URINARY SYSTEM - CONT					
Cortex, Renal Tubule, Atypia Cellular	1 [3.0]				
Cortex, Renal Tubule, Hyperplasia		11 [2.3]	11 [2.1]	15 [3.1]	5 [1.8]
Cortex, Renal Tubule, Mineralization				1 [1.0]	
Medulla, Casts Granular					1 [1.0]
Papilla, Mineralization	1 [1.0]	34 [2.4]	41 [2.9]	43 [3.1]	17 [3.3]
Pelvis, Inflammation, Suppurative	1 [2.0]				
Pelvis, Transitional Epithelium, Hyperplasia	1 [1.0]	8 [1.5]	8 [2.1]	10 [2.4]	5 [1.6]
Urinary Bladder	(50)	(49)	(49)	(49)	(20)
Calculus Micro Observation Only				1 [4.0]	
Inflammation, Suppurative				1 [4.0]	
Muscularis, Hyperplasia					1 [3.0]
Transitional Epithelium, Hyperplasia				1 [3.0]	

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

END OF REPORT

FINAL#1

Facility: Battelle Northwest

Chemical CAS #: 91-17-8

Lock Date: 05/31/00

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

FISCHER 344 RATS FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
DISPOSITION SUMMARY				
Animals Initially in Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	16	10	10	17
Natural Death	2	5		5
Accidently Killed			1	
Survivors				
Moribund Sacrifice			1	
Terminal Sacrifice	32	35	38	28
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Liver	(50)	(48)	(49)	(50)
Histiocytic Sarcoma		1 (2%)		
Mesentery	(26)	(20)	(20)	(17)
Oral Mucosa	(1)			(2)
Gingival, Squamous Cell Carcinoma	1 (100%)			
Stomach, Glandular	(50)	(47)	(49)	(49)
Adenoma		1 (2%)		
Tongue	(2)			(1)
Squamous Cell Carcinoma	1 (50%)			
Squamous Cell Papilloma	1 (50%)			
CARDIOVASCULAR SYSTEM				
None				
ENDOCRINE SYSTEM				
Adrenal Medulla	(50)	(48)	(49)	(49)
Pheochromocytoma Malignant		2 (4%)	1 (2%)	
Pheochromocytoma Benign	1 (2%)	1 (2%)	3 (6%)	1 (2%)
Islets, Pancreatic	(50)	(47)	(49)	(49)
Adenoma	1 (2%)			
Carcinoma	1 (2%)	1 (2%)	1 (2%)	
Pituitary Gland	(50)	(49)	(49)	(50)
Pars Distalis, Adenoma	34 (68%)	27 (55%)	29 (59%)	30 (60%)

FISCHER 344 RATS FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
ENDOCRINE SYSTEM - cont				
Pars Distalis, Carcinoma		1 (2%)	1 (2%)	1 (2%)
Thyroid Gland	(50)	(49)	(49)	(50)
C-Cell, Adenoma	5 (10%)	3 (6%)	2 (4%)	3 (6%)
C-Cell, Carcinoma	3 (6%)		1 (2%)	
Follicular Cell, Adenoma			1 (2%)	
GENERAL BODY SYSTEM				
None				
GENITAL SYSTEM				
Clitoral Gland	(48)	(49)	(49)	(50)
Adenoma	8 (17%)	2 (4%)	1 (2%)	
Carcinoma	1 (2%)	3 (6%)	1 (2%)	1 (2%)
Ovary	(50)	(50)	(49)	(50)
Granulosa Cell Tumor Malignant		1 (2%)		
Granulosa Cell Tumor Benign		2 (4%)		
Thecoma Malignant	1 (2%)			
Uterus	(50)	(49)	(49)	(50)
Polyp Stromal	6 (12%)	8 (16%)	14 (29%)	12 (24%)
Sarcoma Stromal				1 (2%)
Bilateral, Polyp Stromal	1 (2%)			
Endometrium, Carcinoma			2 (4%)	1 (2%)
Vagina	(1)			(2)
Sarcoma	1 (100%)			
HEMATOPOIETIC SYSTEM				
Bone Marrow	(50)	(49)	(49)	(50)
Lymph Node	(6)		(4)	(2)
Lymph Node, Bronchial	(2)	(10)	(7)	(5)
Carcinoma, Metastatic, Uterus			1 (14%)	
Lymph Node, Mesenteric	(50)	(50)	(49)	(49)
Lymph Node, Mediastinal	(45)	(46)	(49)	(44)
Spleen	(50)	(49)	(49)	(50)
Sarcoma		1 (2%)		

FISCHER 344 RATS FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
INTEGUMENTARY SYSTEM				
Mammary Gland	(50)	(50)	(49)	(50)
Carcinoma	5 (10%)	3 (6%)	6 (12%)	3 (6%)
Fibroadenoma	17 (34%)	14 (28%)	17 (35%)	18 (36%)
Fibroadenoma, Multiple	8 (16%)	8 (16%)	3 (6%)	5 (10%)
Skin	(50)	(50)	(49)	(50)
Basal Cell Adenoma				1 (2%)
Basal Cell Carcinoma	1 (2%)		1 (2%)	
Sarcoma	1 (2%)			
Squamous Cell Carcinoma			1 (2%)	
Squamous Cell Papilloma			1 (2%)	
Subcutaneous Tissue, Fibroma			1 (2%)	2 (4%)
Subcutaneous Tissue, Fibrosarcoma	1 (2%)		1 (2%)	
Subcutaneous Tissue, Neural Crest Tumor	1 (2%)			1 (2%)
Subcutaneous Tissue, Sarcoma			1 (2%)	
Subcutaneous Tissue, Schwannoma Malignant			1 (2%)	
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Humerus, Osteosarcoma		1 (2%)	1 (2%)	
Skeletal Muscle	(1)	(2)	(1)	
Carcinoma, Metastatic, Uterus			1 (100%)	
Carcinoma, Metastatic, Zymbal's Gland		1 (50%)		
Osteosarcoma, Metastatic, Bone		1 (50%)		
Rhabdomyosarcoma	1 (100%)			
NERVOUS SYSTEM				
Brain	(50)	(49)	(49)	(50)
Carcinoma, Metastatic, Pituitary Gland			1 (2%)	1 (2%)
RESPIRATORY SYSTEM				
Lung	(50)	(50)	(49)	(50)
Alveolar/Bronchiolar Adenoma	1 (2%)			
Alveolar/Bronchiolar Carcinoma	1 (2%)			
Carcinoma, Metastatic, Uterus			1 (2%)	1 (2%)
Granulosa Cell Tumor Malignant, Metastatic, Ovary		1 (2%)		

FISCHER 344 RATS FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
RESPIRATORY SYSTEM - cont				
Osteosarcoma, Metastatic, Bone		1 (2%)		
Pheochromocytoma Malignant, Metastatic, Adrenal Medulla		1 (2%)		
Pleura	(20)	(25)	(25)	(28)
Carcinoma, Metastatic, Uterus			1 (4%)	
SPECIAL SENSES SYSTEM				
Zymbal's Gland		(1)		
Carcinoma		1 (100%)		
URINARY SYSTEM				
Kidney	(50)	(46)	(49)	(50)
Granulosa Cell Tumor Malignant, Metastatic, Ovary		1 (2%)		
Pelvis, Transitional Epithelium, Carcinoma				1 (2%)
Urinary Bladder	(50)	(47)	(49)	(50)
Sarcoma, Metastatic, Vagina	1 (2%)			
SYSTEMIC LESIONS				
Multiple Organs	*(50)	*(50)	*(50)	*(50)
Histiocytic Sarcoma		1 (2%)		
Leukemia Mononuclear	11 (22%)	15 (30%)	12 (24%)	14 (28%)

* Number of animals with any tissue examined microscopically

FISCHER 344 RATS FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
TUMOR SUMMARY				
Total Animals with Primary Neoplasms (b)	49	44	46	48
Total Primary Neoplasms	114	96	103	95
Total Animals with Benign Neoplasms	46	41	44	44
Total Benign Neoplasms	83	66	72	72
Total Animals with Malignant Neoplasms	25	22	25	18
Total Malignant Neoplasms	30	30	31	22
Total Animals with Metastatic Neoplasms	1	4	2	2
Total Metastatic Neoplasm	1	6	5	2
Total Animals with Malignant Neoplasms Uncertain Primary Site				
Total Animals with Neoplasms Uncertain-Benign or Malignant	1			1
Total Uncertain Neoplasms	1			1

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

FISCHER 344 RATS MALE	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
DISPOSITION SUMMARY					
Animals Initially in Study	50	50	50	50	20
Early Deaths					
Moribund Sacrifice	17	21	23	23	6
Natural Death	5	6	3	7	
Survivors					
Terminal Sacrifice	28	23	23	20	14
Other			1		
Animals Examined Microscopically	50	50	49	50	20
ALIMENTARY SYSTEM					
Intestine Large, Colon	(48)	(47)	(48)	(49)	(20)
Polyp Adenomatous		1 (2%)			
Intestine Small, Jejunum	(47)	(45)	(46)	(47)	(20)
Intestine Small, Ileum	(46)	(45)	(46)	(48)	(20)
Leiomyoma				1 (2%)	
Liver	(50)	(50)	(49)	(50)	(20)
Histiocytic Sarcoma		1 (2%)			
Histiocytic Sarcoma, Metastatic, Skeletal Muscle		1 (2%)			
Mesentery	(16)	(19)	(20)	(13)	(10)
Carcinoma, Metastatic, Urinary Bladder		1 (5%)			
Schwannoma Malignant				1 (8%)	
Oral Mucosa		(2)	(2)	(1)	
Pharyngeal, Squamous Cell Carcinoma				1 (100%)	
Pharyngeal, Squamous Cell Papilloma		1 (50%)	2 (100%)		
Pancreas	(50)	(50)	(49)	(50)	(20)
Carcinoma			1 (2%)		
Carcinoma, Metastatic, Kidney		1 (2%)			
Salivary Glands	(50)	(50)	(49)	(50)	(20)
Sarcoma			1 (2%)		
Schwannoma Malignant				1 (2%)	
Stomach, Glandular	(50)	(50)	(49)	(50)	(20)
Tongue		(1)	(2)	(1)	
Squamous Cell Papilloma		1 (100%)	1 (50%)		

FISCHER 344 RATS MALE	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
CARDIOVASCULAR SYSTEM					
Heart	(50)	(50)	(49)	(50)	(20)
ENDOCRINE SYSTEM					
Adrenal Medulla	(49)	(49)	(49)	(49)	(20)
Pheochromocytoma Malignant	2 (4%)		2 (4%)	7 (14%)	3 (15%)
Pheochromocytoma Benign	7 (14%)	8 (16%)	10 (20%)	9 (18%)	4 (20%)
Bilateral, Pheochromocytoma Benign		1 (2%)	1 (2%)	1 (2%)	2 (10%)
Islets, Pancreatic	(50)	(50)	(49)	(50)	(20)
Adenoma	3 (6%)	3 (6%)	3 (6%)	2 (4%)	1 (5%)
Carcinoma	4 (8%)	1 (2%)		4 (8%)	
Pituitary Gland	(50)	(50)	(49)	(49)	(20)
Craniopharyngeal Duct, Craniopharyngioma		1 (2%)			
Pars Distalis, Adenoma	27 (54%)	33 (66%)	25 (51%)	25 (51%)	9 (45%)
Pars Distalis, Carcinoma			1 (2%)	1 (2%)	
Thyroid Gland	(50)	(50)	(49)	(49)	(20)
C-Cell, Adenoma	7 (14%)	4 (8%)	4 (8%)	3 (6%)	2 (10%)
C-Cell, Carcinoma		2 (4%)	1 (2%)		
Follicular Cell, Carcinoma			1 (2%)	1 (2%)	
GENERAL BODY SYSTEM					
Peritoneum		(2)	(2)	(2)	
GENITAL SYSTEM					
Epididymis	(50)	(50)	(49)	(50)	(20)
Preputial Gland	(50)	(49)	(49)	(50)	(20)
Adenoma		1 (2%)	1 (2%)		
Carcinoma		1 (2%)	1 (2%)	3 (6%)	2 (10%)
Prostate, NOS	(50)	(50)	(49)	(50)	(20)
Carcinoma, Metastatic, Urinary Bladder		1 (2%)			
Ventral, Adenoma		1 (2%)			
Seminal Vesicle	(50)	(50)	(49)	(50)	(20)
Carcinoma, Metastatic, Kidney		1 (2%)			
Testes	(50)	(50)	(49)	(50)	(20)
Bilateral, Interstitial Cell, Adenoma	34 (68%)	31 (62%)	39 (80%)	29 (58%)	16 (80%)
Interstitial Cell, Adenoma	6 (12%)	10 (20%)	8 (16%)	15 (30%)	4 (20%)

FISCHER 344 RATS MALE	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
HEMATOPOIETIC SYSTEM					
Bone Marrow	(50)	(50)	(49)	(50)	(20)
Histiocytic Sarcoma		1 (2%)			
Lymph Node	(8)	(10)	(14)	(11)	(1)
Deep Cervical, Carcinoma, Metastatic, Kidney		1 (10%)			
Pancreatic, Histiocytic Sarcoma		1 (10%)			
Lymph Node, Bronchial	(7)	(8)	(18)	(17)	(7)
Lymph Node, Mandibular	(3)	(2)		(3)	(1)
Lymph Node, Mesenteric	(50)	(50)	(49)	(49)	(20)
Carcinoma, Metastatic, Urinary Bladder		1 (2%)			
Histiocytic Sarcoma, Metastatic, Skeletal Muscle		1 (2%)			
Lymph Node, Mediastinal	(48)	(45)	(44)	(48)	(16)
Carcinoma, Metastatic, Kidney		1 (2%)			
Spleen	(50)	(50)	(49)	(50)	(20)
Capsule, Carcinoma, Metastatic, Kidney		1 (2%)			
Thymus	(50)	(48)	(47)	(50)	(20)
INTEGUMENTARY SYSTEM					
Mammary Gland	(50)	(50)	(49)	(50)	(20)
Adenoma	1 (2%)				
Carcinoma	1 (2%)	1 (2%)		1 (2%)	
Fibroadenoma	2 (4%)	1 (2%)	3 (6%)	1 (2%)	
Skin	(50)	(50)	(49)	(50)	(20)
Basal Cell Adenoma	1 (2%)	2 (4%)			1 (5%)
Keratoacanthoma	1 (2%)	2 (4%)		1 (2%)	
Squamous Cell Papilloma	1 (2%)		1 (2%)		
Trichoepithelioma				1 (2%)	
Pinna, Neural Crest Tumor	1 (2%)		1 (2%)		
Subcutaneous Tissue, Fibroma	2 (4%)	5 (10%)	3 (6%)	2 (4%)	1 (5%)
Subcutaneous Tissue, Fibrosarcoma	2 (4%)			1 (2%)	
Subcutaneous Tissue, Lipoma		1 (2%)	1 (2%)		
Subcutaneous Tissue, Schwannoma Benign			1 (2%)		
Subcutaneous Tissue, Schwannoma Malignant	1 (2%)				

FISCHER 344 RATS MALE	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
MUSCULOSKELETAL SYSTEM					
Bone	(50)	(50)	(49)	(50)	(20)
Osteosarcoma				1 (2%)	
Cranium, Osteoma				1 (2%)	
Cranium, Squamous Cell Carcinoma, Metastatic, Oral Mucosa				1 (2%)	
Skeletal Muscle		(1)		(5)	
Histiocytic Sarcoma		1 (100%)			
NERVOUS SYSTEM					
Brain	(50)	(50)	(49)	(50)	(20)
Carcinoma, Metastatic, Pituitary Gland		1 (2%)	1 (2%)	1 (2%)	
RESPIRATORY SYSTEM					
Lung	(50)	(50)	(49)	(50)	(20)
Alveolar/Bronchiolar Adenoma	1 (2%)	1 (2%)	2 (4%)	1 (2%)	
Alveolar/Bronchiolar Carcinoma	1 (2%)		1 (2%)		1 (5%)
Carcinoma, Metastatic, Kidney		1 (2%)		1 (2%)	
Carcinoma, Metastatic, Urinary Bladder		1 (2%)			
Histiocytic Sarcoma, Metastatic, Liver		1 (2%)			
Histiocytic Sarcoma, Metastatic, Skeletal Muscle		1 (2%)			
Neural Crest Tumor, Metastatic, Skin			1 (2%)		
Pleura	(9)	(8)	(8)	(5)	(6)
SPECIAL SENSES SYSTEM					
Eye		(2)	(2)	(2)	(1)
Carcinoma, Metastatic, Pituitary Gland		1 (50%)			
Harderian Gland	(1)			(2)	
Squamous Cell Carcinoma, Metastatic, Oral Mucosa				1 (50%)	
Zymbal's Gland			(2)	(2)	
Carcinoma			2 (100%)	2 (100%)	

FISCHER 344 RATS MALE	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
URINARY SYSTEM					
Kidney	(50)	(50)	(49)	(50)	(20)
Histiocytic Sarcoma, Metastatic, Liver		1 (2%)			
Histiocytic Sarcoma, Metastatic, Skeletal Muscle		1 (2%)			
Bilateral, Renal Tubule, Carcinoma		1 (2%)			
Cortex, Renal Tubule, Adenoma	1 (2%)	2 (4%)	6 (12%)	9 (18%)	3 (15%)
Cortex, Renal Tubule, Adenoma, Multiple					1 (5%)
Cortex, Renal Tubule, Carcinoma			1 (2%)	4 (8%)	1 (5%)
Pelvis, Transitional Epithelium, Carcinoma	1 (2%)				
Pelvis, Transitional Epithelium, Papilloma		1 (2%)			
Renal Tubule, Adenoma					1 (5%)
Urinary Bladder	(50)	(49)	(49)	(49)	(20)
Transitional Epithelium, Carcinoma		1 (2%)			
Transitional Epithelium, Papilloma				1 (2%)	
SYSTEMIC LESIONS					
Multiple Organs	*(50)	*(50)	*(49)	*(50)	*(20)
Histiocytic Sarcoma		2 (4%)			
Leukemia Mononuclear	19 (38%)	23 (46%)	27 (55%)	25 (50%)	10 (50%)
Lymphoma Malignant			1 (2%)	1 (2%)	
Mesothelioma Malignant	1 (2%)	2 (4%)	2 (4%)	5 (10%)	

* Number of animals with any tissue examined microscopically

FISCHER 344 RATS MALE	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
TUMOR SUMMARY					
Total Animals with Primary Neoplasms (b)	49	50	49	50	20
Total Primary Neoplasms	127	145	154	161	62
Total Animals with Benign Neoplasms	47	49	49	48	20
Total Benign Neoplasms	94	111	111	102	45
Total Animals with Malignant Neoplasms	27	28	32	42	13
Total Malignant Neoplasms	32	34	42	59	17
Total Animals with Metastatic Neoplasms		5	2	4	
Total Metastatic Neoplasm		18	2	16	
Total Animals with Malignant Neoplasms Uncertain Primary Site					
Total Animals with Neoplasms Uncertain-Benign or Malignant	1		1		
Total Uncertain Neoplasms	1		1		

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

END OF REPORT

FINAL#1/RATS

REASONS FOR REMOVAL: ALL

REMOVAL DATE RANGE: ALL

TREATMENT GROUPS:

INCLUDE 001	CONTROL
INCLUDE 003	25 PPM
INCLUDE 005	50 PPM
INCLUDE 006	100 PPM
INCLUDE 008	400 PPM

NTP
LAB: Battelle Northwest
EXPERIMENT: 93026 TEST: 07
TEST TYPE: CHRONIC
CONT: N01-ES-55392
PATHOLOGIST: RENNE, ROGER
Rats(FISCHER 344)

STATISTICAL ANALYSIS OF PRIMARY TUMORS
DECALIN

CAGES FROM 0000 TO LAST CAGE
ROUTE: RESPIRATORY EXPOSURE WHOLE BODY

REPORT: PEIRPT08
DATE: 08/28/01
TIME: 09:20:15

NTP C#: C93026
CAS: 91-17-8

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 Medulla
Clitoral/Preputial Gland
Islets, Pancreatic
Kidney
Lung
Pancreas
Pituitary Gland
Prostate, NOS
Salivary Glands
Testes
Thyroid Gland
Urinary Bladder

Statistical Analysis of Primary Tumors in Rats(FISCHER 344) - DECALIN

Terminal Sacrifice at 105 weeks

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Kidney: Renal Tubule Carcinoma					
TUMOR RATES					
OVERALL (a)	0/50 (0%)	1/50 (2%)	1/49 (2%)	4/50 (8%)	1/20 (5%)
POLY-3 RATE (b)	0/42.09	1/40.74	1/42.78	4/40.81	1/18.78
POLY-3 PERCENT (g)	0.0%	2.5%	2.3%	9.8%	5.3%
TERMINAL (d)	0/28 (0%)	1/23 (4%)	0/23 (0%)	2/20 (10%)	0/14 (0%)
FIRST INCIDENCE	---	733 (T)	694	617	708
STATISTICAL TESTS					
LIFE TABLE	P=0.358	P=0.461	P=0.494	P=0.044 *	P=0.393
POLY 3	P=0.303	P=0.493	P=0.503	P=0.056	P=0.334
POLY 1.5	P=0.278	P=0.496	P=0.501	P=0.058	P=0.326
POLY 6	P=0.343	P=0.490	P=0.503	P=0.052	P=0.347
LOGISTIC REGRESSION	P=0.277	P=0.461	P=0.498	P=0.059	P=0.332
COCH-ARM / FISHERS	P=0.249	P=0.500	P=0.495	P=0.059	P=0.286

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Kidney: Renal Tubule Carcinoma or Adenoma					
TUMOR RATES					
OVERALL (a)	1/50 (2%)	3/50 (6%)	7/49 (14%)	12/50 (24%)	6/20 (30%)
POLY-3 RATE (b)	1/42.09	3/41.09	7/43.05	12/41.51	6/18.85
POLY-3 PERCENT (g)	2.4%	7.3%	16.3%	28.9%	31.8%
TERMINAL (d)	1/28 (4%)	1/23 (4%)	4/23 (17%)	7/20 (35%)	4/14 (29%)
FIRST INCIDENCE	733 (T)	644	680	617	708
STATISTICAL TESTS					
LIFE TABLE	P=0.015 *	P=0.255	P=0.022 *	P<0.001 **	P=0.005 **
POLY 3	P=0.002 **	P=0.296	P=0.031 *	P<0.001 **	P<0.001 **
POLY 1.5	P<0.001 **	P=0.300	P=0.031 *	P<0.001 **	P<0.001 **
POLY 6	P=0.003 **	P=0.291	P=0.031 *	P<0.001 **	P<0.001 **
LOGISTIC REGRESSION	P=0.004 **	P=0.289	P=0.029 *	P<0.001 **	P=0.004 **
COCH-ARM / FISHERS	P<0.001 **	P=0.309	P=0.028 *	P<0.001 **	P=0.002 **

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Lung Alveolar/Bronchiolar Adenoma					
TUMOR RATES					
OVERALL (a)	1/50 (2%)	1/50 (2%)	2/49 (4%)	1/50 (2%)	0/20 (0%)
POLY-3 RATE (b)	1/42.29	1/40.74	2/42.78	1/40.22	0/18.68
POLY-3 PERCENT (g)	2.4%	2.5%	4.7%	2.5%	0.0%
TERMINAL (d)	0/28 (0%)	1/23 (4%)	1/23 (4%)	1/20 (5%)	0/14 (0%)
FIRST INCIDENCE	680	733 (T)	694	733 (T)	---
STATISTICAL TESTS					
LIFE TABLE	P=0.416N	P=0.729	P=0.474	P=0.706	P=0.627N
POLY 3	P=0.466N	P=0.753	P=0.504	P=0.750	P=0.665N
POLY 1.5	P=0.477N	P=0.756	P=0.501	P=0.755	P=0.673N
POLY 6	P=0.448N	P=0.748	P=0.502	P=0.741	P=0.654N
LOGISTIC REGRESSION	P=0.444N	P=0.754	P=0.502	P=0.748	P=0.696N
COCH-ARM / FISHERS	P=0.490N	P=0.753N	P=0.492	P=0.753N	P=0.714N

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Lung Alveolar/Bronchiolar Carcinoma or Alveolar/Bronchiolar Adenoma					
TUMOR RATES					
OVERALL (a)	2/50 (4%)	1/50 (2%)	3/49 (6%)	1/50 (2%)	1/20 (5%)
POLY-3 RATE (b)	2/42.29	1/40.74	3/42.93	1/40.22	1/18.68
POLY-3 PERCENT (g)	4.7%	2.5%	7.0%	2.5%	5.4%
TERMINAL (d)	1/28 (4%)	1/23 (4%)	1/23 (4%)	1/20 (5%)	1/14 (7%)
FIRST INCIDENCE	680	733 (T)	694	733 (T)	733 (T)
STATISTICAL TESTS					
LIFE TABLE	P=0.643N	P=0.556N	P=0.459	P=0.595N	P=0.726N
POLY 3	P=0.646	P=0.513N	P=0.507	P=0.517N	P=0.706
POLY 1.5	P=0.630	P=0.507N	P=0.503	P=0.509N	P=0.693
POLY 6	P=0.671	P=0.522N	P=0.506	P=0.532N	P=0.724
LOGISTIC REGRESSION	P=0.664	P=0.520N	P=0.504	P=0.537N	P=0.719
COCH-ARM / FISHERS	P=0.611	P=0.500N	P=0.490	P=0.500N	P=0.642

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

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Adrenal Medulla Pheochromocytoma Benign					
TUMOR RATES					
OVERALL (a)	7/49 (14%)	9/49 (18%)	11/49 (22%)	10/49 (20%)	6/20 (30%)
POLY-3 RATE (b)	7/41.92	9/40.83	11/43.99	10/40.30	6/18.88
POLY-3 PERCENT (g)	16.7%	22.0%	25.0%	24.8%	31.8%
TERMINAL (d)	4/28 (14%)	8/23 (35%)	6/23 (26%)	6/20 (30%)	4/14 (29%)
FIRST INCIDENCE	561	589	602	600	708
STATISTICAL TESTS					
LIFE TABLE	P=0.321	P=0.258	P=0.156	P=0.139	P=0.245
POLY 3	P=0.173	P=0.368	P=0.247	P=0.261	P=0.155
POLY 1.5	P=0.151	P=0.379	P=0.238	P=0.278	P=0.137
POLY 6	P=0.215	P=0.351	P=0.250	P=0.237	P=0.185
LOGISTIC REGRESSION	P=0.206	P=0.363	P=0.234	P=0.245	P=0.173
COCH-ARM / FISHERS	P=0.129	P=0.393	P=0.217	P=0.297	P=0.121

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Adrenal Medulla Pheochromocytoma Malignant					
TUMOR RATES					
OVERALL (a)	2/49 (4%)	0/49 (0%)	2/49 (4%)	7/49 (14%)	3/20 (15%)
POLY-3 RATE (b)	2/41.35	0/40.35	2/43.10	7/40.53	3/18.75
POLY-3 PERCENT (g)	4.8%	0.0%	4.6%	17.3%	16.0%
TERMINAL (d)	1/28 (4%)	0/23 (0%)	0/23 (0%)	3/20 (15%)	2/14 (14%)
FIRST INCIDENCE	706	---	638	506	716
STATISTICAL TESTS					
LIFE TABLE	P=0.076	P=0.265N	P=0.673	P=0.044 *	P=0.227
POLY 3	P=0.034 *	P=0.242N	P=0.679N	P=0.072	P=0.166
POLY 1.5	P=0.028 *	P=0.240N	P=0.683N	P=0.075	P=0.154
POLY 6	P=0.045 *	P=0.246N	P=0.680N	P=0.066	P=0.185
LOGISTIC REGRESSION	P=0.030 *	P=0.248N	P=0.692N	P=0.074	P=0.208
COCH-ARM / FISHERS	P=0.025 *	P=0.247N	P=0.691N	P=0.080	P=0.142

NTP
LAB: Battelle Northwest
EXPERIMENT: 93026 TEST: 07
TEST TYPE: CHRONIC
CONT: N01-ES-55392
PATHOLOGIST: RENNE, ROGER

STATISTICAL ANALYSIS OF PRIMARY TUMORS
DECALIN

CAGES FROM 0000 TO LAST CAGE
ROUTE: RESPIRATORY EXPOSURE WHOLE BODY

REPORT: PEIRPT08
DATE: 08/28/01
TIME: 09:20:15

NTP C#: C93026
CAS: 91-17-8

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

Male Rats

Organ	Morphology
Adrenal Medulla	Pheochromocytoma Malignant
	Pheochromocytoma: Benign, Complex, Malignant, NOS
Clitoral/Preputial Gland	Carcinoma
Kidney: Renal Tubule	Adenoma
	Carcinoma
	Carcinoma or Adenoma
Testes	Adenoma
All Organs	Malignant Tumors

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

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Adrenal Medulla					
Pheochromocytoma: Benign, Complex, Malignant, NOS					
TUMOR RATES					
OVERALL (a)	8/49 (16%)	9/49 (18%)	13/49 (27%)	16/49 (33%)	8/20 (40%)
POLY-3 RATE (b)	8/41.92	9/40.83	13/44.46	16/41.43	8/18.95
POLY-3 PERCENT (g)	19.1%	22.0%	29.2%	38.6%	42.2%
TERMINAL (d)	5/28 (18%)	8/23 (35%)	6/23 (26%)	8/20 (40%)	5/14 (36%)
FIRST INCIDENCE	561	589	602	506	708
STATISTICAL TESTS					
LIFE TABLE	P=0.134	P=0.347	P=0.117	P=0.014 *	P=0.115
POLY 3	P=0.038 *	P=0.476	P=0.196	P=0.038 *	P=0.049 *
POLY 1.5	P=0.029 *	P=0.487	P=0.184	P=0.042 *	P=0.041 *
POLY 6	P=0.056	P=0.458	P=0.205	P=0.032 *	P=0.065
LOGISTIC REGRESSION	P=0.044 *	P=0.468	P=0.176	P=0.036 *	P=0.067
COCH-ARM / FISHERS	P=0.023 *	P=0.500	P=0.162	P=0.049 *	P=0.039 *

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Bone					
Osteosarcoma or Osteoma					
TUMOR RATES	#	#	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	2/50 (4%)	0/20 (0%)
POLY-3 RATE (b)	0/42.09	0/40.74	0/42.63	2/40.40	0/18.68
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	5.0%	0.0%
TERMINAL (d)	0/28 (0%)	0/23 (0%)	0/23 (0%)	1/20 (5%)	0/14 (0%)
FIRST INCIDENCE	---	---	---	688	---
STATISTICAL TESTS					
LIFE TABLE	P=0.758	(e)	(e)	P=0.184	(e)
POLY 3	P=0.795	(e)	(e)	P=0.228	(e)
POLY 1.5	P=0.776	(e)	(e)	P=0.232	(e)
POLY 6	P=0.819	(e)	(e)	P=0.220	(e)
LOGISTIC REGRESSION	P=0.756	(e)	(e)	P=0.218	(e)
COCH-ARM / FISHERS	P=0.749	(e)	(e)	P=0.247	(e)

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Clitoral/Preputial Gland Carcinoma					
TUMOR RATES					
OVERALL (a)	0/50 (0%)	1/49 (2%)	1/49 (2%)	3/50 (6%)	2/20 (10%)
POLY-3 RATE (b)	0/42.09	1/40.12	1/42.97	3/41.09	2/18.68
POLY-3 PERCENT (g)	0.0%	2.5%	2.3%	7.3%	10.7%
TERMINAL (d)	0/28 (0%)	0/23 (0%)	0/23 (0%)	2/20 (10%)	2/14 (14%)
FIRST INCIDENCE	---	638	638	379	733 (T)
STATISTICAL TESTS					
LIFE TABLE	P=0.082	P=0.495	P=0.510	P=0.085	P=0.103
POLY 3	P=0.053	P=0.490	P=0.504	P=0.114	P=0.075
POLY 1.5	P=0.047 *	P=0.493	P=0.502	P=0.117	P=0.070
POLY 6	P=0.062	P=0.488	P=0.504	P=0.108	P=0.082
LOGISTIC REGRESSION	P=0.029 *	P=0.507	P=0.441	P=0.131	P=0.103
COCH-ARM / FISHERS	P=0.042 *	P=0.495	P=0.495	P=0.121	P=0.079

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Clitoral/Preputial Gland Carcinoma or Adenoma					
TUMOR RATES					
OVERALL (a)	0/50 (0%)	2/49 (4%)	2/49 (4%)	3/50 (6%)	2/20 (10%)
POLY-3 RATE (b)	0/42.09	2/40.12	2/42.97	3/41.09	2/18.68
POLY-3 PERCENT (g)	0.0%	5.0%	4.7%	7.3%	10.7%
TERMINAL (d)	0/28 (0%)	1/23 (4%)	1/23 (4%)	2/20 (10%)	2/14 (14%)
FIRST INCIDENCE	---	638	638	379	733 (T)
STATISTICAL TESTS					
LIFE TABLE	P=0.170	P=0.216	P=0.223	P=0.085	P=0.103
POLY 3	P=0.122	P=0.226	P=0.241	P=0.114	P=0.075
POLY 1.5	P=0.111	P=0.229	P=0.239	P=0.117	P=0.070
POLY 6	P=0.140	P=0.223	P=0.241	P=0.108	P=0.082
LOGISTIC REGRESSION	P=0.087	P=0.230	P=0.228	P=0.131	P=0.103
COCH-ARM / FISHERS	P=0.099	P=0.242	P=0.242	P=0.121	P=0.079

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

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Islets, Pancreatic Adenoma					
TUMOR RATES					
OVERALL (a)	3/50 (6%)	3/50 (6%)	3/49 (6%)	2/50 (4%)	1/20 (5%)
POLY-3 RATE (b)	3/42.52	3/40.88	3/42.90	2/40.71	1/18.68
POLY-3 PERCENT (g)	7.1%	7.3%	7.0%	4.9%	5.4%
TERMINAL (d)	1/28 (4%)	1/23 (4%)	1/23 (4%)	0/20 (0%)	1/14 (7%)
FIRST INCIDENCE	658	708	680	649	733 (T)
STATISTICAL TESTS					
LIFE TABLE	P=0.445N	P=0.609	P=0.628	P=0.574N	P=0.557N
POLY 3	P=0.535N	P=0.645	P=0.659N	P=0.520N	P=0.624N
POLY 1.5	P=0.549N	P=0.652	P=0.661N	P=0.510N	P=0.638N
POLY 6	P=0.512N	P=0.634	P=0.663N	P=0.536N	P=0.603N
LOGISTIC REGRESSION	P=0.521N	P=0.644	P=0.661N	P=0.505N	P=0.634N
COCH-ARM / FISHERS	P=0.565N	P=0.661N	P=0.651	P=0.500N	P=0.749

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Islets, Pancreatic Carcinoma					
TUMOR RATES					
OVERALL (a)	4/50 (8%)	1/50 (2%)	0/49 (0%)	4/50 (8%)	0/20 (0%)
POLY-3 RATE (b)	4/43.31	1/40.74	0/42.63	4/40.40	0/18.68
POLY-3 PERCENT (g)	9.2%	2.5%	0.0%	9.9%	0.0%
TERMINAL (d)	2/28 (7%)	1/23 (4%)	0/23 (0%)	3/20 (15%)	0/14 (0%)
FIRST INCIDENCE	421	733 (T)	---	688	---
STATISTICAL TESTS					
LIFE TABLE	P=0.301N	P=0.224N	P=0.077N	P=0.509	P=0.203N
POLY 3	P=0.326N	P=0.197N	P=0.062N	P=0.605	P=0.209N
POLY 1.5	P=0.343N	P=0.190N	P=0.062N	P=0.622	P=0.220N
POLY 6	P=0.298N	P=0.207N	P=0.063N	P=0.580	P=0.194N
LOGISTIC REGRESSION	P=0.368N	P=0.166N	P=0.099N	P=0.640N	P=0.280N
COCH-ARM / FISHERS	P=0.364N	P=0.181N	P=0.061N	P=0.643N	P=0.251N

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

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Islets, Pancreatic Carcinoma or Adenoma					
TUMOR RATES					
OVERALL (a)	7/50 (14%)	4/50 (8%)	3/49 (6%)	6/50 (12%)	1/20 (5%)
POLY-3 RATE (b)	7/43.74	4/40.88	3/42.90	6/40.88	1/18.68
POLY-3 PERCENT (g)	16.0%	9.8%	7.0%	14.7%	5.4%
TERMINAL (d)	3/28 (11%)	2/23 (9%)	1/23 (4%)	3/20 (15%)	1/14 (7%)
FIRST INCIDENCE	421	708	680	649	733 (T)
STATISTICAL TESTS					
LIFE TABLE	P=0.236N	P=0.339N	P=0.200N	P=0.573	P=0.192N
POLY 3	P=0.292N	P=0.299N	P=0.163N	P=0.553N	P=0.227N
POLY 1.5	P=0.313N	P=0.284N	P=0.163N	P=0.530N	P=0.241N
POLY 6	P=0.260N	P=0.321N	P=0.170N	P=0.586N	P=0.207N
LOGISTIC REGRESSION	P=0.315N	P=0.262N	P=0.193N	P=0.499N	P=0.298N
COCH-ARM / FISHERS	P=0.335N	P=0.262N	P=0.167N	P=0.500N	P=0.268N

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Kidney: Renal Tubule Adenoma					
TUMOR RATES					
OVERALL (a)	1/50 (2%)	2/50 (4%)	6/49 (12%)	9/50 (18%)	5/20 (25%)
POLY-3 RATE (b)	1/42.09	2/41.09	6/42.90	9/41.34	5/18.75
POLY-3 PERCENT (g)	2.4%	4.9%	14.0%	21.8%	26.7%
TERMINAL (d)	1/28 (4%)	0/23 (0%)	4/23 (17%)	5/20 (25%)	4/14 (29%)
FIRST INCIDENCE	733 (T)	644	680	617	716
STATISTICAL TESTS					
LIFE TABLE	P=0.024 *	P=0.453	P=0.038 *	P=0.004 **	P=0.012 *
POLY 3	P=0.005 **	P=0.492	P=0.058	P=0.007 **	P=0.004 **
POLY 1.5	P=0.004 **	P=0.495	P=0.057	P=0.007 **	P=0.003 **
POLY 6	P=0.007 **	P=0.488	P=0.057	P=0.006 **	P=0.005 **
LOGISTIC REGRESSION	P=0.009 **	P=0.489	P=0.051	P=0.007 **	P=0.012 *
COCH-ARM / FISHERS	P=0.003 **	P=0.500	P=0.053	P=0.008 **	P=0.006 **

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

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Mammary Gland					
Carcinoma or Adenoma					
TUMOR RATES	#	#	#	#	#
OVERALL (a)	2/50 (4%)	1/50 (2%)	0/50 (0%)	1/50 (2%)	0/20 (0%)
POLY-3 RATE (b)	2/42.09	1/40.74	0/42.63	1/40.40	0/18.68
POLY-3 PERCENT (g)	4.8%	2.5%	0.0%	2.5%	0.0%
TERMINAL (d)	2/28 (7%)	1/23 (4%)	0/23 (0%)	0/20 (0%)	0/14 (0%)
FIRST INCIDENCE	733 (T)	733 (T)	---	687	---
STATISTICAL TESTS					
LIFE TABLE	P=0.386N	P=0.569N	P=0.282N	P=0.588N	P=0.400N
POLY 3	P=0.434N	P=0.511N	P=0.234N	P=0.514N	P=0.428N
POLY 1.5	P=0.440N	P=0.507N	P=0.236N	P=0.508N	P=0.440N
POLY 6	P=0.423N	P=0.518N	P=0.235N	P=0.526N	P=0.410N
LOGISTIC REGRESSION	P=0.397N	P=0.569N	(e)	P=0.542N	(e)
COCH-ARM / FISHERS	P=0.445N	P=0.500N	P=0.247N	P=0.500N	P=0.507N

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Mammary Gland					
Fibroadenoma					
TUMOR RATES	#	#	#	#	#
OVERALL (a)	2/50 (4%)	1/50 (2%)	3/50 (6%)	1/50 (2%)	0/20 (0%)
POLY-3 RATE (b)	2/42.11	1/40.74	3/42.88	1/40.30	0/18.68
POLY-3 PERCENT (g)	4.8%	2.5%	7.0%	2.5%	0.0%
TERMINAL (d)	1/28 (4%)	1/23 (4%)	2/23 (9%)	0/20 (0%)	0/14 (0%)
FIRST INCIDENCE	728	733 (T)	666	715	---
STATISTICAL TESTS					
LIFE TABLE	P=0.295N	P=0.572N	P=0.429	P=0.602N	P=0.406N
POLY 3	P=0.325N	P=0.512N	P=0.508	P=0.515N	P=0.428N
POLY 1.5	P=0.337N	P=0.507N	P=0.503	P=0.508N	P=0.440N
POLY 6	P=0.306N	P=0.519N	P=0.508	P=0.528N	P=0.411N
LOGISTIC REGRESSION	P=0.300N	P=0.543N	P=0.495	P=0.562N	P=0.390N
COCH-ARM / FISHERS	P=0.351N	P=0.500N	P=0.500	P=0.500N	P=0.507N

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		

Mammary Gland
Fibroma, Fibroadenoma or Adenoma

TUMOR RATES	#	#	#	#	#
OVERALL (a)	3/50 (6%)	1/50 (2%)	3/50 (6%)	1/50 (2%)	0/20 (0%)
POLY-3 RATE (b)	3/42.11	1/40.74	3/42.88	1/40.30	0/18.68
POLY-3 PERCENT (g)	7.1%	2.5%	7.0%	2.5%	0.0%
TERMINAL (d)	2/28 (7%)	1/23 (4%)	2/23 (9%)	0/20 (0%)	0/14 (0%)
FIRST INCIDENCE	728	733 (T)	666	715	---
STATISTICAL TESTS					
LIFE TABLE	P=0.226N	P=0.382N	P=0.584	P=0.422N	P=0.271N
POLY 3	P=0.248N	P=0.317N	P=0.655N	P=0.321N	P=0.291N
POLY 1.5	P=0.259N	P=0.312N	P=0.659N	P=0.313N	P=0.304N
POLY 6	P=0.231N	P=0.323N	P=0.656N	P=0.333N	P=0.272N
LOGISTIC REGRESSION	P=0.225N	P=0.350N	P=0.655	P=0.375N	P=0.256N
COCH-ARM / FISHERS	P=0.270N	P=0.309N	P=0.661N	P=0.309N	P=0.358N

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		

Mammary Gland
Fibroma, Fibroadenoma, Carcinoma, or Adenoma

TUMOR RATES	#	#	#	#	#
OVERALL (a)	4/50 (8%)	2/50 (4%)	3/50 (6%)	2/50 (4%)	0/20 (0%)
POLY-3 RATE (b)	4/42.11	2/40.74	3/42.88	2/40.47	0/18.68
POLY-3 PERCENT (g)	9.5%	4.9%	7.0%	4.9%	0.0%
TERMINAL (d)	3/28 (11%)	2/23 (9%)	2/23 (9%)	0/20 (0%)	0/14 (0%)
FIRST INCIDENCE	728	733 (T)	666	687	---
STATISTICAL TESTS					
LIFE TABLE	P=0.163N	P=0.433N	P=0.592N	P=0.471N	P=0.186N
POLY 3	P=0.181N	P=0.352N	P=0.490N	P=0.355N	P=0.201N
POLY 1.5	P=0.193N	P=0.346N	P=0.496N	P=0.347N	P=0.215N
POLY 6	P=0.163N	P=0.360N	P=0.490N	P=0.369N	P=0.183N
LOGISTIC REGRESSION	P=0.164N	P=0.401N	P=0.517N	P=0.403N	P=0.172N
COCH-ARM / FISHERS	P=0.206N	P=0.339N	P=0.500N	P=0.339N	P=0.251N

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		

Oral Cavity (Oral Mucosa, Tongue, Pharynx, Tooth, Gingiva)
Papilloma Squamous or Papilloma

TUMOR RATES	#	#	#	#	#
OVERALL (a)	0/50 (0%)	2/50 (4%)	3/50 (6%)	0/50 (0%)	0/20 (0%)
POLY-3 RATE (b)	0/42.09	2/40.91	3/42.63	0/40.22	0/18.68
POLY-3 PERCENT (g)	0.0%	4.9%	7.0%	0.0%	0.0%
TERMINAL (d)	0/28 (0%)	1/23 (4%)	3/23 (13%)	0/20 (0%)	0/14 (0%)
FIRST INCIDENCE	---	688	733 (T)	---	---
STATISTICAL TESTS					
LIFE TABLE	P=0.382N	P=0.212	P=0.087	(e)	(e)
POLY 3	P=0.430N	P=0.230	P=0.120	(e)	(e)
POLY 1.5	P=0.439N	P=0.233	P=0.119	(e)	(e)
POLY 6	P=0.416N	P=0.227	P=0.119	(e)	(e)
LOGISTIC REGRESSION	P=0.389N	P=0.227	P=0.087	(e)	(e)
COCH-ARM / FISHERS	P=0.449N	P=0.247	P=0.121	(e)	(e)

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		

Oral Cavity (Oral Mucosa, Tongue, Pharynx, Tooth, Gingiva)
Squamous Cell Carcinoma, Papilloma Squamous, or Papilloma

TUMOR RATES	#	#	#	#	#
OVERALL (a)	0/50 (0%)	2/50 (4%)	3/50 (6%)	1/50 (2%)	0/20 (0%)
POLY-3 RATE (b)	0/42.09	2/40.91	3/42.63	1/40.43	0/18.68
POLY-3 PERCENT (g)	0.0%	4.9%	7.0%	2.5%	0.0%
TERMINAL (d)	0/28 (0%)	1/23 (4%)	3/23 (13%)	0/20 (0%)	0/14 (0%)
FIRST INCIDENCE	---	688	733 (T)	679	---
STATISTICAL TESTS					
LIFE TABLE	P=0.409N	P=0.212	P=0.087	P=0.477	(e)
POLY 3	P=0.459N	P=0.230	P=0.120	P=0.492	(e)
POLY 1.5	P=0.473N	P=0.233	P=0.119	P=0.496	(e)
POLY 6	P=0.437N	P=0.227	P=0.119	P=0.486	(e)
LOGISTIC REGRESSION	P=0.434N	P=0.227	P=0.087	P=0.500	(e)
COCH-ARM / FISHERS	P=0.490N	P=0.247	P=0.121	P=0.500	(e)

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Oral Mucosa Squamous Cell Papilloma					
TUMOR RATES	#	#	#	#	#
OVERALL (a)	0/50 (0%)	1/50 (2%)	2/50 (4%)	0/50 (0%)	0/20 (0%)
POLY-3 RATE (b)	0/42.09	1/40.91	2/42.63	0/40.22	0/18.68
POLY-3 PERCENT (g)	0.0%	2.4%	4.7%	0.0%	0.0%
TERMINAL (d)	0/28 (0%)	0/23 (0%)	2/23 (9%)	0/20 (0%)	0/14 (0%)
FIRST INCIDENCE	---	688	733 (T)	---	---
STATISTICAL TESTS					
LIFE TABLE	P=0.526N	P=0.488	P=0.195	(e)	(e)
POLY 3	P=0.587N	P=0.494	P=0.240	(e)	(e)
POLY 1.5	P=0.593N	P=0.497	P=0.238	(e)	(e)
POLY 6	P=0.577N	P=0.491	P=0.238	(e)	(e)
LOGISTIC REGRESSION	P=0.549N	P=0.498	P=0.195	(e)	(e)
COCH-ARM / FISHERS	P=0.599N	P=0.500	P=0.247	(e)	(e)

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Pituitary Gland: Pars Distalis or Unspecified Site Adenoma					
TUMOR RATES					
OVERALL (a)	27/50 (54%)	33/50 (66%)	25/49 (51%)	25/49 (51%)	9/20 (45%)
POLY-3 RATE (b)	27/46.10	33/45.82	25/45.02	25/44.21	9/19.11
POLY-3 PERCENT (g)	58.6%	72.0%	55.5%	56.5%	47.1%
TERMINAL (d)	14/28 (50%)	14/23 (61%)	14/23 (61%)	8/19 (42%)	5/14 (36%)
FIRST INCIDENCE	561	509	574	506	694
STATISTICAL TESTS					
LIFE TABLE	P=0.061N	P=0.097	P=0.513	P=0.340	P=0.152N
POLY 3	P=0.121N	P=0.120	P=0.467N	P=0.508N	P=0.280N
POLY 1.5	P=0.146N	P=0.131	P=0.452N	P=0.488N	P=0.306N
POLY 6	P=0.087N	P=0.109	P=0.521N	P=0.536N	P=0.243N
LOGISTIC REGRESSION	P=0.137N	P=0.135	P=0.415N	P=0.482N	P=0.297N
COCH-ARM / FISHERS	P=0.179N	P=0.154	P=0.462N	P=0.462N	P=0.339N

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

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Pituitary Gland: Pars Distalis or Unspecified Site					
Carcinoma or Adenoma					
TUMOR RATES					
OVERALL (a)	27/50 (54%)	33/50 (66%)	26/49 (53%)	26/49 (53%)	9/20 (45%)
POLY-3 RATE (b)	27/46.10	33/45.82	26/45.42	26/44.21	9/19.11
POLY-3 PERCENT (g)	58.6%	72.0%	57.2%	58.8%	47.1%
TERMINAL (d)	14/28 (50%)	14/23 (61%)	14/23 (61%)	9/19 (47%)	5/14 (36%)
FIRST INCIDENCE	561	509	574	506	694
STATISTICAL TESTS					
LIFE TABLE	P=0.060N	P=0.097	P=0.450	P=0.275	P=0.152N
POLY 3	P=0.121N	P=0.120	P=0.534N	P=0.577	P=0.280N
POLY 1.5	P=0.146N	P=0.131	P=0.525N	P=0.573N	P=0.306N
POLY 6	P=0.087N	P=0.109	P=0.576N	P=0.552	P=0.243N
LOGISTIC REGRESSION	P=0.137N	P=0.135	P=0.505N	P=0.568N	P=0.297N
COCH-ARM / FISHERS	P=0.177N	P=0.154	P=0.543N	P=0.543N	P=0.339N

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Skin					
Basal Cell Adenoma					
TUMOR RATES	#	#	#	#	#
OVERALL (a)	1/50 (2%)	2/50 (4%)	0/50 (0%)	0/50 (0%)	1/20 (5%)
POLY-3 RATE (b)	1/42.50	2/40.97	0/42.63	0/40.22	1/18.68
POLY-3 PERCENT (g)	2.4%	4.9%	0.0%	0.0%	5.4%
TERMINAL (d)	0/28 (0%)	1/23 (4%)	0/23 (0%)	0/20 (0%)	1/14 (7%)
FIRST INCIDENCE	614	670	---	---	733 (T)
STATISTICAL TESTS					
LIFE TABLE	P=0.563	P=0.466	P=0.491N	P=0.500N	P=0.587
POLY 3	P=0.519	P=0.487	P=0.499N	P=0.511N	P=0.569
POLY 1.5	P=0.514	P=0.493	P=0.500N	P=0.506N	P=0.558
POLY 6	P=0.529	P=0.480	P=0.502N	P=0.520N	P=0.585
LOGISTIC REGRESSION	P=0.514	P=0.503	P=0.482N	P=0.485N	P=0.527
COCH-ARM / FISHERS	P=0.508	P=0.500	P=0.500N	P=0.500N	P=0.493

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		

Skin
Basal Cell Adenoma, Basosquamous Tumor Benign, or Trichoepithelioma

TUMOR RATES	#	#	#	#	#
OVERALL (a)	1/50 (2%)	2/50 (4%)	0/50 (0%)	1/50 (2%)	1/20 (5%)
POLY-3 RATE (b)	1/42.50	2/40.97	0/42.63	1/40.22	1/18.68
POLY-3 PERCENT (g)	2.4%	4.9%	0.0%	2.5%	5.4%
TERMINAL (d)	0/28 (0%)	1/23 (4%)	0/23 (0%)	1/20 (5%)	1/14 (7%)
FIRST INCIDENCE	614	670	---	733 (T)	733 (T)
STATISTICAL TESTS					
LIFE TABLE	P=0.536	P=0.466	P=0.491N	P=0.724	P=0.587
POLY 3	P=0.492	P=0.487	P=0.499N	P=0.749	P=0.569
POLY 1.5	P=0.481	P=0.493	P=0.500N	P=0.754	P=0.558
POLY 6	P=0.510	P=0.480	P=0.502N	P=0.739	P=0.585
LOGISTIC REGRESSION	P=0.486	P=0.503	P=0.482N	P=0.761N	P=0.527
COCH-ARM / FISHERS	P=0.468	P=0.500	P=0.500N	P=0.753N	P=0.493

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		

Skin
Basal Cell Carcinoma, Basal Cell Adenoma, Basosquamous Tumor (benign, malignant or NOS), or Trichoepithelioma

TUMOR RATES	#	#	#	#	#
OVERALL (a)	1/50 (2%)	2/50 (4%)	0/50 (0%)	1/50 (2%)	1/20 (5%)
POLY-3 RATE (b)	1/42.50	2/40.97	0/42.63	1/40.22	1/18.68
POLY-3 PERCENT (g)	2.4%	4.9%	0.0%	2.5%	5.4%
TERMINAL (d)	0/28 (0%)	1/23 (4%)	0/23 (0%)	1/20 (5%)	1/14 (7%)
FIRST INCIDENCE	614	670	---	733 (T)	733 (T)
STATISTICAL TESTS					
LIFE TABLE	P=0.536	P=0.466	P=0.491N	P=0.724	P=0.587
POLY 3	P=0.492	P=0.487	P=0.499N	P=0.749	P=0.569
POLY 1.5	P=0.481	P=0.493	P=0.500N	P=0.754	P=0.558
POLY 6	P=0.510	P=0.480	P=0.502N	P=0.739	P=0.585
LOGISTIC REGRESSION	P=0.486	P=0.503	P=0.482N	P=0.761N	P=0.527
COCH-ARM / FISHERS	P=0.468	P=0.500	P=0.500N	P=0.753N	P=0.493

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		

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)	3/50 (6%)	3/50 (6%)	1/50 (2%)	2/50 (4%)	1/20 (5%)
POLY-3 RATE (b)	3/42.70	3/41.61	1/42.63	2/40.22	1/18.68
POLY-3 PERCENT (g)	7.0%	7.2%	2.4%	5.0%	5.4%
TERMINAL (d)	1/28 (4%)	1/23 (4%)	1/23 (4%)	2/20 (10%)	1/14 (7%)
FIRST INCIDENCE	614	525	733 (T)	733 (T)	733 (T)
STATISTICAL TESTS					
LIFE TABLE	P=0.531N	P=0.615	P=0.338N	P=0.604N	P=0.575N
POLY 3	P=0.612N	P=0.651	P=0.305N	P=0.527N	P=0.625N
POLY 1.5	P=0.621N	P=0.656	P=0.306N	P=0.514N	P=0.639N
POLY 6	P=0.594N	P=0.643	P=0.311N	P=0.550N	P=0.605N
LOGISTIC REGRESSION	P=0.622N	P=0.652N	P=0.305N	P=0.520N	P=0.663N
COCH-ARM / FISHERS	P=0.633N	P=0.661N	P=0.309N	P=0.500N	P=0.749

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		

Skin
Fibroma

TUMOR RATES	#	#	#	#	#
OVERALL (a)	2/50 (4%)	5/50 (10%)	3/50 (6%)	2/50 (4%)	1/20 (5%)
POLY-3 RATE (b)	2/42.09	5/41.68	3/42.63	2/40.90	1/18.68
POLY-3 PERCENT (g)	4.8%	12.0%	7.0%	4.9%	5.4%
TERMINAL (d)	2/28 (7%)	2/23 (9%)	3/23 (13%)	1/20 (5%)	1/14 (7%)
FIRST INCIDENCE	733 (T)	532	733 (T)	506	733 (T)
STATISTICAL TESTS					
LIFE TABLE	P=0.428N	P=0.174	P=0.409	P=0.601	P=0.735
POLY 3	P=0.503N	P=0.211	P=0.506	P=0.684	P=0.707
POLY 1.5	P=0.519N	P=0.213	P=0.502	P=0.689	P=0.694
POLY 6	P=0.477N	P=0.208	P=0.503	P=0.674	P=0.726
LOGISTIC REGRESSION	P=0.515N	P=0.209	P=0.409	P=0.694N	P=0.735
COCH-ARM / FISHERS	P=0.537N	P=0.218	P=0.500	P=0.691N	P=0.642

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Skin Fibroma, Fibrosarcoma, Sarcoma, Myxoma, Myxosarcoma, or Fibrous Histiocytoma					
TUMOR RATES	#	#	#	#	#
OVERALL (a)	4/50 (8%)	5/50 (10%)	3/50 (6%)	3/50 (6%)	1/20 (5%)
POLY-3 RATE (b)	4/42.94	5/41.68	3/42.63	3/40.90	1/18.68
POLY-3 PERCENT (g)	9.3%	12.0%	7.0%	7.3%	5.4%
TERMINAL (d)	3/28 (11%)	2/23 (9%)	3/23 (13%)	2/20 (10%)	1/14 (7%)
FIRST INCIDENCE	387	532	733 (T)	506	733 (T)
STATISTICAL TESTS					
LIFE TABLE	P=0.315N	P=0.427	P=0.594N	P=0.630N	P=0.453N
POLY 3	P=0.379N	P=0.481	P=0.504N	P=0.527N	P=0.494N
POLY 1.5	P=0.395N	P=0.487	P=0.505N	P=0.515N	P=0.511N
POLY 6	P=0.352N	P=0.476	P=0.510N	P=0.546N	P=0.467N
LOGISTIC REGRESSION	P=0.415N	P=0.513	P=0.500N	P=0.479N	P=0.577N
COCH-ARM / FISHERS	P=0.412N	P=0.500	P=0.500N	P=0.500N	P=0.556N

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Skin Fibrosarcoma					
TUMOR RATES	#	#	#	#	#
OVERALL (a)	2/50 (4%)	0/50 (0%)	0/50 (0%)	1/50 (2%)	0/20 (0%)
POLY-3 RATE (b)	2/42.94	0/40.74	0/42.63	1/40.22	0/18.68
POLY-3 PERCENT (g)	4.7%	0.0%	0.0%	2.5%	0.0%
TERMINAL (d)	1/28 (4%)	0/23 (0%)	0/23 (0%)	1/20 (5%)	0/14 (0%)
FIRST INCIDENCE	387	---	---	733 (T)	---
STATISTICAL TESTS					
LIFE TABLE	P=0.502N	P=0.264N	P=0.264N	P=0.580N	P=0.428N
POLY 3	P=0.533N	P=0.249N	P=0.238N	P=0.523N	P=0.433N
POLY 1.5	P=0.539N	P=0.244N	P=0.239N	P=0.513N	P=0.444N
POLY 6	P=0.522N	P=0.254N	P=0.240N	P=0.538N	P=0.417N
LOGISTIC REGRESSION	P=0.580N	P=0.198N	P=0.186N	P=0.475N	P=0.536N
COCH-ARM / FISHERS	P=0.546N	P=0.247N	P=0.247N	P=0.500N	P=0.507N

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Skin Keratoacanthoma					
TUMOR RATES	#	#	#	#	#
OVERALL (a)	1/50 (2%)	2/50 (4%)	0/50 (0%)	1/50 (2%)	0/20 (0%)
POLY-3 RATE (b)	1/42.29	2/41.61	0/42.63	1/40.22	0/18.68
POLY-3 PERCENT (g)	2.4%	4.8%	0.0%	2.5%	0.0%
TERMINAL (d)	0/28 (0%)	0/23 (0%)	0/23 (0%)	1/20 (5%)	0/14 (0%)
FIRST INCIDENCE	680	525	---	733 (T)	---
STATISTICAL TESTS					
LIFE TABLE	P=0.445N	P=0.487	P=0.500N	P=0.706	P=0.627N
POLY 3	P=0.480N	P=0.494	P=0.498N	P=0.750	P=0.665N
POLY 1.5	P=0.486N	P=0.497	P=0.500N	P=0.755	P=0.673N
POLY 6	P=0.469N	P=0.491	P=0.500N	P=0.741	P=0.654N
LOGISTIC REGRESSION	P=0.511N	P=0.524	P=0.500N	P=0.748	P=0.696N
COCH-ARM / FISHERS	P=0.492N	P=0.500	P=0.500N	P=0.753N	P=0.714N

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Skin Squamous Cell Papilloma, Papilloma, Squamous Cell Carcinoma or Keratoacanthoma					
TUMOR RATES	#	#	#	#	#
OVERALL (a)	2/50 (4%)	2/50 (4%)	1/50 (2%)	1/50 (2%)	0/20 (0%)
POLY-3 RATE (b)	2/42.29	2/41.61	1/42.63	1/40.22	0/18.68
POLY-3 PERCENT (g)	4.7%	4.8%	2.4%	2.5%	0.0%
TERMINAL (d)	1/28 (4%)	0/23 (0%)	1/23 (4%)	1/20 (5%)	0/14 (0%)
FIRST INCIDENCE	680	525	733 (T)	733 (T)	---
STATISTICAL TESTS					
LIFE TABLE	P=0.299N	P=0.664	P=0.546N	P=0.595N	P=0.395N
POLY 3	P=0.328N	P=0.689	P=0.497N	P=0.517N	P=0.429N
POLY 1.5	P=0.335N	P=0.691	P=0.499N	P=0.509N	P=0.441N
POLY 6	P=0.315N	P=0.685	P=0.501N	P=0.532N	P=0.413N
LOGISTIC REGRESSION	P=0.343N	P=0.684N	P=0.500N	P=0.537N	P=0.434N
COCH-ARM / FISHERS	P=0.342N	P=0.691N	P=0.500N	P=0.500N	P=0.507N

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Skin					
Squamous Cell Papilloma, Papilloma, or Keratoacanthoma					
TUMOR RATES	#	#	#	#	#
OVERALL (a)	2/50 (4%)	2/50 (4%)	1/50 (2%)	1/50 (2%)	0/20 (0%)
POLY-3 RATE (b)	2/42.29	2/41.61	1/42.63	1/40.22	0/18.68
POLY-3 PERCENT (g)	4.7%	4.8%	2.4%	2.5%	0.0%
TERMINAL (d)	1/28 (4%)	0/23 (0%)	1/23 (4%)	1/20 (5%)	0/14 (0%)
FIRST INCIDENCE	680	525	733 (T)	733 (T)	---
STATISTICAL TESTS					
LIFE TABLE	P=0.299N	P=0.664	P=0.546N	P=0.595N	P=0.395N
POLY 3	P=0.328N	P=0.689	P=0.497N	P=0.517N	P=0.429N
POLY 1.5	P=0.335N	P=0.691	P=0.499N	P=0.509N	P=0.441N
POLY 6	P=0.315N	P=0.685	P=0.501N	P=0.532N	P=0.413N
LOGISTIC REGRESSION	P=0.343N	P=0.684N	P=0.500N	P=0.537N	P=0.434N
COCH-ARM / FISHERS	P=0.342N	P=0.691N	P=0.500N	P=0.500N	P=0.507N

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Testes					
Adenoma					
TUMOR RATES					
OVERALL (a)	40/50 (80%)	41/50 (82%)	47/49 (96%)	44/50 (88%)	20/20 (100%)
POLY-3 RATE (b)	40/45.00	41/46.57	47/48.20	44/48.10	20/20.00
POLY-3 PERCENT (g)	88.9%	88.0%	97.5%	91.5%	100.0%
TERMINAL (d)	27/28 (96%)	21/23 (91%)	23/23 (100%)	19/20 (95%)	14/14 (100%)
FIRST INCIDENCE	581	532	596	419	433
STATISTICAL TESTS					
LIFE TABLE	P=0.347N	P=0.175	P=0.037 *	P=0.022 *	P=0.550N
POLY 3	P=0.089	P=0.591N	P=0.056	P=0.467	P=0.087
POLY 1.5	P=0.053	P=0.598	P=0.030 *	P=0.325	P=0.052
POLY 6	P=0.177	P=0.470N	P=0.145	P=0.688	P=0.210
LOGISTIC REGRESSION	P=0.029 *	P=0.341	P=0.060	P=0.111	P=0.049 *
COCH-ARM / FISHERS	P=0.031 *	P=0.500	P=0.015 *	P=0.207	P=0.026 *

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Thyroid Gland: C-Cell Adenoma					
TUMOR RATES					
OVERALL (a)	7/50 (14%)	4/50 (8%)	4/49 (8%)	3/49 (6%)	2/20 (10%)
POLY-3 RATE (b)	7/42.70	4/40.97	4/43.27	3/39.85	2/18.78
POLY-3 PERCENT (g)	16.4%	9.8%	9.2%	7.5%	10.7%
TERMINAL (d)	5/28 (18%)	1/23 (4%)	2/23 (9%)	1/20 (5%)	1/14 (7%)
FIRST INCIDENCE	581	694	602	617	708
STATISTICAL TESTS					
LIFE TABLE	P=0.381N	P=0.352N	P=0.330N	P=0.270N	P=0.344N
POLY 3	P=0.487N	P=0.283N	P=0.251N	P=0.184N	P=0.422N
POLY 1.5	P=0.505N	P=0.274N	P=0.258N	P=0.176N	P=0.447N
POLY 6	P=0.455N	P=0.295N	P=0.251N	P=0.199N	P=0.384N
LOGISTIC REGRESSION	P=0.471N	P=0.288N	P=0.259N	P=0.186N	P=0.415N
COCH-ARM / FISHERS	P=0.523N	P=0.262N	P=0.274N	P=0.167N	P=0.495N

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Thyroid Gland: C-Cell Carcinoma					
TUMOR RATES					
OVERALL (a)	0/50 (0%)	2/50 (4%)	1/49 (2%)	0/49 (0%)	0/20 (0%)
POLY-3 RATE (b)	0/42.09	2/40.74	1/42.63	0/39.27	0/18.68
POLY-3 PERCENT (g)	0.0%	4.9%	2.4%	0.0%	0.0%
TERMINAL (d)	0/28 (0%)	2/23 (9%)	1/23 (4%)	0/20 (0%)	0/14 (0%)
FIRST INCIDENCE	---	733 (T)	733 (T)	---	---
STATISTICAL TESTS					
LIFE TABLE	P=0.483N	P=0.195	P=0.461	(e)	(e)
POLY 3	P=0.543N	P=0.230	P=0.503	(e)	(e)
POLY 1.5	P=0.545N	P=0.233	P=0.501	(e)	(e)
POLY 6	P=0.537N	P=0.225	P=0.501	(e)	(e)
LOGISTIC REGRESSION	(e)	P=0.195	P=0.461	(e)	(e)
COCH-ARM / FISHERS	P=0.546N	P=0.247	P=0.495	(e)	(e)

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Thyroid Gland: C-Cell Carcinoma or Adenoma					
TUMOR RATES					
OVERALL (a)	7/50 (14%)	6/50 (12%)	5/49 (10%)	3/49 (6%)	2/20 (10%)
POLY-3 RATE (b)	7/42.70	6/40.97	5/43.27	3/39.85	2/18.78
POLY-3 PERCENT (g)	16.4%	14.7%	11.6%	7.5%	10.7%
TERMINAL (d)	5/28 (18%)	3/23 (13%)	3/23 (13%)	1/20 (5%)	1/14 (7%)
FIRST INCIDENCE	581	694	602	617	708
STATISTICAL TESTS					
LIFE TABLE	P=0.287N	P=0.612N	P=0.464N	P=0.270N	P=0.344N
POLY 3	P=0.381N	P=0.532N	P=0.368N	P=0.184N	P=0.422N
POLY 1.5	P=0.400N	P=0.518N	P=0.375N	P=0.176N	P=0.447N
POLY 6	P=0.348N	P=0.551N	P=0.370N	P=0.199N	P=0.384N
LOGISTIC REGRESSION	P=0.353N	P=0.543N	P=0.374N	P=0.186N	P=0.415N
COCH-ARM / FISHERS	P=0.419N	P=0.500N	P=0.394N	P=0.167N	P=0.495N

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
Zymbal's Gland Carcinoma					
TUMOR RATES	#	#	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	2/50 (4%)	2/50 (4%)	0/20 (0%)
POLY-3 RATE (b)	0/42.09	0/40.74	2/42.76	2/40.40	0/18.68
POLY-3 PERCENT (g)	0.0%	0.0%	4.7%	5.0%	0.0%
TERMINAL (d)	0/28 (0%)	0/23 (0%)	1/23 (4%)	1/20 (5%)	0/14 (0%)
FIRST INCIDENCE	---	---	699	688	---
STATISTICAL TESTS					
LIFE TABLE	P=0.655N	(e)	P=0.215	P=0.184	(e)
POLY 3	P=0.716N	(e)	P=0.240	P=0.228	(e)
POLY 1.5	P=0.732N	(e)	P=0.238	P=0.232	(e)
POLY 6	P=0.692N	(e)	P=0.240	P=0.220	(e)
LOGISTIC REGRESSION	P=0.703N	(e)	P=0.236	P=0.218	(e)
COCH-ARM / FISHERS	P=0.751N	(e)	P=0.247	P=0.247	(e)

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
All Organs Histiocytic Sarcoma					
TUMOR RATES	#	#	#	#	#
OVERALL (a)	0/50 (0%)	2/50 (4%)	0/50 (0%)	0/50 (0%)	0/20 (0%)
POLY-3 RATE (b)	0/42.09	2/41.72	0/42.63	0/40.22	0/18.68
POLY-3 PERCENT (g)	0.0%	4.8%	0.0%	0.0%	0.0%
TERMINAL (d)	0/28 (0%)	0/23 (0%)	0/23 (0%)	0/20 (0%)	0/14 (0%)
FIRST INCIDENCE	---	509	---	---	---
STATISTICAL TESTS					
LIFE TABLE	P=0.603N	P=0.239	(e)	(e)	(e)
POLY 3	P=0.628N	P=0.235	(e)	(e)	(e)
POLY 1.5	P=0.626N	P=0.236	(e)	(e)	(e)
POLY 6	P=0.627N	P=0.233	(e)	(e)	(e)
LOGISTIC REGRESSION	P=0.672N	P=0.261	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.623N	P=0.247	(e)	(e)	(e)

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
All Organs Leukemia: Lymphocytic, Monocytic, Mononuclear, or Undifferentiated					
TUMOR RATES	#	#	#	#	#
OVERALL (a)	19/50 (38%)	23/50 (46%)	27/50 (54%)	25/50 (50%)	10/20 (50%)
POLY-3 RATE (b)	19/44.35	23/45.99	27/47.39	25/44.76	10/19.93
POLY-3 PERCENT (g)	42.8%	50.0%	57.0%	55.9%	50.2%
TERMINAL (d)	8/28 (29%)	8/23 (35%)	8/23 (35%)	9/20 (45%)	5/14 (36%)
FIRST INCIDENCE	614	315	596	529	433
STATISTICAL TESTS					
LIFE TABLE	P=0.414N	P=0.192	P=0.092	P=0.062	P=0.566
POLY 3	P=0.482	P=0.316	P=0.122	P=0.149	P=0.389
POLY 1.5	P=0.418	P=0.300	P=0.097	P=0.152	P=0.333
POLY 6	P=0.563	P=0.329	P=0.153	P=0.141	P=0.458
LOGISTIC REGRESSION	P=0.328	P=0.273	P=0.080	P=0.134	P=0.285
COCH-ARM / FISHERS	P=0.328	P=0.272	P=0.080	P=0.157	P=0.256

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		

All Organs
Mesothelioma: Benign, Malignant, NOS

TUMOR RATES	#	#	#	#	#
OVERALL (a)	1/50 (2%)	2/50 (4%)	2/50 (4%)	5/50 (10%)	0/20 (0%)
POLY-3 RATE (b)	1/42.09	2/41.01	2/42.63	5/41.28	0/18.68
POLY-3 PERCENT (g)	2.4%	4.9%	4.7%	12.1%	0.0%
TERMINAL (d)	1/28 (4%)	0/23 (0%)	2/23 (9%)	2/20 (10%)	0/14 (0%)
FIRST INCIDENCE	733 (T)	688	733 (T)	419	---
STATISTICAL TESTS					
LIFE TABLE	P=0.439N	P=0.470	P=0.431	P=0.064	P=0.638N
POLY 3	P=0.485N	P=0.491	P=0.504	P=0.095	P=0.665N
POLY 1.5	P=0.512N	P=0.495	P=0.502	P=0.099	P=0.672N
POLY 6	P=0.445N	P=0.487	P=0.503	P=0.089	P=0.653N
LOGISTIC REGRESSION	P=0.536N	P=0.484	P=0.431	P=0.106	(e)
COCH-ARM / FISHERS	P=0.546N	P=0.500	P=0.500	P=0.102	P=0.714N

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		

All Organs
Mesothelioma: Malignant

TUMOR RATES	#	#	#	#	#
OVERALL (a)	1/50 (2%)	2/50 (4%)	2/50 (4%)	5/50 (10%)	0/20 (0%)
POLY-3 RATE (b)	1/42.09	2/41.01	2/42.63	5/41.28	0/18.68
POLY-3 PERCENT (g)	2.4%	4.9%	4.7%	12.1%	0.0%
TERMINAL (d)	1/28 (4%)	0/23 (0%)	2/23 (9%)	2/20 (10%)	0/14 (0%)
FIRST INCIDENCE	733 (T)	688	733 (T)	419	---
STATISTICAL TESTS					
LIFE TABLE	P=0.439N	P=0.470	P=0.431	P=0.064	P=0.638N
POLY 3	P=0.485N	P=0.491	P=0.504	P=0.095	P=0.665N
POLY 1.5	P=0.512N	P=0.495	P=0.502	P=0.099	P=0.672N
POLY 6	P=0.445N	P=0.487	P=0.503	P=0.089	P=0.653N
LOGISTIC REGRESSION	P=0.536N	P=0.484	P=0.431	P=0.106	(e)
COCH-ARM / FISHERS	P=0.546N	P=0.500	P=0.500	P=0.102	P=0.714N

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		

All Organs
Osteosarcoma or Osteoma

TUMOR RATES	#	#	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	2/50 (4%)	0/20 (0%)
POLY-3 RATE (b)	0/42.09	0/40.74	0/42.63	2/40.40	0/18.68
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	5.0%	0.0%
TERMINAL (d)	0/28 (0%)	0/23 (0%)	0/23 (0%)	1/20 (5%)	0/14 (0%)
FIRST INCIDENCE	---	---	---	688	---
STATISTICAL TESTS					
LIFE TABLE	P=0.758	(e)	(e)	P=0.184	(e)
POLY 3	P=0.795	(e)	(e)	P=0.228	(e)
POLY 1.5	P=0.776	(e)	(e)	P=0.232	(e)
POLY 6	P=0.819	(e)	(e)	P=0.220	(e)
LOGISTIC REGRESSION	P=0.756	(e)	(e)	P=0.218	(e)
COCH-ARM / FISHERS	P=0.749	(e)	(e)	P=0.247	(e)

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		

All Organs
Benign Tumors

TUMOR RATES	#	#	#	#	#
OVERALL (a)	47/50 (94%)	49/50 (98%)	49/50 (98%)	48/50 (96%)	20/20 (100%)
POLY-3 RATE (b)	47/47.82	49/49.08	49/49.00	48/49.09	20/20.00
POLY-3 PERCENT (g)	98.3%	99.8%	100.0%	97.8%	100.0%
TERMINAL (d)	28/28 (100%)	23/23 (100%)	23/23 (100%)	20/20 (100%)	14/14 (100%)
FIRST INCIDENCE	561	509	574	419	433
STATISTICAL TESTS					
LIFE TABLE	P=0.114N	P=0.140	P=0.192	P=0.067	P=0.212N
POLY 3	P=0.816	P=0.670	P=0.620	P=0.751N	P=0.849
POLY 1.5	P=0.631	P=0.397	P=0.283	P=0.720	P=0.555
POLY 6	P=0.926	P=0.998	P=0.998	P=0.657N	P=1.000
LOGISTIC REGRESSION	P=0.379	P=0.220	P=0.761	P=0.420	P=0.311
COCH-ARM / FISHERS	P=0.351	P=0.309	P=0.309	P=0.500	P=0.358

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
All Organs Malignant Tumors					
TUMOR RATES	#	#	#	#	#
OVERALL (a)	27/50 (54%)	29/50 (58%)	32/50 (64%)	42/50 (84%)	13/20 (65%)
POLY-3 RATE (b)	27/46.01	29/47.85	32/47.61	42/48.40	13/20.00
POLY-3 PERCENT (g)	58.7%	60.6%	67.2%	86.8%	65.0%
TERMINAL (d)	14/28 (50%)	9/23 (39%)	11/23 (48%)	16/20 (80%)	7/14 (50%)
FIRST INCIDENCE	387	315	596	379	433
STATISTICAL TESTS					
LIFE TABLE	P=0.425N	P=0.275	P=0.173	P<0.001 **	P=0.503N
POLY 3	P=0.309	P=0.508	P=0.256	P<0.001 **	P=0.415
POLY 1.5	P=0.250	P=0.468	P=0.218	P<0.001 **	P=0.354
POLY 6	P=0.398	P=0.566	P=0.313	P<0.001 **	P=0.503
LOGISTIC REGRESSION	P=0.163	P=0.447	P=0.207	P<0.001 **	P=0.273
COCH-ARM / FISHERS	P=0.185	P=0.420	P=0.208	P<0.001 **	P=0.285

Dose	CONTROL	25 PPM	50 PPM	100 PPM	400 PPM
			Males		
All Organs Malignant and Benign Tumors					
TUMOR RATES	#	#	#	#	#
OVERALL (a)	49/50 (98%)	50/50 (100%)	49/50 (98%)	50/50 (100%)	20/20 (100%)
POLY-3 RATE (b)	49/49.49	50/50.00	49/49.00	50/50.00	20/20.00
POLY-3 PERCENT (g)	99.0%	100.0%	100.0%	100.0%	100.0%
TERMINAL (d)	28/28 (100%)	23/23 (100%)	23/23 (100%)	20/20 (100%)	14/14 (100%)
FIRST INCIDENCE	387	315	574	379	433
STATISTICAL TESTS					
LIFE TABLE	P=0.094N	P=0.184	P=0.288	P=0.072	P=0.156N
POLY 3	P=0.984	P=0.851	P=0.853	P=0.851	P=0.947
POLY 1.5	P=0.899	P=0.665	P=0.672	P=0.665	P=0.827
POLY 6	P=1.000	P=0.999	P=0.999	P=0.999	P=1.000
LOGISTIC REGRESSION	P=0.790	P=0.473	P=0.685	P=0.480	P=0.746
COCH-ARM / FISHERS	P=0.623	P=0.500	P=0.753N	P=0.500	P=0.714

(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).

FINAL#1/RATS

REASONS FOR REMOVAL: ALL

REMOVAL DATE RANGE: ALL

TREATMENT GROUPS:

INCLUDE 002	CONTROL
INCLUDE 004	25 PPM
INCLUDE 007	100 PPM
INCLUDE 009	400 PPM

NTP
LAB: Battelle Northwest
EXPERIMENT: 93026 TEST: 07
TEST TYPE: CHRONIC
CONT: N01-ES-55392
PATHOLOGIST: RENNE, ROGER
Rats(FISCHER 344)

STATISTICAL ANALYSIS OF PRIMARY TUMORS
DECALIN

CAGES FROM 0000 TO LAST CAGE
ROUTE: RESPIRATORY EXPOSURE WHOLE BODY

REPORT: PEIRPT08
DATE: 08/28/01
TIME: 09:19:39

NTP C#: C93026
CAS: 91-17-8

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 Medulla
Clitoral/Preputial Gland
Islets, Pancreatic
Kidney
Lung
Ovary
Pituitary Gland
Spleen
Thyroid Gland

NTP
LAB: Battelle Northwest
EXPERIMENT: 93026 TEST: 07
TEST TYPE: CHRONIC
CONT: N01-ES-55392
PATHOLOGIST: RENNE, ROGER

STATISTICAL ANALYSIS OF PRIMARY TUMORS
DECALIN

CAGES FROM 0000 TO LAST CAGE
ROUTE: RESPIRATORY EXPOSURE WHOLE BODY

REPORT: PEIRPT08
DATE: 08/28/01
TIME: 09:19:39

NTP C#: C93026
CAS: 91-17-8

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

Female Rats

Organ	Morphology
Clitoral/Preputial Gland	Adenoma
	Carcinoma or Adenoma
Pituitary Gland: Pars Distalis or Unspecified Site	
	Adenoma
Uterus	Sarcoma Stromal or Polyp Stromal
All Organs	Malignant and Benign Tumors

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

Dose	CONTROL	25 PPM	100 PPM	400 PPM
		Females		
Adrenal Medulla Pheochromocytoma Benign				
TUMOR RATES				
OVERALL (a)	1/50 (2%)	1/48 (2%)	3/49 (6%)	1/49 (2%)
POLY-3 RATE (b)	1/44.52	1/45.50	3/46.32	1/40.74
POLY-3 PERCENT (g)	2.3%	2.2%	6.5%	2.5%
TERMINAL (d)	1/32 (3%)	1/35 (3%)	2/39 (5%)	1/28 (4%)
FIRST INCIDENCE	734 (T)	734 (T)	688	734 (T)
STATISTICAL TESTS				
LIFE TABLE	P=0.653	P=0.742N	P=0.370	P=0.732
POLY 3	P=0.635N	P=0.756N	P=0.320	P=0.741
POLY 1.5	P=0.616N	P=0.760	P=0.310	P=0.748
POLY 6	P=0.635	P=0.748N	P=0.333	P=0.732
LOGISTIC REGRESSION	P=0.652	P=0.742N	P=0.324	P=0.732
COCH-ARM / FISHERS	P=0.591N	P=0.742	P=0.301	P=0.747

Dose	CONTROL	25 PPM	100 PPM	400 PPM
		Females		
Adrenal Medulla Pheochromocytoma Malignant				
TUMOR RATES				
OVERALL (a)	0/50 (0%)	2/48 (4%)	1/49 (2%)	0/49 (0%)
POLY-3 RATE (b)	0/44.52	2/45.87	1/46.14	0/40.74
POLY-3 PERCENT (g)	0.0%	4.4%	2.2%	0.0%
TERMINAL (d)	0/32 (0%)	0/35 (0%)	1/39 (3%)	0/28 (0%)
FIRST INCIDENCE	---	663	734 (T)	---
STATISTICAL TESTS				
LIFE TABLE	P=0.418N	P=0.265	P=0.539	(e)
POLY 3	P=0.384N	P=0.244	P=0.507	(e)
POLY 1.5	P=0.376N	P=0.237	P=0.502	(e)
POLY 6	P=0.393N	P=0.253	P=0.514	(e)
LOGISTIC REGRESSION	P=0.360N	P=0.191	P=0.539	(e)
COCH-ARM / FISHERS	P=0.367N	P=0.237	P=0.495	(e)

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

Dose	Females CONTROL	25 PPM	100 PPM	400 PPM
Adrenal Medulla				
Pheochromocytoma: Benign, Complex, Malignant, NOS				
TUMOR RATES				
OVERALL (a)	1/50 (2%)	3/48 (6%)	4/49 (8%)	1/49 (2%)
POLY-3 RATE (b)	1/44.52	3/45.87	4/46.32	1/40.74
POLY-3 PERCENT (g)	2.3%	6.5%	8.6%	2.5%
TERMINAL (d)	1/32 (3%)	1/35 (3%)	3/39 (8%)	1/28 (4%)
FIRST INCIDENCE	734 (T)	663	688	734 (T)
STATISTICAL TESTS				
LIFE TABLE	P=0.458N	P=0.344	P=0.239	P=0.732
POLY 3	P=0.421N	P=0.316	P=0.191	P=0.741
POLY 1.5	P=0.398N	P=0.306	P=0.183	P=0.748
POLY 6	P=0.450N	P=0.330	P=0.203	P=0.732
LOGISTIC REGRESSION	P=0.418N	P=0.287	P=0.200	P=0.732
COCH-ARM / FISHERS	P=0.370N	P=0.293	P=0.175	P=0.747

Dose	Females CONTROL	25 PPM	100 PPM	400 PPM
Clitoral/Preputial Gland				
Adenoma				
TUMOR RATES				
OVERALL (a)	8/48 (17%)	2/49 (4%)	1/49 (2%)	0/50 (0%)
POLY-3 RATE (b)	8/43.66	2/45.86	1/46.14	0/41.60
POLY-3 PERCENT (g)	18.3%	4.4%	2.2%	0.0%
TERMINAL (d)	7/31 (23%)	1/35 (3%)	1/39 (3%)	0/28 (0%)
FIRST INCIDENCE	666	722	734 (T)	---
STATISTICAL TESTS				
LIFE TABLE	P=0.018N*	P=0.032N*	P=0.007N**	P=0.007N**
POLY 3	P=0.014N*	P=0.037N*	P=0.012N*	P=0.004N**
POLY 1.5	P=0.012N*	P=0.039N*	P=0.013N*	P=0.004N**
POLY 6	P=0.016N*	P=0.033N*	P=0.010N*	P=0.005N**
LOGISTIC REGRESSION	P=0.017N*	P=0.032N*	P=0.011N*	P=0.007N**
COCH-ARM / FISHERS	P=0.012N*	P=0.042N*	P=0.014N*	P=0.002N**

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

Dose	CONTROL	Females 25 PPM	100 PPM	400 PPM
Clitoral/Preputial Gland Carcinoma				
TUMOR RATES				
OVERALL (a)	1/48 (2%)	3/49 (6%)	1/49 (2%)	1/50 (2%)
POLY-3 RATE (b)	1/43.96	3/45.81	1/46.14	1/42.00
POLY-3 PERCENT (g)	2.3%	6.6%	2.2%	2.4%
TERMINAL (d)	0/31 (0%)	3/35 (9%)	1/39 (3%)	0/28 (0%)
FIRST INCIDENCE	561	734 (T)	734 (T)	618
STATISTICAL TESTS				
LIFE TABLE	P=0.495N	P=0.339	P=0.735N	P=0.740
POLY 3	P=0.456N	P=0.320	P=0.750N	P=0.750
POLY 1.5	P=0.443N	P=0.316	P=0.753N	P=0.758
POLY 6	P=0.471N	P=0.327	P=0.744N	P=0.741
LOGISTIC REGRESSION	P=0.371N	P=0.295	P=0.751N	P=0.593N
COCH-ARM / FISHERS	P=0.423N	P=0.316	P=0.747N	P=0.742N

Dose	CONTROL	Females 25 PPM	100 PPM	400 PPM
Clitoral/Preputial Gland Carcinoma or Adenoma				
TUMOR RATES				
OVERALL (a)	9/48 (19%)	5/49 (10%)	2/49 (4%)	1/50 (2%)
POLY-3 RATE (b)	9/44.21	5/45.86	2/46.14	1/42.00
POLY-3 PERCENT (g)	20.4%	10.9%	4.3%	2.4%
TERMINAL (d)	7/31 (23%)	4/35 (11%)	2/39 (5%)	0/28 (0%)
FIRST INCIDENCE	561	722	734 (T)	618
STATISTICAL TESTS				
LIFE TABLE	P=0.025N*	P=0.141N	P=0.012N*	P=0.017N*
POLY 3	P=0.018N*	P=0.171N	P=0.020N*	P=0.010N*
POLY 1.5	P=0.015N*	P=0.177N	P=0.022N*	P=0.008N**
POLY 6	P=0.021N*	P=0.161N	P=0.018N*	P=0.012N*
LOGISTIC REGRESSION	P=0.015N*	P=0.170N	P=0.024N*	P=0.008N**
COCH-ARM / FISHERS	P=0.014N*	P=0.182N	P=0.023N*	P=0.006N**

Dose	CONTROL	25 PPM	100 PPM	400 PPM
		Females		
Islets, Pancreatic Carcinoma or Adenoma				
TUMOR RATES				
OVERALL (a)	2/50 (4%)	1/47 (2%)	1/49 (2%)	0/49 (0%)
POLY-3 RATE (b)	2/44.60	1/44.86	1/46.14	0/40.74
POLY-3 PERCENT (g)	4.5%	2.2%	2.2%	0.0%
TERMINAL (d)	1/32 (3%)	0/35 (0%)	1/39 (3%)	0/28 (0%)
FIRST INCIDENCE	716	708	734 (T)	---
STATISTICAL TESTS				
LIFE TABLE	P=0.259N	P=0.460N	P=0.442N	P=0.283N
POLY 3	P=0.239N	P=0.498N	P=0.488N	P=0.258N
POLY 1.5	P=0.228N	P=0.507N	P=0.496N	P=0.250N
POLY 6	P=0.252N	P=0.485N	P=0.477N	P=0.267N
LOGISTIC REGRESSION	P=0.240N	P=0.500N	P=0.465N	P=0.271N
COCH-ARM / FISHERS	P=0.213N	P=0.523N	P=0.508N	P=0.253N

Dose	CONTROL	25 PPM	100 PPM	400 PPM
		Females		
Lung Alveolar/Bronchiolar Carcinoma or Alveolar/Bronchiolar Adenoma				
TUMOR RATES				
OVERALL (a)	2/50 (4%)	0/50 (0%)	0/49 (0%)	0/50 (0%)
POLY-3 RATE (b)	2/44.52	0/46.53	0/46.14	0/41.60
POLY-3 PERCENT (g)	4.5%	0.0%	0.0%	0.0%
TERMINAL (d)	2/32 (6%)	0/35 (0%)	0/39 (0%)	0/28 (0%)
FIRST INCIDENCE	734 (T)	---	---	---
STATISTICAL TESTS				
LIFE TABLE	P=0.337N	P=0.219N	P=0.196N	P=0.268N
POLY 3	P=0.323N	P=0.227N	P=0.229N	P=0.252N
POLY 1.5	P=0.317N	P=0.231N	P=0.235N	P=0.245N
POLY 6	P=0.331N	P=0.222N	P=0.222N	P=0.262N
LOGISTIC REGRESSION	P=0.337N	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.308N	P=0.247N	P=0.253N	P=0.247N

Dose	CONTROL	25 PPM	100 PPM	400 PPM
		Females		
Mammary Gland Carcinoma				
TUMOR RATES	#	#	#	#
OVERALL (a)	5/50 (10%)	3/50 (6%)	6/50 (12%)	3/50 (6%)
POLY-3 RATE (b)	5/45.15	3/46.57	6/46.51	3/41.72
POLY-3 PERCENT (g)	11.1%	6.4%	12.9%	7.2%
TERMINAL (d)	2/32 (6%)	2/35 (6%)	4/39 (10%)	2/28 (7%)
FIRST INCIDENCE	652	722	679	702
STATISTICAL TESTS				
LIFE TABLE	P=0.506N	P=0.314N	P=0.600	P=0.453N
POLY 3	P=0.441N	P=0.339N	P=0.521	P=0.400N
POLY 1.5	P=0.410N	P=0.346N	P=0.506	P=0.380N
POLY 6	P=0.482N	P=0.332N	P=0.541	P=0.428N
LOGISTIC REGRESSION	P=0.430N	P=0.346N	P=0.506	P=0.393N
COCH-ARM / FISHERS	P=0.371N	P=0.357N	P=0.500	P=0.357N

Dose	CONTROL	25 PPM	100 PPM	400 PPM
		Females		
Mammary Gland Fibroadenoma				
TUMOR RATES	#	#	#	#
OVERALL (a)	25/50 (50%)	22/50 (44%)	20/50 (40%)	23/50 (46%)
POLY-3 RATE (b)	25/47.00	22/47.27	20/46.96	23/44.37
POLY-3 PERCENT (g)	53.2%	46.5%	42.6%	51.8%
TERMINAL (d)	18/32 (56%)	14/35 (40%)	16/39 (41%)	15/28 (54%)
FIRST INCIDENCE	359	656	665	589
STATISTICAL TESTS				
LIFE TABLE	P=0.227	P=0.225N	P=0.072N	P=0.488
POLY 3	P=0.450	P=0.329N	P=0.203N	P=0.533N
POLY 1.5	P=0.503	P=0.339N	P=0.221N	P=0.488N
POLY 6	P=0.392	P=0.305N	P=0.172N	P=0.576N
LOGISTIC REGRESSION	P=0.462	P=0.311N	P=0.201N	P=0.475N
COCH-ARM / FISHERS	P=0.531N	P=0.344N	P=0.211N	P=0.421N

Dose	Females CONTROL	25 PPM	100 PPM	400 PPM
Mammary Gland Fibroma, Fibroadenoma, Carcinoma, or Adenoma				
TUMOR RATES	#	#	#	#
OVERALL (a)	29/50 (58%)	24/50 (48%)	25/50 (50%)	25/50 (50%)
POLY-3 RATE (b)	29/47.37	24/47.32	25/47.32	25/44.49
POLY-3 PERCENT (g)	61.2%	50.7%	52.8%	56.2%
TERMINAL (d)	20/32 (63%)	15/35 (43%)	19/39 (49%)	16/28 (57%)
FIRST INCIDENCE	359	656	665	589
STATISTICAL TESTS				
LIFE TABLE	P=0.288	P=0.133N	P=0.093N	P=0.548N
POLY 3	P=0.554N	P=0.202N	P=0.267N	P=0.388N
POLY 1.5	P=0.491N	P=0.208N	P=0.290N	P=0.340N
POLY 6	P=0.486	P=0.187N	P=0.225N	P=0.441N
LOGISTIC REGRESSION	P=0.540N	P=0.179N	P=0.261N	P=0.335N
COCH-ARM / FISHERS	P=0.406N	P=0.212N	P=0.274N	P=0.274N

Dose	Females CONTROL	25 PPM	100 PPM	400 PPM
Oral Cavity (Oral Mucosa, Tongue, Pharynx, Tooth, Gingiva) Squamous Cell Carcinoma				
TUMOR RATES	#	#	#	#
OVERALL (a)	2/50 (4%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	2/44.66	0/46.53	0/46.15	0/41.60
POLY-3 PERCENT (g)	4.5%	0.0%	0.0%	0.0%
TERMINAL (d)	0/32 (0%)	0/35 (0%)	0/39 (0%)	0/28 (0%)
FIRST INCIDENCE	716	---	---	---
STATISTICAL TESTS				
LIFE TABLE	P=0.356N	P=0.211N	P=0.211N	P=0.290N
POLY 3	P=0.322N	P=0.228N	P=0.230N	P=0.253N
POLY 1.5	P=0.315N	P=0.232N	P=0.235N	P=0.246N
POLY 6	P=0.329N	P=0.224N	P=0.223N	P=0.263N
LOGISTIC REGRESSION	P=0.322N	P=0.228N	P=0.231N	P=0.259N
COCH-ARM / FISHERS	P=0.308N	P=0.247N	P=0.247N	P=0.247N

Dose	CONTROL	25 PPM	100 PPM	400 PPM
		Females		

Oral Cavity (Oral Mucosa, Tongue, Pharynx, Tooth, Gingiva)
Squamous Cell Carcinoma, Papilloma Squamous, or Papilloma

TUMOR RATES	#	#	#	#
OVERALL (a)	3/50 (6%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	3/44.92	0/46.53	0/46.15	0/41.60
POLY-3 PERCENT (g)	6.7%	0.0%	0.0%	0.0%
TERMINAL (d)	0/32 (0%)	0/35 (0%)	0/39 (0%)	0/28 (0%)
FIRST INCIDENCE	666	---	---	---
STATISTICAL TESTS				
LIFE TABLE	P=0.223N	P=0.107N	P=0.105N	P=0.164N
POLY 3	P=0.198N	P=0.112N	P=0.114N	P=0.133N
POLY 1.5	P=0.192N	P=0.115N	P=0.117N	P=0.126N
POLY 6	P=0.205N	P=0.110N	P=0.109N	P=0.142N
LOGISTIC REGRESSION	P=0.185N	P=0.123N	P=0.121N	P=0.124N
COCH-ARM / FISHERS	P=0.187N	P=0.121N	P=0.121N	P=0.121N

Dose	CONTROL	25 PPM	100 PPM	400 PPM
		Females		

Ovary
Granulosa Cell Tumor Benign

TUMOR RATES				
OVERALL (a)	0/50 (0%)	2/50 (4%)	0/49 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/44.52	2/46.53	0/46.14	0/41.60
POLY-3 PERCENT (g)	0.0%	4.3%	0.0%	0.0%
TERMINAL (d)	0/32 (0%)	2/35 (6%)	0/39 (0%)	0/28 (0%)
FIRST INCIDENCE	---	734 (T)	---	---
STATISTICAL TESTS				
LIFE TABLE	P=0.428N	P=0.258	(e)	(e)
POLY 3	P=0.396N	P=0.247	(e)	(e)
POLY 1.5	P=0.393N	P=0.243	(e)	(e)
POLY 6	P=0.399N	P=0.252	(e)	(e)
LOGISTIC REGRESSION	(e)	P=0.258	(e)	(e)
COCH-ARM / FISHERS	P=0.390N	P=0.247	(e)	(e)

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

Dose	CONTROL	25 PPM	100 PPM	400 PPM
		Females		
Ovary				
Granulosa Cell Tumor: Benign, Malignant, NOS				
TUMOR RATES				
OVERALL (a)	0/50 (0%)	3/50 (6%)	0/49 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/44.52	3/46.88	0/46.14	0/41.60
POLY-3 PERCENT (g)	0.0%	6.4%	0.0%	0.0%
TERMINAL (d)	0/32 (0%)	2/35 (6%)	0/39 (0%)	0/28 (0%)
FIRST INCIDENCE	---	635	---	---
STATISTICAL TESTS				
LIFE TABLE	P=0.306N	P=0.136	(e)	(e)
POLY 3	P=0.273N	P=0.128	(e)	(e)
POLY 1.5	P=0.270N	P=0.124	(e)	(e)
POLY 6	P=0.276N	P=0.134	(e)	(e)
LOGISTIC REGRESSION	P=0.265N	P=0.115	(e)	(e)
COCH-ARM / FISHERS	P=0.269N	P=0.121	(e)	(e)

Dose	CONTROL	25 PPM	100 PPM	400 PPM
		Females		
Pituitary Gland: Pars Distalis or Unspecified Site				
Adenoma				
TUMOR RATES				
OVERALL (a)	34/50 (68%)	27/49 (55%)	29/49 (59%)	30/50 (60%)
POLY-3 RATE (b)	34/48.08	27/48.51	29/46.97	30/45.70
POLY-3 PERCENT (g)	70.7%	55.7%	61.7%	65.7%
TERMINAL (d)	23/32 (72%)	18/35 (51%)	25/39 (64%)	18/28 (64%)
FIRST INCIDENCE	525	499	665	492
STATISTICAL TESTS				
LIFE TABLE	P=0.197	P=0.078N	P=0.047N*	P=0.556
POLY 3	P=0.464	P=0.090N	P=0.237N	P=0.377N
POLY 1.5	P=0.545	P=0.104N	P=0.239N	P=0.321N
POLY 6	P=0.365	P=0.076N	P=0.232N	P=0.456N
LOGISTIC REGRESSION	P=0.516N	P=0.153N	P=0.192N	P=0.315N
COCH-ARM / FISHERS	P=0.461N	P=0.133N	P=0.241N	P=0.266N

Dose	Females CONTROL	25 PPM	100 PPM	400 PPM
Pituitary Gland: Pars Distalis or Unspecified Site				
Carcinoma or Adenoma				
TUMOR RATES				
OVERALL (a)	34/50 (68%)	28/49 (57%)	30/49 (61%)	31/50 (62%)
POLY-3 RATE (b)	34/48.08	28/48.51	30/47.14	31/46.02
POLY-3 PERCENT (g)	70.7%	57.7%	63.6%	67.4%
TERMINAL (d)	23/32 (72%)	19/35 (54%)	25/39 (64%)	18/28 (64%)
FIRST INCIDENCE	525	499	665	492
STATISTICAL TESTS				
LIFE TABLE	P=0.165	P=0.104N	P=0.069N	P=0.484
POLY 3	P=0.430	P=0.129N	P=0.301N	P=0.447N
POLY 1.5	P=0.505	P=0.146N	P=0.306N	P=0.394N
POLY 6	P=0.344	P=0.110N	P=0.290N	P=0.516N
LOGISTIC REGRESSION	P=0.553	P=0.204N	P=0.258N	P=0.386N
COCH-ARM / FISHERS	P=0.508N	P=0.182N	P=0.310N	P=0.338N

Dose	Females CONTROL	25 PPM	100 PPM	400 PPM
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%)	0/50 (0%)	3/50 (6%)	1/50 (2%)
POLY-3 RATE (b)	1/44.78	0/46.53	3/46.20	1/41.60
POLY-3 PERCENT (g)	2.2%	0.0%	6.5%	2.4%
TERMINAL (d)	0/32 (0%)	0/35 (0%)	2/39 (5%)	1/28 (4%)
FIRST INCIDENCE	666	---	722	734 (T)
STATISTICAL TESTS				
LIFE TABLE	P=0.549	P=0.495N	P=0.367	P=0.725
POLY 3	P=0.570	P=0.492N	P=0.317	P=0.744
POLY 1.5	P=0.592	P=0.495N	P=0.309	P=0.752
POLY 6	P=0.541	P=0.489N	P=0.327	P=0.734
LOGISTIC REGRESSION	P=0.584	P=0.531N	P=0.311	P=0.757
COCH-ARM / FISHERS	P=0.619	P=0.500N	P=0.309	P=0.753N

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

Dose	CONTROL	25 PPM	100 PPM	400 PPM
		Females		
Skin Fibroma				
TUMOR RATES	#	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	1/50 (2%)	2/50 (4%)
POLY-3 RATE (b)	0/44.52	0/46.53	1/46.15	2/41.60
POLY-3 PERCENT (g)	0.0%	0.0%	2.2%	4.8%
TERMINAL (d)	0/32 (0%)	0/35 (0%)	1/39 (3%)	2/28 (7%)
FIRST INCIDENCE	---	---	734 (T)	734 (T)
STATISTICAL TESTS				
LIFE TABLE	P=0.063	(e)	P=0.539	P=0.209
POLY 3	P=0.084	(e)	P=0.507	P=0.222
POLY 1.5	P=0.089	(e)	P=0.502	P=0.229
POLY 6	P=0.077	(e)	P=0.514	P=0.213
LOGISTIC REGRESSION	(e)	(e)	P=0.539	P=0.209
COCH-ARM / FISHERS	P=0.097	(e)	P=0.500	P=0.247

Dose	CONTROL	25 PPM	100 PPM	400 PPM
		Females		
Skin Fibroma, Fibrosarcoma, Sarcoma, Myxoma, Myxosarcoma, or Fibrous Histiocytoma				
TUMOR RATES	#	#	#	#
OVERALL (a)	2/50 (4%)	0/50 (0%)	3/50 (6%)	2/50 (4%)
POLY-3 RATE (b)	2/44.52	0/46.53	3/46.30	2/41.60
POLY-3 PERCENT (g)	4.5%	0.0%	6.5%	4.8%
TERMINAL (d)	2/32 (6%)	0/35 (0%)	2/39 (5%)	2/28 (7%)
FIRST INCIDENCE	734 (T)	---	694	734 (T)
STATISTICAL TESTS				
LIFE TABLE	P=0.387	P=0.219N	P=0.581	P=0.647
POLY 3	P=0.419	P=0.227N	P=0.518	P=0.670
POLY 1.5	P=0.441	P=0.231N	P=0.506	P=0.681
POLY 6	P=0.390	P=0.222N	P=0.535	P=0.655
LOGISTIC REGRESSION	P=0.384	(e)	P=0.538	P=0.647
COCH-ARM / FISHERS	P=0.470	P=0.247N	P=0.500	P=0.691N

Dose	CONTROL	25 PPM	100 PPM	400 PPM
		Females		
Skin Fibrosarcoma, Sarcoma, Myxosarcoma, or Fibrous Histiocytoma				
TUMOR RATES	#	#	#	#
OVERALL (a)	2/50 (4%)	0/50 (0%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)	2/44.52	0/46.53	2/46.30	0/41.60
POLY-3 PERCENT (g)	4.5%	0.0%	4.3%	0.0%
TERMINAL (d)	2/32 (6%)	0/35 (0%)	1/39 (3%)	0/28 (0%)
FIRST INCIDENCE	734 (T)	---	694	---
STATISTICAL TESTS				
LIFE TABLE	P=0.331N	P=0.219N	P=0.630N	P=0.268N
POLY 3	P=0.322N	P=0.227N	P=0.680N	P=0.252N
POLY 1.5	P=0.308N	P=0.231N	P=0.689N	P=0.245N
POLY 6	P=0.341N	P=0.222N	P=0.666N	P=0.262N
LOGISTIC REGRESSION	P=0.326N	(e)	P=0.672N	(e)
COCH-ARM / FISHERS	P=0.290N	P=0.247N	P=0.691N	P=0.247N

Dose	CONTROL	25 PPM	100 PPM	400 PPM
		Females		
Skin Squamous Cell Carcinoma, Basal Cell Carcinoma, Basosquamous Tumor (malignant or NOS), or Carcinoma				
TUMOR RATES	#	#	#	#
OVERALL (a)	1/50 (2%)	0/50 (0%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)	1/44.78	0/46.53	2/46.20	0/41.60
POLY-3 PERCENT (g)	2.2%	0.0%	4.3%	0.0%
TERMINAL (d)	0/32 (0%)	0/35 (0%)	1/39 (3%)	0/28 (0%)
FIRST INCIDENCE	666	---	722	---
STATISTICAL TESTS				
LIFE TABLE	P=0.496N	P=0.495N	P=0.553	P=0.536N
POLY 3	P=0.471N	P=0.492N	P=0.511	P=0.515N
POLY 1.5	P=0.456N	P=0.495N	P=0.503	P=0.508N
POLY 6	P=0.490N	P=0.489N	P=0.521	P=0.524N
LOGISTIC REGRESSION	P=0.445N	P=0.531N	P=0.502	P=0.487N
COCH-ARM / FISHERS	P=0.437N	P=0.500N	P=0.500	P=0.500N

Dose	CONTROL	25 PPM	100 PPM	400 PPM
		Females		
Skin Squamous Cell Papilloma, Papilloma, Squamous Cell Carcinoma or Keratoacanthoma				
TUMOR RATES	#	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)	0/44.52	0/46.53	2/46.20	0/41.60
POLY-3 PERCENT (g)	0.0%	0.0%	4.3%	0.0%
TERMINAL (d)	0/32 (0%)	0/35 (0%)	1/39 (3%)	0/28 (0%)
FIRST INCIDENCE	---	---	722	---
STATISTICAL TESTS				
LIFE TABLE	P=0.710N	(e)	P=0.284	(e)
POLY 3	P=0.680N	(e)	P=0.245	(e)
POLY 1.5	P=0.668N	(e)	P=0.240	(e)
POLY 6	P=0.696N	(e)	P=0.253	(e)
LOGISTIC REGRESSION	P=0.700N	(e)	P=0.259	(e)
COCH-ARM / FISHERS	P=0.652N	(e)	P=0.247	(e)

Dose	CONTROL	25 PPM	100 PPM	400 PPM
		Females		
Thyroid Gland: C-Cell Adenoma				
TUMOR RATES				
OVERALL (a)	5/50 (10%)	3/49 (6%)	2/49 (4%)	3/50 (6%)
POLY-3 RATE (b)	5/44.66	3/45.81	2/46.14	3/42.08
POLY-3 PERCENT (g)	11.2%	6.6%	4.3%	7.1%
TERMINAL (d)	3/32 (9%)	3/35 (9%)	2/39 (5%)	2/28 (7%)
FIRST INCIDENCE	716	734 (T)	734 (T)	590
STATISTICAL TESTS				
LIFE TABLE	P=0.562N	P=0.305N	P=0.154N	P=0.442N
POLY 3	P=0.484N	P=0.342N	P=0.203N	P=0.389N
POLY 1.5	P=0.463N	P=0.353N	P=0.213N	P=0.374N
POLY 6	P=0.510N	P=0.329N	P=0.191N	P=0.409N
LOGISTIC REGRESSION	P=0.512N	P=0.300N	P=0.173N	P=0.399N
COCH-ARM / FISHERS	P=0.436N	P=0.369N	P=0.226N	P=0.357N

Dose	Females CONTROL	25 PPM	100 PPM	400 PPM
Thyroid Gland: C-Cell Carcinoma				
TUMOR RATES				
OVERALL (a)	3/50 (6%)	0/49 (0%)	1/49 (2%)	0/50 (0%)
POLY-3 RATE (b)	3/44.52	0/45.81	1/46.40	0/41.60
POLY-3 PERCENT (g)	6.7%	0.0%	2.2%	0.0%
TERMINAL (d)	3/32 (9%)	0/35 (0%)	0/39 (0%)	0/28 (0%)
FIRST INCIDENCE	734 (T)	---	665	---
STATISTICAL TESTS				
LIFE TABLE	P=0.223N	P=0.105N	P=0.246N	P=0.145N
POLY 3	P=0.213N	P=0.114N	P=0.291N	P=0.131N
POLY 1.5	P=0.203N	P=0.117N	P=0.300N	P=0.125N
POLY 6	P=0.227N	P=0.109N	P=0.277N	P=0.139N
LOGISTIC REGRESSION	P=0.204N	(e)	P=0.296N	(e)
COCH-ARM / FISHERS	P=0.190N	P=0.125N	P=0.316N	P=0.121N

Dose	Females CONTROL	25 PPM	100 PPM	400 PPM
Thyroid Gland: C-Cell Carcinoma or Adenoma				
TUMOR RATES				
OVERALL (a)	8/50 (16%)	3/49 (6%)	3/49 (6%)	3/50 (6%)
POLY-3 RATE (b)	8/44.66	3/45.81	3/46.40	3/42.08
POLY-3 PERCENT (g)	17.9%	6.6%	6.5%	7.1%
TERMINAL (d)	6/32 (19%)	3/35 (9%)	2/39 (5%)	2/28 (7%)
FIRST INCIDENCE	716	734 (T)	665	590
STATISTICAL TESTS				
LIFE TABLE	P=0.311N	P=0.075N	P=0.059N	P=0.156N
POLY 3	P=0.249N	P=0.090N	P=0.086N	P=0.116N
POLY 1.5	P=0.230N	P=0.096N	P=0.095N	P=0.108N
POLY 6	P=0.275N	P=0.082N	P=0.076N	P=0.128N
LOGISTIC REGRESSION	P=0.261N	P=0.067N	P=0.078N	P=0.134N
COCH-ARM / FISHERS	P=0.206N	P=0.106N	P=0.106N	P=0.100N

Dose	CONTROL	25 PPM	100 PPM	400 PPM
		Females		
Tongue				
Squamous Cell Carcinoma or Papilloma Squamous				
TUMOR RATES	#	#	#	#
OVERALL (a)	2/50 (4%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	2/44.85	0/46.53	0/46.15	0/41.60
POLY-3 PERCENT (g)	4.5%	0.0%	0.0%	0.0%
TERMINAL (d)	0/32 (0%)	0/35 (0%)	0/39 (0%)	0/28 (0%)
FIRST INCIDENCE	666	---	---	---
STATISTICAL TESTS				
LIFE TABLE	P=0.350N	P=0.226N	P=0.221N	P=0.288N
POLY 3	P=0.321N	P=0.229N	P=0.231N	P=0.254N
POLY 1.5	P=0.315N	P=0.232N	P=0.235N	P=0.246N
POLY 6	P=0.327N	P=0.225N	P=0.225N	P=0.265N
LOGISTIC REGRESSION	P=0.302N	P=0.248N	P=0.237N	P=0.236N
COCH-ARM / FISHERS	P=0.308N	P=0.247N	P=0.247N	P=0.247N

Dose	CONTROL	25 PPM	100 PPM	400 PPM
		Females		
Uterus				
Carcinoma				
TUMOR RATES	#	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	2/50 (4%)	1/50 (2%)
POLY-3 RATE (b)	0/44.52	0/46.53	2/46.15	1/42.32
POLY-3 PERCENT (g)	0.0%	0.0%	4.3%	2.4%
TERMINAL (d)	0/32 (0%)	0/35 (0%)	2/39 (5%)	0/28 (0%)
FIRST INCIDENCE	---	---	734 (T)	478
STATISTICAL TESTS				
LIFE TABLE	P=0.382	(e)	P=0.283	P=0.504
POLY 3	P=0.388	(e)	P=0.245	P=0.490
POLY 1.5	P=0.402	(e)	P=0.240	P=0.495
POLY 6	P=0.369	(e)	P=0.253	P=0.483
LOGISTIC REGRESSION	P=0.445	(e)	P=0.283	P=0.401
COCH-ARM / FISHERS	P=0.419	(e)	P=0.247	P=0.500

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

Dose	Females CONTROL	25 PPM	100 PPM	400 PPM
Uterus Polyp Stromal				
TUMOR RATES	#	#	#	#
OVERALL (a)	7/50 (14%)	8/50 (16%)	14/50 (28%)	12/50 (24%)
POLY-3 RATE (b)	7/45.21	8/47.22	14/47.02	12/42.70
POLY-3 PERCENT (g)	15.5%	16.9%	29.8%	28.1%
TERMINAL (d)	5/32 (16%)	6/35 (17%)	10/39 (26%)	9/28 (32%)
FIRST INCIDENCE	609	635	665	589
STATISTICAL TESTS				
LIFE TABLE	P=0.063	P=0.561	P=0.156	P=0.095
POLY 3	P=0.109	P=0.537	P=0.081	P=0.117
POLY 1.5	P=0.133	P=0.522	P=0.072	P=0.133
POLY 6	P=0.082	P=0.556	P=0.096	P=0.099
LOGISTIC REGRESSION	P=0.127	P=0.504	P=0.075	P=0.120
COCH-ARM / FISHERS	P=0.170	P=0.500	P=0.070	P=0.154

Dose	Females CONTROL	25 PPM	100 PPM	400 PPM
Uterus Sarcoma Stromal or Polyp Stromal				
TUMOR RATES	#	#	#	#
OVERALL (a)	7/50 (14%)	8/50 (16%)	14/50 (28%)	13/50 (26%)
POLY-3 RATE (b)	7/45.21	8/47.22	14/47.02	13/43.42
POLY-3 PERCENT (g)	15.5%	16.9%	29.8%	29.9%
TERMINAL (d)	5/32 (16%)	6/35 (17%)	10/39 (26%)	9/28 (32%)
FIRST INCIDENCE	609	635	665	478
STATISTICAL TESTS				
LIFE TABLE	P=0.036 *	P=0.561	P=0.156	P=0.065
POLY 3	P=0.071	P=0.537	P=0.081	P=0.082
POLY 1.5	P=0.086	P=0.522	P=0.072	P=0.092
POLY 6	P=0.053	P=0.556	P=0.096	P=0.070
LOGISTIC REGRESSION	P=0.092	P=0.504	P=0.075	P=0.098
COCH-ARM / FISHERS	P=0.108	P=0.500	P=0.070	P=0.105

Dose	CONTROL	25 PPM	100 PPM	400 PPM
		Females		
All Organs Leukemia: Lymphocytic, Monocytic, Mononuclear, or Undifferentiated				
TUMOR RATES	#	#	#	#
OVERALL (a)	11/50 (22%)	15/50 (30%)	12/50 (24%)	14/50 (28%)
POLY-3 RATE (b)	11/45.59	15/47.12	12/46.76	14/44.43
POLY-3 PERCENT (g)	24.1%	31.8%	25.7%	31.5%
TERMINAL (d)	6/32 (19%)	10/35 (29%)	10/39 (26%)	5/28 (18%)
FIRST INCIDENCE	639	656	617	538
STATISTICAL TESTS				
LIFE TABLE	P=0.209	P=0.361	P=0.507N	P=0.228
POLY 3	P=0.364	P=0.276	P=0.528	P=0.292
POLY 1.5	P=0.390	P=0.265	P=0.508	P=0.306
POLY 6	P=0.335	P=0.290	P=0.554	P=0.276
LOGISTIC REGRESSION	P=0.381	P=0.282	P=0.518	P=0.328
COCH-ARM / FISHERS	P=0.420	P=0.247	P=0.500	P=0.322

Dose	CONTROL	25 PPM	100 PPM	400 PPM
		Females		
All Organs Benign Tumors				
TUMOR RATES	#	#	#	#
OVERALL (a)	46/50 (92%)	41/50 (82%)	44/50 (88%)	44/50 (88%)
POLY-3 RATE (b)	46/49.59	41/49.74	44/47.71	44/48.01
POLY-3 PERCENT (g)	92.8%	82.4%	92.2%	91.7%
TERMINAL (d)	30/32 (94%)	27/35 (77%)	36/39 (92%)	26/28 (93%)
FIRST INCIDENCE	359	499	665	492
STATISTICAL TESTS				
LIFE TABLE	P=0.061	P=0.103N	P=0.055N	P=0.321
POLY 3	P=0.348	P=0.100N	P=0.616N	P=0.573N
POLY 1.5	P=0.433	P=0.107N	P=0.574N	P=0.489N
POLY 6	P=0.270	P=0.088N	P=0.628N	P=0.654N
LOGISTIC REGRESSION	P=0.436	P=0.136N	P=0.389N	P=0.424N
COCH-ARM / FISHERS	P=0.550	P=0.117N	P=0.370N	P=0.370N

Dose	Females CONTROL	25 PPM	100 PPM	400 PPM
All Organs Malignant Tumors				
TUMOR RATES	#	#	#	#
OVERALL (a)	25/50 (50%)	22/50 (44%)	25/50 (50%)	18/50 (36%)
POLY-3 RATE (b)	25/47.28	22/49.12	25/47.65	18/45.68
POLY-3 PERCENT (g)	52.9%	44.8%	52.5%	39.4%
TERMINAL (d)	12/32 (38%)	12/35 (34%)	18/39 (46%)	6/28 (21%)
FIRST INCIDENCE	561	533	617	478
STATISTICAL TESTS				
LIFE TABLE	P=0.395N	P=0.255N	P=0.316N	P=0.308N
POLY 3	P=0.157N	P=0.278N	P=0.566N	P=0.134N
POLY 1.5	P=0.129N	P=0.301N	P=0.576	P=0.121N
POLY 6	P=0.202N	P=0.255N	P=0.541N	P=0.158N
LOGISTIC REGRESSION	P=0.099N	P=0.374N	P=0.567N	P=0.101N
COCH-ARM / FISHERS	P=0.104N	P=0.344N	P=0.579N	P=0.113N

Dose	Females CONTROL	25 PPM	100 PPM	400 PPM
All Organs Malignant and Benign Tumors				
TUMOR RATES	#	#	#	#
OVERALL (a)	49/50 (98%)	44/50 (88%)	46/50 (92%)	48/50 (96%)
POLY-3 RATE (b)	49/50.00	44/50.00	46/48.11	48/50.00
POLY-3 PERCENT (g)	98.0%	88.0%	95.6%	96.0%
TERMINAL (d)	31/32 (97%)	29/35 (83%)	37/39 (95%)	26/28 (93%)
FIRST INCIDENCE	359	499	617	478
STATISTICAL TESTS				
LIFE TABLE	P=0.035 *	P=0.098N	P=0.036N*	P=0.260
POLY 3	P=0.383	P=0.057N	P=0.460N	P=0.500N
POLY 1.5	P=0.378	P=0.057N	P=0.400N	P=0.500N
POLY 6	P=0.385	P=0.057N	P=0.483N	P=0.500N
LOGISTIC REGRESSION	P=0.300	(e)	P=0.218N	(e)
COCH-ARM / FISHERS	P=0.355	P=0.056N	P=0.181N	P=0.500N

(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).

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

DECALIN

FINAL#1/MICE

Facility: Battelle Northwest

Chemical CAS #: 91-17-8

Lock Date: 01/04/01

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
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

B6C3F1 MICE FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
DISPOSITION SUMMARY				
Animals Initially In Study	50	50	50	50
Early Deaths				
Natural Death	2	7	3	6
Moribund Sacrifice	10	15	11	8
Accidently Killed			1	
Survivors				
Moribund Sacrifice				1
Terminal Sacrifice	37	28	35	35
Other	1			
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Esophagus	(50)	(50)	(50)	(50)
Hyperplasia, Squamous	1 [2.0]			
Inflammation, Chronic Active	2 [2.0]			
Intestine Large, Rectum	(50)	(47)	(49)	(48)
Necrosis		1 [1.0]		
Intestine Small, Duodenum	(49)	(43)	(47)	(47)
Inflammation, Acute				1 [4.0]
Necrosis			1 [1.0]	1 [3.0]
Intestine Small, Jejunum	(49)	(45)	(48)	(45)
Infiltration Cellular, Mixed Cell		1 [3.0]		
Necrosis	1 [4.0]			
Intestine Small, Ileum	(48)	(45)	(49)	(47)
Infiltration Cellular, Mixed Cell		2 [3.0]		
Inflammation, Granulomatous				1 [2.0]
Necrosis	1 [4.0]			
Liver	(50)	(50)	(50)	(50)
Angiectasis	1 [1.0]		1 [2.0]	1 [2.0]
Basophilic Focus	8 [2.8]	7 [2.1]	6 [1.8]	3 [2.7]
Clear Cell Focus	2 [1.5]	2 [1.0]	4 [1.8]	1 [2.0]
Cyst		1 [2.0]		
Eosinophilic Focus	8 [1.9]	6 [2.5]	11 [1.8]	11 [2.5]
Fatty Change	2 [1.5]		2 [2.0]	2 [1.5]
Hematopoietic Cell Proliferation		2 [1.5]		3 [1.0]
Infarct	1 [4.0]	2 [2.0]		
Infiltration Cellular, Mast Cell	1 [2.0]			
Infiltration Cellular, Lymphocyte		1 [2.0]		
Inflammation, Granulomatous	16 [1.2]	11 [1.1]	16 [1.1]	16 [1.1]

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
WITH AVERAGE SEVERITY GRADES[b]
DECALIN

B6C3F1 MICE FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
ALIMENTARY SYSTEM - CONT				
Mitotic Alteration		1 [3.0]	1 [2.0]	
Mixed Cell Focus		1 [2.0]		
Necrosis			1 [1.0]	1 [1.0]
Tension Lipidosis		3 [1.3]		4 [2.0]
Thrombosis	1 [3.0]			
Vacuolization Cytoplasmic		1 [3.0]		1 [2.0]
Bile Duct, Cyst		1 [2.0]		
Centrilobular, Degeneration	1 [2.0]			
Centrilobular, Necrosis		1 [2.0]		2 [2.5]
Oval Cell, Hyperplasia			1 [1.0]	
Mesentery	(17)	(18)	(12)	(18)
Inflammation, Granulomatous	2 [3.0]			2 [3.5]
Thrombosis		1 [2.0]		
Fat, Hemorrhage		1 [3.0]		
Fat, Necrosis	16 [1.9]	16 [1.9]	11 [2.1]	16 [2.2]
Pancreas	(50)	(47)	(50)	(49)
Angiectasis				1 [2.0]
Atrophy	1 [1.0]		1 [2.0]	
Basophilic Focus	1 [2.0]		1 [2.0]	
Lipomatosis	1 [3.0]			
Necrosis	1 [2.0]			
Salivary Glands	(50)	(50)	(50)	(50)
Degeneration	1 [3.0]			
Stomach, Forestomach	(50)	(49)	(50)	(47)
Hyperplasia, Squamous	5 [2.2]	1 [2.0]	6 [1.8]	2 [1.0]
Inflammation, Acute	1 [2.0]		1 [2.0]	2 [2.0]
Stomach, Glandular	(49)	(47)	(50)	(47)
Infiltration Cellular, Mixed Cell	1 [2.0]			
Mineralization		2 [1.0]	3 [1.7]	1 [1.0]
Necrosis	1 [1.0]		1 [2.0]	
Tooth	(4)	(2)	(1)	(1)
Inflammation, Chronic Active		1 [4.0]		
Malformation	3 [1.3]	1 [2.0]	1 [1.0]	1 [2.0]
Dentine, Incisor, Dysplasia	1 [1.0]			
CARDIOVASCULAR SYSTEM				
Blood Vessel			(2)	
Aorta, Mineralization			1 [2.0]	
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	8 [1.4]	10 [1.1]	13 [1.0]	8 [1.6]
Inflammation, Chronic Active		1 [3.0]		

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

B6C3F1 MICE FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
CARDIOVASCULAR SYSTEM - CONT				
Mineralization			1 [1.0]	1 [2.0]
Atrium, Inflammation, Acute		1 [3.0]		
Atrium, Thrombosis				1 [4.0]
Capillary, Hyperplasia			1 [4.0]	
ENDOCRINE SYSTEM				
Adrenal Cortex	(50)	(50)	(50)	(49)
Hyperplasia	6 [1.5]	7 [2.0]	5 [1.6]	5 [1.8]
Hypertrophy	3 [2.0]	8 [1.4]	2 [1.5]	6 [1.7]
Necrosis			1 [2.0]	
Thrombosis			1 [2.0]	
Vacuolization Cytoplasmic	1 [4.0]			
Subcapsular, Hyperplasia	1 [3.0]	1 [4.0]		
Adrenal Medulla	(49)	(50)	(50)	(49)
Hyperplasia	1 [1.0]	2 [2.0]	2 [2.0]	2 [2.0]
Islets, Pancreatic	(50)	(47)	(50)	(49)
Hyperplasia			1 [2.0]	
Pituitary Gland	(50)	(49)	(49)	(50)
Pars Distalis, Angiectasis	1 [3.0]	1 [2.0]		
Pars Distalis, Hyperplasia	20 [2.3]	20 [2.2]	20 [2.4]	12 [2.6]
Pars Intermedia, Hyperplasia	2 [3.0]			
Pars Intermedia, Hypertrophy			1 [2.0]	1 [3.0]
Thyroid Gland	(50)	(49)	(50)	(47)
Cyst	1 [2.0]			
Follicular Cell, Hyperplasia	1 [1.0]	2 [3.0]	1 [3.0]	
GENERAL BODY SYSTEM				
None				
GENITAL SYSTEM				
Ovary	(50)	(49)	(49)	(48)
Angiectasis		2 [4.0]	1 [4.0]	1 [2.0]
Cyst	16 [2.4]	11 [2.2]	8 [2.5]	10 [2.5]
Hyperplasia, Tubular	1 [2.0]	1 [2.0]	1 [1.0]	
Inflammation, Granulomatous		1 [4.0]		
Thrombosis		1 [4.0]		
Uterus	(50)	(49)	(50)	(49)

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

B6C3F1 MICE FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
GENITAL SYSTEM - CONT				
Angiectasis	1 [4.0]	2 [3.5]	2 [4.0]	3 [2.7]
Hyperplasia, Cystic	3 [3.3]	3 [2.7]	5 [2.8]	
Inflammation, Suppurative	1 [4.0]			
Necrosis	1 [3.0]			
Thrombosis				1 [4.0]
Endometrium, Hyperplasia, Cystic	7 [4.0]	5 [3.6]	4 [4.0]	8 [3.9]
Lymphatic, Cyst				1 [3.0]
HEMATOPOIETIC SYSTEM				
Lymph Node	(5)	(2)	(4)	(1)
Lumbar, Angiectasis			1 [4.0]	
Renal, Angiectasis	2 [4.0]			
Lymph Node, Bronchial	(41)	(45)	(47)	(44)
Infiltration Cellular, Plasma Cell		1 [4.0]	1 [3.0]	
Lymph Node, Mandibular	(37)	(40)	(37)	(41)
Hyperplasia, Lymphoid		1 [4.0]		
Infiltration Cellular, Mast Cell	1 [4.0]			
Lymph Node, Mesenteric	(48)	(47)	(50)	(47)
Angiectasis		1 [2.0]	2 [3.5]	2 [2.5]
Ectasia		1 [4.0]		
Infiltration Cellular, Plasma Cell	1 [3.0]	1 [3.0]		
Inflammation, Granulomatous		1 [3.0]		1 [4.0]
Lymph Node, Mediastinal	(43)	(42)	(43)	(46)
Congestion				1 [3.0]
Infiltration Cellular, Plasma Cell		1 [4.0]		
Spleen	(50)	(47)	(50)	(48)
Hematopoietic Cell Proliferation	1 [2.0]	2 [3.0]	2 [4.0]	3 [4.0]
Hyperplasia, Lymphoid	1 [3.0]	2 [4.0]		1 [2.0]
Infiltration Cellular, Mast Cell	1 [2.0]			
Necrosis				1 [2.0]
Thymus	(48)	(48)	(48)	(47)
Necrosis		1 [2.0]		2 [2.0]
INTEGUMENTARY SYSTEM				
Mammary Gland	(49)	(50)	(50)	(50)
Hyperplasia	2 [2.0]	1 [2.0]	1 [2.0]	
Skin	(50)	(50)	(50)	(50)
Hyperplasia, Basal Cell				1 [1.0]
Infiltration Cellular, Mixed Cell	1 [2.0]	2 [2.0]	1 [1.0]	1 [2.0]

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

B6C3F1 MICE FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
INTEGUMENTARY SYSTEM - CONT				
Inflammation, Chronic Active				1 [4.0]
Inflammation, Granulomatous			1 [3.0]	
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Fibrous Osteodystrophy	3 [2.0]	3 [2.3]	2 [2.0]	2 [2.0]
Skeletal Muscle		(2)		
Necrosis, Fatty		1 [2.0]		
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Meninges, Infiltration Cellular, Mononuclear Cell			1 [1.0]	1 [2.0]
RESPIRATORY SYSTEM				
Larynx	(50)	(50)	(50)	(49)
Inflammation, Acute			1 [2.0]	
Mineralization			1 [2.0]	
Lung	(50)	(50)	(50)	(50)
Congestion			1 [4.0]	
Hemorrhage			1 [3.0]	1 [4.0]
Inflammation, Granulomatous			3 [1.7]	
Mineralization			1 [3.0]	
Thrombosis		1 [1.0]		
Alveolar Epithelium, Hyperplasia	4 [2.3]	2 [1.5]	3 [1.7]	4 [1.3]
Alveolus, Infiltration Cellular, Histiocyte	3 [2.3]		1 [1.0]	3 [1.3]
Artery, Inflammation, Chronic				1 [3.0]
Bronchiole, Hyperplasia		1 [3.0]		1 [3.0]
Nose	(50)	(50)	(50)	(49)
Inflammation, Suppurative	3 [1.3]	1 [4.0]		1 [1.0]
Glands, Dilatation			1 [1.0]	5 [1.0]
Olfactory Epithelium, Atrophy			1 [1.0]	2 [2.0]
Respiratory Epithelium, Metaplasia, Squamous				1 [1.0]
Sinus, Foreign Body		1 [4.0]		1 [3.0]
Trachea	(50)	(49)	(50)	(49)
Inflammation, Acute			1 [2.0]	
Mineralization			1 [3.0]	

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
WITH AVERAGE SEVERITY GRADES[b]
DECALIN

B6C3F1 MICE FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
SPECIAL SENSES SYSTEM				
Eye	(2)	(1)	(2)	
Cornea, Inflammation, Chronic Active	1 [4.0]	1 [1.0]	1 [2.0]	
Harderian Gland	(4)	(4)	(5)	(3)
Hyperplasia				1 [4.0]
URINARY SYSTEM				
Kidney	(50)	(50)	(50)	(50)
Amyloid Deposition		1 [4.0]		1 [4.0]
Infarct	4 [2.0]	2 [2.5]		
Metaplasia, Osseous	4 [2.0]	1 [1.0]	1 [2.0]	3 [1.3]
Nephropathy	46 [1.1]	40 [1.3]	40 [1.2]	41 [1.2]
Pelvis, Dilatation	1 [2.0]			
Renal Tubule, Hyperplasia	1 [1.0]			
Renal Tubule, Necrosis				1 [2.0]
Renal Tubule, Vacuolization Cytoplasmic			1 [2.0]	

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

B6C3F1 MICE MALE	CONTROL	25 PPM	100 PPM	400 PPM
DISPOSITION SUMMARY				
Animals Initially In Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	7	7	7	5
Natural Death	3	2	7	11
Survivors				
Terminal Sacrifice	39	41	35	33
Moribund Sacrifice				1
Natural Death	1		1	
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Gallbladder	(42)	(40)	(41)	(40)
Degeneration, Hyaline	1 [2.0]			3 [1.7]
Hyperplasia		1 [1.0]		1 [2.0]
Intestine Large, Colon	(49)	(48)	(49)	(49)
Hemorrhage				1 [3.0]
Infiltration Cellular, Mixed Cell				1 [2.0]
Necrosis			1 [1.0]	
Serosa, Inflammation, Chronic			1 [2.0]	
Intestine Large, Cecum	(48)	(48)	(49)	(46)
Hemorrhage				1 [3.0]
Infiltration Cellular, Mixed Cell				1 [2.0]
Inflammation, Acute			1 [1.0]	
Necrosis			1 [1.0]	
Serosa, Inflammation, Granulomatous	1 [1.0]			
Intestine Small, Duodenum	(47)	(48)	(47)	(43)
Inflammation, Acute	1 [3.0]			
Necrosis	1 [2.0]			
Intestine Small, Jejunum	(46)	(48)	(47)	(43)
Infiltration Cellular, Mixed Cell	1 [2.0]			1 [3.0]
Necrosis			1 [2.0]	
Intestine Small, Ileum	(46)	(48)	(47)	(46)
Hyperplasia				1 [2.0]
Infiltration Cellular, Mixed Cell		1 [2.0]		1 [3.0]
Liver	(50)	(50)	(50)	(50)
Angiectasis	1 [2.0]			1 [3.0]
Basophilic Focus	9 [2.0]	6 [3.0]	13 [2.5]	13 [2.4]
Clear Cell Focus	17 [1.9]	21 [2.2]	16 [2.4]	21 [2.3]
Eosinophilic Focus	10 [2.2]	9 [2.1]	7 [2.9]	19 [2.3]

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

B6C3F1 MICE MALE	CONTROL	25 PPM	100 PPM	400 PPM
ALIMENTARY SYSTEM - CONT				
Erythrophagocytosis				9 [1.6]
Fatty Change	1 [2.0]		3 [1.3]	3 [2.0]
Hematopoietic Cell Proliferation	1 [1.0]		1 [1.0]	
Infarct		1 [4.0]		
Inflammation, Granulomatous	5 [1.0]	6 [1.0]	9 [1.0]	3 [1.7]
Mixed Cell Focus				1 [2.0]
Necrosis		1 [3.0]	3 [1.3]	19 [1.2]
Syncytial Alteration	26 [1.0]	28 [1.0]	36 [1.2]	44 [2.2]
Tension Lipidosis	2	5		1
Thrombosis			1 [3.0]	
Vacuolization Cytoplasmic		1 [1.0]		
Bile Duct, Degeneration, Hyaline				1 [4.0]
Centrilobular, Hypertrophy	2 [1.5]		4 [1.3]	36 [1.9]
Centrilobular, Necrosis			4 [2.8]	2 [3.0]
Mesentery	(14)	(11)	(10)	(15)
Inflammation, Granulomatous	3 [2.3]	1 [2.0]	2 [1.5]	3 [2.7]
Artery, Inflammation, Chronic Active		1 [3.0]		
Fat, Necrosis	12 [2.2]	9 [1.9]	9 [2.0]	12 [1.8]
Pancreas	(49)	(50)	(50)	(49)
Atrophy	1 [1.0]	1 [1.0]		
Basophilic Focus		1 [2.0]	1 [2.0]	
Cyst	1 [3.0]			
Lipomatosis	1 [4.0]	1 [2.0]		
Stomach, Forestomach	(49)	(50)	(49)	(50)
Hyperplasia, Squamous	4 [3.0]	4 [1.8]	1 [2.0]	9 [2.4]
Inflammation, Acute	2 [1.5]	1 [1.0]	1 [1.0]	4 [2.3]
Inflammation, Chronic Active	1 [3.0]			1 [2.0]
Necrosis	1 [2.0]	1 [2.0]		4 [1.5]
Stomach, Glandular	(49)	(49)	(48)	(48)
Hyperplasia		1 [3.0]		
Infiltration Cellular, Mixed Cell		1 [2.0]		
Mineralization	1 [1.0]		1 [1.0]	
Necrosis			2 [1.5]	
Tooth	(23)	(26)	(22)	(21)
Inflammation, Chronic Active	1 [4.0]			
Malformation	21 [1.2]	26 [1.2]	22 [1.2]	20 [1.4]
Dentine, Incisor, Dysplasia	1 [1.0]			1 [1.0]
CARDIOVASCULAR SYSTEM				
Blood Vessel	(1)	(3)		(1)
Inflammation, Chronic Active	1 [3.0]	1 [2.0]		

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
WITH AVERAGE SEVERITY GRADES[b]
DECALIN

B6C3F1 MICE MALE	CONTROL	25 PPM	100 PPM	400 PPM
CARDIOVASCULAR SYSTEM - CONT				
Heart	(50)	(50)	(50)	(50)
Angiectasis			1 [1.0]	
Cardiomyopathy	9 [1.1]	8 [1.0]	7 [1.0]	7 [1.0]
Mineralization			1 [1.0]	1 [1.0]
Artery, Inflammation, Chronic Active	1 [3.0]	1 [2.0]	1 [3.0]	
ENDOCRINE SYSTEM				
Adrenal Cortex	(49)	(50)	(50)	(50)
Hyperplasia	23 [2.0]	16 [2.0]	13 [2.0]	14 [1.9]
Hypertrophy	37 [1.7]	42 [1.9]	30 [1.9]	26 [1.7]
Subcapsular, Hyperplasia				1 [3.0]
Adrenal Medulla	(49)	(50)	(50)	(50)
Hyperplasia	3 [1.7]			3 [1.7]
Islets, Pancreatic	(49)	(50)	(50)	(49)
Hypertrophy		2 [2.5]		
Pituitary Gland	(48)	(50)	(50)	(49)
Cyst		1 [2.0]		1 [2.0]
Pars Distalis, Hyperplasia	2 [2.0]	1 [1.0]	3 [1.3]	3 [2.7]
Pars Intermedia, Hyperplasia	1 [1.0]			
Pars Intermedia, Hypertrophy		1 [2.0]		
GENERAL BODY SYSTEM				
None				
GENITAL SYSTEM				
Epididymis	(50)	(50)	(50)	(50)
Granuloma Sperm	1 [2.0]	2 [2.0]	1 [3.0]	3 [2.0]
Inflammation, Chronic				1 [1.0]
Preputial Gland	(49)	(49)	(50)	(50)
Ectasia	28 [1.9]	24 [2.0]	21 [2.2]	22 [2.0]
Hyperplasia, Squamous				1 [3.0]
Inflammation, Chronic Active	1 [2.0]	1 [2.0]	2 [3.0]	2 [2.5]
Prostate	(48)	(50)	(50)	(50)
Hyperplasia		2 [2.5]		
Inflammation, Chronic Active			2 [2.0]	
Artery, Inflammation, Chronic Active		1 [3.0]		
Seminal Vesicle	(49)	(50)	(50)	(50)

a Number of animals examined microscopically at site and number of animals with lesion
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B6C3F1 MICE MALE	CONTROL	25 PPM	100 PPM	400 PPM
GENITAL SYSTEM - CONT				
Inflammation, Chronic		1 [2.0]		
Testes	(50)	(50)	(50)	(50)
Mineralization	1 [1.0]	1 [1.0]		
Interstitial Cell, Hyperplasia	2 [1.0]			
HEMATOPOIETIC SYSTEM				
Bone Marrow	(49)	(50)	(50)	(48)
Angiectasis				1 [2.0]
Thrombosis				1 [2.0]
Lymph Node	(1)		(3)	(1)
Iliac, Infiltration Cellular, Plasma Cell			1 [4.0]	1 [3.0]
Lymph Node, Mesenteric	(49)	(48)	(50)	(47)
Angiectasis	2 [2.5]			
Infiltration Cellular, Plasma Cell		2 [3.0]	1 [3.0]	2 [3.0]
Infiltration Cellular, Mixed Cell	2 [3.0]			1 [3.0]
Lymph Node, Mediastinal	(41)	(36)	(42)	(35)
Inflammation, Granulomatous	1 [3.0]			
Spleen	(49)	(50)	(50)	(49)
Hematopoietic Cell Proliferation	1 [3.0]	1 [3.0]	2 [3.5]	2 [3.0]
Hyperplasia, Lymphoid				1 [4.0]
Thymus	(44)	(44)	(42)	(40)
Necrosis		1 [3.0]		
INTEGUMENTARY SYSTEM				
Skin	(50)	(50)	(50)	(50)
Cyst Epithelial Inclusion		1 [2.0]		
Hyperplasia, Basal Cell				1 [2.0]
Infiltration Cellular, Mixed Cell				1 [2.0]
Inflammation, Acute			1 [4.0]	1 [3.0]
Inflammation, Chronic Active	1 [4.0]	2 [4.0]	2 [3.5]	4 [3.0]
Lymphatic, Angiectasis	1 [4.0]			
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Inflammation, Chronic Active		1 [3.0]		

a Number of animals examined microscopically at site and number of animals with lesion
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B6C3F1 MICE MALE	CONTROL	25 PPM	100 PPM	400 PPM
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Meninges, Infiltration Cellular, Mononuclear Cell			1 [1.0]	
RESPIRATORY SYSTEM				
Larynx	(50)	(50)	(50)	(50)
Degeneration, Hyaline				1 [1.0]
Inflammation, Acute			1 [2.0]	
Lung	(50)	(50)	(50)	(50)
Inflammation, Granulomatous	3 [1.0]		2 [1.0]	1 [4.0]
Thrombosis			1 [2.0]	
Alveolar Epithelium, Hyperplasia	5 [1.6]	2 [2.0]	2 [3.0]	6 [2.8]
Alveolus, Infiltration Cellular, Histiocyte	1 [1.0]	2 [1.0]		
Nose	(50)	(50)	(50)	(48)
Inflammation, Suppurative	1 [1.0]	2 [2.0]	4 [1.8]	2 [1.0]
Polyp, Inflammatory		1 [3.0]		
Thrombosis		2 [1.5]		
Glands, Dilatation	2 [1.0]	2 [1.5]	1 [1.0]	3 [1.7]
Olfactory Epithelium, Atrophy	1 [2.0]	1 [4.0]	3 [2.0]	
Sinus, Foreign Body	1 [4.0]			
Trachea	(49)	(50)	(49)	(48)
Degeneration, Hyaline				1 [2.0]
Necrosis				1 [1.0]
SPECIAL SENSES SYSTEM				
Eye	(3)	(3)	(2)	(1)
Cataract	2 [2.0]			
Degeneration		1 [3.0]		
Cornea, Inflammation, Chronic Active		1 [2.0]		
Harderian Gland	(9)	(5)	(5)	(5)
Hyperplasia	1 [2.0]			
URINARY SYSTEM				
Kidney	(49)	(50)	(50)	(49)
Cyst		1 [2.0]		
Infarct	3 [2.0]	2 [2.0]	5 [2.0]	1 [2.0]

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

INCIDENCE RATES OF NONNEOPLASTIC LESIONS BY ANATOMIC SITE (a)
WITH AVERAGE SEVERITY GRADES[b]
DECALIN

B6C3F1 MICE MALE	CONTROL	25 PPM	100 PPM	400 PPM
URINARY SYSTEM - CONT				
Metaplasia, Osseous	3 [1.7]	3 [1.3]	5 [1.0]	2 [1.0]
Mineralization			1 [2.0]	
Nephropathy	47 [1.3]	46 [1.2]	47 [1.5]	41 [1.4]
Renal Tubule, Hyperplasia	1 [1.0]			2 [1.0]
Renal Tubule, Karyomegaly		1 [2.0]	1 [1.0]	

a Number of animals examined microscopically at site and number of animals with lesion
b Average severity grade (1-minimal;2-mild;3-moderate;4-marked)

---------- END OF REPORT ----------

FINAL#1/MICE

Facility: Battelle Northwest

Chemical CAS #: 91-17-8

Lock Date: 01/04/01

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

B6C3F1 MICE FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
DISPOSITION SUMMARY				
Animals Initially in Study	50	50	50	50
Early Deaths				
Natural Death	2	7	3	6
Moribund Sacrifice	10	15	11	8
Accidently Killed			1	
Survivors				
Moribund Sacrifice				1
Terminal Sacrifice	37	28	35	35
Other	1			
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Esophagus	(50)	(50)	(50)	(50)
Hepatocholangiocarcinoma, Metastatic, Liver		1 (2%)		
Gallbladder	(42)	(40)	(40)	(38)
Hepatocholangiocarcinoma, Metastatic, Liver		1 (3%)		
Mast Cell Tumor Malignant, Metastatic, Uncertain Primary Site			1 (3%)	
Intestine Large, Cecum	(49)	(43)	(47)	(46)
Leiomyoma	1 (2%)			
Intestine Small, Duodenum	(49)	(43)	(47)	(47)
Polyp Adenomatous				1 (2%)
Intestine Small, Ileum	(48)	(45)	(49)	(47)
Hepatocholangiocarcinoma, Metastatic, Liver		1 (2%)		
Liver	(50)	(50)	(50)	(50)
Hemangiosarcoma				1 (2%)
Hepatoblastoma				1 (2%)
Hepatocellular Carcinoma	4 (8%)	15 (30%)	6 (12%)	5 (10%)
Hepatocellular Carcinoma, Multiple		1 (2%)		
Hepatocellular Adenoma	4 (8%)	11 (22%)	7 (14%)	14 (28%)
Hepatocellular Adenoma, Multiple	3 (6%)	2 (4%)	1 (2%)	3 (6%)
Hepatocholangiocarcinoma		1 (2%)		
Mast Cell Tumor Malignant, Metastatic, Uncertain Primary Site			1 (2%)	
Sarcoma, Metastatic, Skin		1 (2%)		
Sarcoma, Metastatic, Uncertain Primary Site				1 (2%)
Mesentery	(17)	(18)	(12)	(18)
Hepatocholangiocarcinoma, Metastatic, Liver		1 (6%)		

B6C3F1 MICE FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
ALIMENTARY SYSTEM - cont				
Sarcoma, Metastatic, Skin		1 (6%)		
Pancreas	(50)	(47)	(50)	(49)
Hepatocholangiocarcinoma, Metastatic, Liver		1 (2%)		
Salivary Glands	(50)	(50)	(50)	(50)
Stomach, Forestomach	(50)	(49)	(50)	(47)
Hepatocholangiocarcinoma, Metastatic, Liver		1 (2%)		
Mast Cell Tumor Malignant, Metastatic, Uncertain Primary Site			1 (2%)	
Squamous Cell Carcinoma		1 (2%)		1 (2%)
Stomach, Glandular	(49)	(47)	(50)	(47)
Hepatocholangiocarcinoma, Metastatic, Liver		1 (2%)		
Mast Cell Tumor Malignant, Metastatic, Uncertain Primary Site			1 (2%)	
Tongue	(1)			
Squamous Cell Carcinoma	1 (100%)			
CARDIOVASCULAR SYSTEM				
Blood Vessel			(2)	
Aorta, Mast Cell Tumor Malignant, Metastatic, Uncertain Primary Site			1 (50%)	
Heart	(50)	(50)	(50)	(50)
Sarcoma, Metastatic, Uncertain Primary Site				1 (2%)
ENDOCRINE SYSTEM				
Adrenal Cortex	(50)	(50)	(50)	(49)
Subcapsular, Adenoma	1 (2%)			
Adrenal Medulla	(49)	(50)	(50)	(49)
Pheochromocytoma Benign	2 (4%)		2 (4%)	1 (2%)
Islets, Pancreatic	(50)	(47)	(50)	(49)
Adenoma	1 (2%)		1 (2%)	
Pituitary Gland	(50)	(49)	(49)	(50)
Mast Cell Tumor Malignant, Metastatic, Uncertain Primary Site			1 (2%)	
Pars Distalis, Adenoma	13 (26%)	8 (16%)	10 (20%)	17 (34%)
Pars Intermedia, Adenoma	1 (2%)	1 (2%)	2 (4%)	2 (4%)
Thyroid Gland	(50)	(49)	(50)	(47)
Follicular Cell, Adenoma	1 (2%)			

B6C3F1 MICE FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
GENERAL BODY SYSTEM				
None				
GENITAL SYSTEM				
Ovary	(50)	(49)	(49)	(48)
Carcinoma, Metastatic, Uterus		1 (2%)		
Cystadenoma	1 (2%)		3 (6%)	2 (4%)
Granulosa Cell Tumor Malignant				1 (2%)
Granulosa Cell Tumor Benign	1 (2%)		1 (2%)	1 (2%)
Granulosa-Theca Tumor Malignant			1 (2%)	
Hemangioma	1 (2%)			
Hemangiosarcoma			1 (2%)	
Hepatocholangiocarcinoma, Metastatic, Liver		1 (2%)		
Luteoma	1 (2%)			
Mast Cell Tumor Malignant, Metastatic, Uncertain Primary Site			1 (2%)	
Tubulostromal Adenoma			1 (2%)	
Uterus	(50)	(49)	(50)	(49)
Carcinoma	1 (2%)	1 (2%)		
Hemangiosarcoma		1 (2%)		1 (2%)
Hepatocholangiocarcinoma, Metastatic, Liver		1 (2%)		
Mast Cell Tumor Malignant, Metastatic, Uncertain Primary Site			1 (2%)	
Polyp Stromal			2 (4%)	3 (6%)
Sarcoma Stromal				1 (2%)
HEMATOPOIETIC SYSTEM				
Bone Marrow	(50)	(50)	(50)	(48)
Hemangiosarcoma			1 (2%)	1 (2%)
Lymph Node	(5)	(2)	(4)	(1)
Mast Cell Tumor Malignant, Metastatic, Uncertain Primary Site			1 (25%)	
Iliac, Mast Cell Tumor Malignant, Metastatic, Uncertain Primary Site			1 (25%)	
Lymph Node, Bronchial	(41)	(45)	(47)	(44)
Hepatocholangiocarcinoma, Metastatic, Liver		1 (2%)		
Mast Cell Tumor Malignant, Metastatic, Uncertain Primary Site			1 (2%)	

B6C3F1 MICE FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
HEMATOPOIETIC SYSTEM - cont				
Sarcoma, Metastatic, Uncertain Primary Site				1 (2%)
Lymph Node, Mandibular	(37)	(40)	(37)	(41)
Carcinoma, Metastatic, Harderian Gland			1 (3%)	
Lymph Node, Mesenteric	(48)	(47)	(50)	(47)
Hepatocholangiocarcinoma, Metastatic, Liver		1 (2%)		
Mast Cell Tumor Malignant, Metastatic, Uncertain Primary Site			1 (2%)	
Sarcoma, Metastatic, Uncertain Primary Site				1 (2%)
Lymph Node, Mediastinal	(43)	(42)	(43)	(46)
Hepatocholangiocarcinoma, Metastatic, Liver		1 (2%)		
Mast Cell Tumor Malignant, Metastatic, Uncertain Primary Site			1 (2%)	
Osteosarcoma, Metastatic, Uncertain Primary Site				1 (2%)
Sarcoma, Metastatic, Uncertain Primary Site				1 (2%)
Spleen	(50)	(47)	(50)	(48)
Hemangiosarcoma	1 (2%)	1 (2%)	1 (2%)	2 (4%)
Hepatocholangiocarcinoma, Metastatic, Liver		1 (2%)		
Thymus	(48)	(48)	(48)	(47)
Thymoma Benign				1 (2%)
INTEGUMENTARY SYSTEM				
Mammary Gland	(49)	(50)	(50)	(50)
Carcinoma	1 (2%)	2 (4%)	2 (4%)	
Skin	(50)	(50)	(50)	(50)
Basal Cell Carcinoma		1 (2%)		
Mast Cell Tumor Benign				1 (2%)
Neural Crest Tumor			1 (2%)	
Squamous Cell Papilloma			1 (2%)	
Subcutaneous Tissue, Fibrosarcoma			1 (2%)	
Subcutaneous Tissue, Fibrous Histiocytoma		1 (2%)		1 (2%)
Subcutaneous Tissue, Hemangiosarcoma		1 (2%)		1 (2%)
Subcutaneous Tissue, Sarcoma	2 (4%)	2 (4%)	2 (4%)	1 (2%)
Subcutaneous Tissue, Schwannoma Malignant			1 (2%)	

B6C3F1 MICE FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Uncertain Primary Site			1 (2%)	
Osteoma		1 (2%)		
Skeletal Muscle		(2)		
Hepatocholangiocarcinoma, Metastatic, Liver		1 (50%)		
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Mast Cell Tumor Malignant, Metastatic, Uncertain Primary Site			1 (2%)	
RESPIRATORY SYSTEM				
Larynx	(50)	(50)	(50)	(49)
Lung	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Adenoma	1 (2%)	4 (8%)		4 (8%)
Alveolar/Bronchiolar Carcinoma	6 (12%)	3 (6%)	1 (2%)	1 (2%)
Carcinoma, Metastatic, Harderian Gland			1 (2%)	
Carcinoma, Metastatic, Uterus		1 (2%)		
Hemangiosarcoma, Metastatic, Liver				1 (2%)
Hemangiosarcoma, Metastatic, Skin		1 (2%)		
Hepatocellular Carcinoma, Metastatic, Liver	2 (4%)	1 (2%)	2 (4%)	
Hepatocholangiocarcinoma, Metastatic, Liver		1 (2%)		
Mast Cell Tumor Malignant, Metastatic, Uncertain Primary Site			1 (2%)	
Sarcoma, Metastatic, Uncertain Primary Site				1 (2%)
Mediastinum, Alveolar/Bronchiolar Carcinoma, Metastatic, Lung	1 (2%)			
Mediastinum, Sarcoma, Metastatic, Skin		1 (2%)		
Nose	(50)	(50)	(50)	(49)
Mast Cell Tumor Malignant, Metastatic, Uncertain Primary Site			1 (2%)	
Pleura	(1)			(1)
Sarcoma, Metastatic, Uncertain Primary Site				1 (100%)

B6C3F1 MICE FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
SPECIAL SENSES SYSTEM				
Eye	(2)	(1)	(2)	
Carcinoma, Metastatic, Uncertain Primary Site			1 (50%)	
Harderian Gland	(4)	(4)	(5)	(3)
Adenoma	3 (75%)	4 (100%)	2 (40%)	2 (67%)
Carcinoma	1 (25%)		3 (60%)	
URINARY SYSTEM				
Kidney	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung	1 (2%)			
Hepatocholangiocarcinoma, Metastatic, Liver		1 (2%)		
Mast Cell Tumor Malignant, Metastatic, Uncertain Primary Site			1 (2%)	
Urinary Bladder	(50)	(46)	(49)	(47)
SYSTEMIC LESIONS				
Multiple Organs	*(50)	*(50)	*(50)	*(50)
Lymphoma Malignant	11 (22%)	8 (16%)	13 (26%)	14 (28%)

* Number of animals with any tissue examined microscopically

B6C3F1 MICE FEMALE	CONTROL	25 PPM	100 PPM	400 PPM
TUMOR SUMMARY				
Total Animals with Primary Neoplasms (b)	39	40	42	41
Total Primary Neoplasms	63	70	67	84
Total Animals with Benign Neoplasms	28	25	27	34
Total Benign Neoplasms	35	31	33	52
Total Animals with Malignant Neoplasms	22	28	28	26
Total Malignant Neoplasms	28	39	33	32
Total Animals with Metastatic Neoplasms	3	5	5	3
Total Metastatic Neoplasm	4	23	23	9
Total Animals with Malignant Neoplasms Uncertain Primary Site			2	2
Total Animals with Neoplasms Uncertain-Benign or Malignant			1	
Total Uncertain Neoplasms			1	

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

B6C3F1 MICE MALE	CONTROL	25 PPM	100 PPM	400 PPM
DISPOSITION SUMMARY				
Animals Initially in Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	7	7	7	5
Natural Death	3	2	7	11
Survivors				
Terminal Sacrifice	39	41	35	33
Moribund Sacrifice				1
Natural Death	1		1	
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Gallbladder	(42)	(40)	(41)	(40)
Intestine Large, Cecum	(48)	(48)	(49)	(46)
Polyp Adenomatous	1 (2%)			
Intestine Small, Duodenum	(47)	(48)	(47)	(43)
Carcinoma			1 (2%)	
Intestine Small, Jejunum	(46)	(48)	(47)	(43)
Carcinoma		1 (2%)	1 (2%)	
Liver	(50)	(50)	(50)	(50)
Cholangioma		1 (2%)		
Hemangiosarcoma	1 (2%)	3 (6%)		2 (4%)
Hepatoblastoma		1 (2%)		1 (2%)
Hepatocellular Carcinoma	10 (20%)	7 (14%)	8 (16%)	11 (22%)
Hepatocellular Carcinoma, Multiple			2 (4%)	
Hepatocellular Adenoma	16 (32%)	16 (32%)	9 (18%)	17 (34%)
Hepatocellular Adenoma, Multiple	6 (12%)	6 (12%)	5 (10%)	10 (20%)
Histiocytic Sarcoma			1 (2%)	
Liposarcoma, Metastatic, Mesentery				1 (2%)
Sarcoma, Metastatic, Uncertain Primary Site				1 (2%)
Mesentery	(14)	(11)	(10)	(15)
Liposarcoma				1 (7%)
Sarcoma, Metastatic, Uncertain Primary Site				1 (7%)
Pancreas	(49)	(50)	(50)	(49)
Liposarcoma, Metastatic, Mesentery				1 (2%)
Sarcoma, Metastatic, Uncertain Primary Site				2 (4%)
Salivary Glands	(50)	(50)	(50)	(49)
Stomach, Forestomach	(49)	(50)	(49)	(50)
Sarcoma, Metastatic, Uncertain Primary Site				1 (2%)

B6C3F1 MICE MALE	CONTROL	25 PPM	100 PPM	400 PPM
ALIMENTARY SYSTEM - cont				
Stomach, Glandular	(49)	(49)	(48)	(48)
Liposarcoma, Metastatic, Mesentery				1 (2%)
Tooth	(23)	(26)	(22)	(21)
Sarcoma, Metastatic, Uncertain Primary Site				1 (5%)
CARDIOVASCULAR SYSTEM				
Heart	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung				1 (2%)
Carcinoma, Metastatic, Uncertain Primary Site				1 (2%)
Hemangiosarcoma	1 (2%)	1 (2%)		
Hemangiosarcoma, Metastatic, Liver				1 (2%)
Sarcoma, Metastatic, Uncertain Primary Site				1 (2%)
ENDOCRINE SYSTEM				
Adrenal Cortex	(49)	(50)	(50)	(50)
Sarcoma, Metastatic, Uncertain Primary Site				1 (2%)
Subcapsular, Adenoma	2 (4%)	1 (2%)		4 (8%)
Adrenal Medulla	(49)	(50)	(50)	(50)
Sarcoma, Metastatic, Uncertain Primary Site				1 (2%)
Islets, Pancreatic	(49)	(50)	(50)	(49)
Adenoma	1 (2%)		2 (4%)	2 (4%)
Pituitary Gland	(48)	(50)	(50)	(49)
Pars Distalis, Adenoma	1 (2%)	1 (2%)		
Thyroid Gland	(48)	(48)	(49)	(49)
Follicular Cell, Carcinoma			1 (2%)	
GENERAL BODY SYSTEM				
Peritoneum				(1)
Hemangiosarcoma, Metastatic, Liver				1 (100%)

B6C3F1 MICE MALE	CONTROL	25 PPM	100 PPM	400 PPM
GENITAL SYSTEM				
Coagulating Gland	(1)			
Adenoma	1 (100%)			
Epididymis	(50)	(50)	(50)	(50)
Histiocytic Sarcoma			1 (2%)	
Preputial Gland	(49)	(49)	(50)	(50)
Hemangiosarcoma			2 (4%)	
Prostate	(48)	(50)	(50)	(50)
Seminal Vesicle	(49)	(50)	(50)	(50)
Liposarcoma, Metastatic, Mesentery				1 (2%)
Sarcoma, Metastatic, Uncertain Primary Site				1 (2%)
Testes	(50)	(50)	(50)	(50)
Interstitial Cell, Adenoma				3 (6%)
HEMATOPOIETIC SYSTEM				
Bone Marrow	(49)	(50)	(50)	(48)
Hemangiosarcoma	1 (2%)			
Histiocytic Sarcoma			1 (2%)	
Lymph Node	(1)		(3)	(1)
Lymph Node, Bronchial	(42)	(36)	(40)	(41)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung			1 (3%)	2 (5%)
Liposarcoma, Metastatic, Mesentery				1 (2%)
Sarcoma, Metastatic, Uncertain Primary Site				2 (5%)
Lymph Node, Mandibular	(31)	(36)	(32)	(22)
Carcinoma, Metastatic, Harderian Gland	1 (3%)			
Liposarcoma, Metastatic, Mesentery				1 (5%)
Lymph Node, Mesenteric	(49)	(48)	(50)	(47)
Histiocytic Sarcoma			1 (2%)	
Liposarcoma, Metastatic, Mesentery				1 (2%)
Plasma Cell Tumor Malignant		1 (2%)		
Sarcoma, Metastatic, Uncertain Primary Site				2 (4%)
Lymph Node, Mediastinal	(41)	(36)	(42)	(35)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung				1 (3%)
Sarcoma, Metastatic, Uncertain Primary Site				2 (6%)
Spleen	(49)	(50)	(50)	(49)
Hemangiosarcoma		3 (6%)		2 (4%)
Thymus	(44)	(44)	(42)	(40)
Carcinoma, Metastatic, Uncertain Primary Site				1 (3%)

B6C3F1 MICE MALE	CONTROL	25 PPM	100 PPM	400 PPM
INTEGUMENTARY SYSTEM				
Skin	(50)	(50)	(50)	(50)
Squamous Cell Papilloma		1 (2%)		
Subcutaneous Tissue, Hemangioma			1 (2%)	
MUSCULOSKELETAL SYSTEM				
Skeletal Muscle				(2)
Liposarcoma, Metastatic, Mesentery				1 (50%)
Sarcoma, Metastatic, Uncertain Primary Site				1 (50%)
NERVOUS SYSTEM				
None				
RESPIRATORY SYSTEM				
Larynx	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Thyroid Gland			1 (2%)	
Lung	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Adenoma	6 (12%)	5 (10%)	4 (8%)	2 (4%)
Alveolar/Bronchiolar Adenoma, Multiple	2 (4%)			
Alveolar/Bronchiolar Carcinoma	6 (12%)	7 (14%)	6 (12%)	12 (24%)
Alveolar/Bronchiolar Carcinoma, Multiple	2 (4%)	1 (2%)		
Carcinoma, Metastatic, Harderian Gland	2 (4%)			
Carcinoma, Metastatic, Thyroid Gland			1 (2%)	
Carcinoma, Metastatic, Uncertain Primary Site				1 (2%)
Hemangiosarcoma, Metastatic, Liver				1 (2%)
Hepatocellular Carcinoma, Metastatic, Liver	3 (6%)	1 (2%)	4 (8%)	5 (10%)
Histiocytic Sarcoma			1 (2%)	
Liposarcoma, Metastatic, Mesentery				1 (2%)
Sarcoma, Metastatic, Uncertain Primary Site				2 (4%)
Mediastinum, Alveolar/Bronchiolar Carcinoma, Metastatic, Lung				2 (4%)
Pleura				(1)
Sarcoma, Metastatic, Uncertain Primary Site				1 (100%)

B6C3F1 MICE MALE	CONTROL	25 PPM	100 PPM	400 PPM
SPECIAL SENSES SYSTEM				
Harderian Gland	(9)	(5)	(5)	(5)
Adenoma	6 (67%)	2 (40%)	4 (80%)	2 (40%)
Carcinoma	3 (33%)	1 (20%)	1 (20%)	1 (20%)
Bilateral, Adenoma		2 (40%)		1 (20%)
URINARY SYSTEM				
Kidney	(49)	(50)	(50)	(49)
Carcinoma, Metastatic, Uncertain Primary Site				1 (2%)
Sarcoma, Metastatic, Uncertain Primary Site				1 (2%)
Urinary Bladder	(49)	(50)	(49)	(49)
SYSTEMIC LESIONS				
Multiple Organs	*(50)	*(50)	*(50)	*(50)
Histiocytic Sarcoma			1 (2%)	
Lymphoma Malignant	3 (6%)	3 (6%)	4 (8%)	4 (8%)

* Number of animals with any tissue examined microscopically

B6C3F1 MICE MALE	CONTROL	25 PPM	100 PPM	400 PPM
TUMOR SUMMARY				
Total Animals with Primary Neoplasms (b)	43	39	37	42
Total Primary Neoplasms	69	64	52	75
Total Animals with Benign Neoplasms	32	27	22	32
Total Benign Neoplasms	42	35	25	41
Total Animals with Malignant Neoplasms	23	20	23	23
Total Malignant Neoplasms	27	29	27	34
Total Animals with Metastatic Neoplasms	5	1	6	10
Total Metastatic Neoplasm	6	1	7	48
Total Animals with Malignant Neoplasms Uncertain Primary Site				2
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

END OF REPORT

FINAL#1/MICE

REASONS FOR REMOVAL: ALL

REMOVAL DATE RANGE: ALL

TREATMENT GROUPS: INCLUDE ALL

NTP
LAB: Battelle Northwest
EXPERIMENT: 93026 TEST: 06
TEST TYPE: CHRONIC
CONT: N01-ES-55392
PATHOLOGIST: grumbein, sondra
Mice(B6C3F1)

STATISTICAL ANALYSIS OF PRIMARY TUMORS
DECALIN

CAGES FROM 0000 TO LAST CAGE
ROUTE: RESPIRATORY EXPOSURE WHOLE BODY

REPORT: PEIRPT08
DATE: 06/12/01
TIME: 12:11:20

NTP C#: C93026
CAS: 91-17-8

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
Bone Marrow
Clitoral/Preputial Gland
Heart
Islets, Pancreatic
Liver
Lung
Ovary
Pituitary Gland
Spleen
Testes
Thymus
Thyroid Gland

NTP
LAB: Battelle Northwest
EXPERIMENT: 93026 TEST: 06
TEST TYPE: CHRONIC
CONT: N01-ES-55392
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STATISTICAL ANALYSIS OF PRIMARY TUMORS
DECALIN
CAGES FROM 0000 TO LAST CAGE
ROUTE: RESPIRATORY EXPOSURE WHOLE BODY

REPORT: PEIRPT08
DATE: 06/12/01
TIME: 12:11:20

NTP C#: C93026
CAS: 91-17-8

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

Male Mice

Organ	Morphology
Liver	Hepatocellular Adenoma
	Hepatocellular Carcinoma or Hepatocellular Adenoma
	Hepatocellular Carcinoma, Hepatocellular Adenoma, or Hepatoblastoma
Lung	Alveolar/Bronchiolar Adenoma
Testes	Adenoma
All Organs	Benign Tumors

Female Mice

Organ	Morphology
Liver	Hepatocellular Adenoma
	Hepatocellular Carcinoma
	Hepatocellular Carcinoma or Hepatoblastoma
	Hepatocellular Carcinoma or Hepatocellular Adenoma
	Hepatocellular Carcinoma, Hepatocellular Adenoma, or Hepatoblastoma
Lung	Alveolar/Bronchiolar Carcinoma or Alveolar/Bronchiolar Adenoma
Uterus	Polyp Stromal
	Sarcoma Stromal or Polyp Stromal
All Organs	Benign Tumors

Statistical Analysis of Primary Tumors in Mice(B6C3F1) - DECALIN

Terminal Sacrifice at 105 weeks

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Adrenal Cortex Adenoma								
TUMOR RATES								
OVERALL (a)	2/49 (4%)	1/50 (2%)	0/50 (0%)	4/50 (8%)	1/50 (2%)	0/50 (0%)	0/50 (0%)	0/49 (0%)
POLY-3 RATE (b)	2/44.56	1/45.02	0/45.00	4/44.52	1/44.80	0/42.57	0/45.02	0/45.26
POLY-3 PERCENT (g)	4.5%	2.2%	0.0%	9.0%	2.2%	0.0%	0.0%	0.0%
TERMINAL (d)	2/40 (5%)	1/41 (2%)	0/36 (0%)	3/34 (9%)	1/37 (3%)	0/28 (0%)	0/35 (0%)	0/36 (0%)
FIRST INCIDENCE	733 (T)	733 (T)	---	634	735 (T)	---	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.062	P=0.491N	P=0.262N	P=0.271	P=0.532N	P=0.556N	P=0.511N	P=0.505N
POLY 3	P=0.088	P=0.496N	P=0.235N	P=0.337	P=0.543N	P=0.510N	P=0.499N	P=0.498N
POLY 1.5	P=0.090	P=0.496N	P=0.233N	P=0.342	P=0.547N	P=0.504N	P=0.500N	P=0.500N
POLY 6	P=0.085	P=0.496N	P=0.238N	P=0.327	P=0.539N	P=0.518N	P=0.498N	P=0.495N
LOGISTIC REGRESSION	P=0.085	P=0.491N	(e)	P=0.332	P=0.532N	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.092	P=0.492N	P=0.242N	P=0.349	P=0.551N	P=0.500N	P=0.500N	P=0.505N

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Adrenal Medulla Pheochromocytoma Benign								
TUMOR RATES								
OVERALL (a)	0/49 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	2/49 (4%)	0/50 (0%)	2/50 (4%)	1/49 (2%)
POLY-3 RATE (b)	0/44.56	0/45.02	0/45.00	0/44.16	2/43.80	0/42.57	2/45.02	1/45.58
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	0.0%	4.6%	0.0%	4.4%	2.2%
TERMINAL (d)	0/40 (0%)	0/41 (0%)	0/36 (0%)	0/34 (0%)	2/36 (6%)	0/28 (0%)	2/35 (6%)	0/36 (0%)
FIRST INCIDENCE	---	---	---	---	735 (T)	---	735 (T)	644
STATISTICAL TESTS								
LIFE TABLE	(e)	(e)	(e)	(e)	P=0.570N	P=0.295N	P=0.685	P=0.495N
POLY 3	(e)	(e)	(e)	(e)	P=0.581N	P=0.243N	P=0.684N	P=0.486N
POLY 1.5	(e)	(e)	(e)	(e)	P=0.593N	P=0.237N	P=0.685N	P=0.491N
POLY 6	(e)	(e)	(e)	(e)	P=0.563N	P=0.252N	P=0.682N	P=0.479N
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)	P=0.592N	(e)	P=0.685	P=0.498N
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	P=0.609N	P=0.242N	P=0.684N	P=0.500N

Statistical Analysis of Primary Tumors in Mice(B6C3F1) - DECALIN
Terminal Sacrifice at 105 weeks

Dose	Males CONTROL	Males 25 PPM	Males 100 PPM	Males 400 PPM	Females CONTROL	Females 25 PPM	Females 100 PPM	Females 400 PPM
Clitoral/Preputial Gland Hemangiosarcoma								
TUMOR RATES								
OVERALL (a)	0/49 (0%)	0/49 (0%)	2/50 (4%)	0/50 (0%)	0/41 (0%)	0/42 (0%)	0/44 (0%)	0/44 (0%)
POLY-3 RATE (b)	0/44.58	0/44.53	2/45.00	0/44.16	0/37.16	0/35.32	0/40.55	0/40.61
POLY-3 PERCENT (g)	0.0%	0.0%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
TERMINAL (d)	0/40 (0%)	0/41 (0%)	2/36 (6%)	0/34 (0%)	0/31 (0%)	0/23 (0%)	0/33 (0%)	0/32 (0%)
FIRST INCIDENCE	---	---	733 (T)	---	---	---	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.690N	(e)	P=0.215	(e)	(e)	(e)	(e)	(e)
POLY 3	P=0.658N	(e)	P=0.239	(e)	(e)	(e)	(e)	(e)
POLY 1.5	P=0.652N	(e)	P=0.241	(e)	(e)	(e)	(e)	(e)
POLY 6	P=0.668N	(e)	P=0.236	(e)	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	(e)	(e)	P=0.215	(e)	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.647N	(e)	P=0.253	(e)	(e)	(e)	(e)	(e)

Dose	Males CONTROL	Males 25 PPM	Males 100 PPM	Males 400 PPM	Females CONTROL	Females 25 PPM	Females 100 PPM	Females 400 PPM
Harderian Gland Adenoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	6/50 (12%)	4/50 (8%)	4/50 (8%)	3/50 (6%)	3/50 (6%)	4/50 (8%)	2/50 (4%)	2/50 (4%)
POLY-3 RATE (b)	6/45.71	4/45.08	4/45.00	3/44.90	3/45.15	4/43.34	2/45.21	2/45.81
POLY-3 PERCENT (g)	13.1%	8.9%	8.9%	6.7%	6.7%	9.2%	4.4%	4.4%
TERMINAL (d)	5/40 (13%)	3/41 (7%)	4/36 (11%)	2/34 (6%)	2/37 (5%)	2/28 (7%)	1/35 (3%)	1/36 (3%)
FIRST INCIDENCE	588	718	733 (T)	467	638	588	686	636
STATISTICAL TESTS								
LIFE TABLE	P=0.354N	P=0.362N	P=0.430N	P=0.309N	P=0.320N	P=0.398	P=0.509N	P=0.501N
POLY 3	P=0.277N	P=0.378N	P=0.379N	P=0.251N	P=0.342N	P=0.478	P=0.499N	P=0.493N
POLY 1.5	P=0.272N	P=0.377N	P=0.373N	P=0.245N	P=0.346N	P=0.491	P=0.500N	P=0.495N
POLY 6	P=0.288N	P=0.377N	P=0.390N	P=0.261N	P=0.333N	P=0.461	P=0.498N	P=0.488N
LOGISTIC REGRESSION	P=0.276N	P=0.372N	P=0.374N	P=0.239N	P=0.354N	P=0.501	P=0.500N	P=0.501N
COCH-ARM / FISHERS	P=0.272N	P=0.370N	P=0.370N	P=0.243N	P=0.353N	P=0.500	P=0.500N	P=0.500N

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Harderian Gland Carcinoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	3/50 (6%)	1/50 (2%)	1/50 (2%)	1/50 (2%)	1/50 (2%)	0/50 (0%)	3/50 (6%)	0/50 (0%)
POLY-3 RATE (b)	3/45.45	1/45.02	1/45.00	1/44.16	1/44.80	0/42.57	3/45.02	0/45.46
POLY-3 PERCENT (g)	6.6%	2.2%	2.2%	2.3%	2.2%	0.0%	6.7%	0.0%
TERMINAL (d)	2/40 (5%)	1/41 (2%)	1/36 (3%)	1/34 (3%)	1/37 (3%)	0/28 (0%)	3/35 (9%)	0/36 (0%)
FIRST INCIDENCE	674	733 (T)	733 (T)	733 (T)	735 (T)	---	735 (T)	---
STATISTICAL TESTS								
LIFE TABLE	P=0.441N	P=0.298N	P=0.335N	P=0.355N	P=0.381N	P=0.556N	P=0.285	P=0.505N
POLY 3	P=0.392N	P=0.309N	P=0.309N	P=0.316N	P=0.385N	P=0.510N	P=0.307	P=0.497N
POLY 1.5	P=0.387N	P=0.309N	P=0.306N	P=0.310N	P=0.395N	P=0.504N	P=0.306	P=0.498N
POLY 6	P=0.399N	P=0.308N	P=0.314N	P=0.325N	P=0.371N	P=0.518N	P=0.308	P=0.495N
LOGISTIC REGRESSION	P=0.400N	P=0.306N	P=0.307N	P=0.315N	P=0.381N	(e)	P=0.285	(e)
COCH-ARM / FISHERS	P=0.385N	P=0.309N	P=0.309N	P=0.309N	P=0.406N	P=0.500N	P=0.309	P=0.500N

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Harderian Gland Carcinoma or Adenoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	9/50 (18%)	5/50 (10%)	5/50 (10%)	4/50 (8%)	4/50 (8%)	4/50 (8%)	5/50 (10%)	2/50 (4%)
POLY-3 RATE (b)	9/45.94	5/45.08	5/45.00	4/44.90	4/45.15	4/43.34	5/45.21	2/45.81
POLY-3 PERCENT (g)	19.6%	11.1%	11.1%	8.9%	8.9%	9.2%	11.1%	4.4%
TERMINAL (d)	7/40 (18%)	4/41 (10%)	5/36 (14%)	3/34 (9%)	3/37 (8%)	2/28 (7%)	4/35 (11%)	1/36 (3%)
FIRST INCIDENCE	588	718	733 (T)	467	638	588	686	636
STATISTICAL TESTS								
LIFE TABLE	P=0.268N	P=0.189N	P=0.249N	P=0.177N	P=0.209N	P=0.527	P=0.478	P=0.343N
POLY 3	P=0.189N	P=0.202N	P=0.203N	P=0.123N	P=0.224N	P=0.621	P=0.501	P=0.330N
POLY 1.5	P=0.184N	P=0.201N	P=0.197N	P=0.118N	P=0.231N	P=0.634	P=0.500	P=0.332N
POLY 6	P=0.200N	P=0.203N	P=0.215N	P=0.133N	P=0.212N	P=0.604	P=0.502	P=0.325N
LOGISTIC REGRESSION	P=0.191N	P=0.195N	P=0.196N	P=0.116N	P=0.236N	P=0.642	P=0.503	P=0.336N
COCH-ARM / FISHERS	P=0.185N	P=0.194N	P=0.194N	P=0.117N	P=0.240N	P=0.643N	P=0.500	P=0.339N

Statistical Analysis of Primary Tumors in Mice(B6C3F1) - DECALIN
Terminal Sacrifice at 105 weeks

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Intestine Small: Site Unspecified Carcinoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	0/50 (0%)	1/50 (2%)	2/50 (4%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/45.23	1/45.02	2/45.13	0/44.16	0/44.80	0/42.57	0/45.02	0/45.46
POLY-3 PERCENT (g)	0.0%	2.2%	4.4%	0.0%	0.0%	0.0%	0.0%	0.0%
TERMINAL (d)	0/40 (0%)	1/41 (2%)	1/36 (3%)	0/34 (0%)	0/37 (0%)	0/28 (0%)	0/35 (0%)	0/36 (0%)
FIRST INCIDENCE	---	733 (T)	699	---	---	---	---	---
STATISTICAL TESTS								
LIFE TABLE	P=0.511N	P=0.505	P=0.231	(e)	(e)	(e)	(e)	(e)
POLY 3	P=0.481N	P=0.499	P=0.237	(e)	(e)	(e)	(e)	(e)
POLY 1.5	P=0.476N	P=0.499	P=0.238	(e)	(e)	(e)	(e)	(e)
POLY 6	P=0.489N	P=0.500	P=0.235	(e)	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	P=0.483N	P=0.505	P=0.236	(e)	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.473N	P=0.500	P=0.247	(e)	(e)	(e)	(e)	(e)

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Islets, Pancreatic Adenoma								
TUMOR RATES								
OVERALL (a)	1/49 (2%)	0/50 (0%)	2/50 (4%)	2/49 (4%)	1/50 (2%)	0/47 (0%)	1/50 (2%)	0/49 (0%)
POLY-3 RATE (b)	1/44.56	0/45.02	2/45.71	2/43.64	1/45.08	0/40.98	1/45.11	0/45.26
POLY-3 PERCENT (g)	2.2%	0.0%	4.4%	4.6%	2.2%	0.0%	2.2%	0.0%
TERMINAL (d)	1/40 (3%)	0/41 (0%)	0/36 (0%)	1/34 (3%)	0/37 (0%)	0/28 (0%)	0/35 (0%)	0/36 (0%)
FIRST INCIDENCE	733 (T)	---	612	731	659	---	714	---
STATISTICAL TESTS								
LIFE TABLE	P=0.254	P=0.495N	P=0.485	P=0.447	P=0.454N	P=0.530N	P=0.760	P=0.495N
POLY 3	P=0.282	P=0.498N	P=0.509	P=0.493	P=0.466N	P=0.519N	P=0.760N	P=0.499N
POLY 1.5	P=0.286	P=0.498N	P=0.509	P=0.497	P=0.471N	P=0.515N	P=0.760	P=0.500N
POLY 6	P=0.273	P=0.497N	P=0.507	P=0.486	P=0.458N	P=0.525N	P=0.760N	P=0.497N
LOGISTIC REGRESSION	P=0.287	(e)	P=0.499	P=0.471	P=0.480N	P=0.517N	P=0.762N	P=0.516N
COCH-ARM / FISHERS	P=0.287	P=0.495N	P=0.508	P=0.500	P=0.477N	P=0.515N	P=0.753N	P=0.505N

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Liver Hemangiosarcoma								
TUMOR RATES								
OVERALL (a)	1/50 (2%)	3/50 (6%)	0/50 (0%)	2/50 (4%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	1/50 (2%)
POLY-3 RATE (b)	1/45.23	3/45.02	0/45.00	2/44.16	0/44.80	0/42.57	0/45.02	1/45.46
POLY-3 PERCENT (g)	2.2%	6.7%	0.0%	4.5%	0.0%	0.0%	0.0%	2.2%
TERMINAL (d)	1/40 (3%)	3/41 (7%)	0/36 (0%)	2/34 (6%)	0/37 (0%)	0/28 (0%)	0/35 (0%)	1/36 (3%)
FIRST INCIDENCE	733 (T)	733 (T)	---	733 (T)	---	---	---	735 (T)
STATISTICAL TESTS								
LIFE TABLE	P=0.499	P=0.314	P=0.521N	P=0.443	P=0.243	(e)	(e)	P=0.495
POLY 3	P=0.556	P=0.304	P=0.501N	P=0.492	P=0.234	(e)	(e)	P=0.503
POLY 1.5	P=0.561	P=0.303	P=0.500N	P=0.496	P=0.232	(e)	(e)	P=0.502
POLY 6	P=0.550	P=0.306	P=0.503N	P=0.484	P=0.239	(e)	(e)	P=0.505
LOGISTIC REGRESSION	P=0.499	P=0.314	(e)	P=0.443	(e)	(e)	(e)	P=0.495
COCH-ARM / FISHERS	P=0.565	P=0.309	P=0.500N	P=0.500	P=0.228	(e)	(e)	P=0.500

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Liver Hepatocellular Adenoma								
TUMOR RATES								
OVERALL (a)	22/50 (44%)	22/50 (44%)	14/50 (28%)	27/50 (54%)	7/50 (14%)	13/50 (26%)	8/50 (16%)	17/50 (34%)
POLY-3 RATE (b)	22/47.09	22/46.93	14/47.39	27/45.45	7/44.80	13/43.76	8/45.41	17/45.68
POLY-3 PERCENT (g)	46.7%	46.9%	29.5%	59.4%	15.6%	29.7%	17.6%	37.2%
TERMINAL (d)	18/40 (45%)	19/41 (46%)	8/36 (22%)	21/34 (62%)	7/37 (19%)	9/28 (32%)	6/35 (17%)	14/36 (39%)
FIRST INCIDENCE	476	495	448	605	735 (T)	532	652	714
STATISTICAL TESTS								
LIFE TABLE	P=0.030 *	P=0.545N	P=0.143N	P=0.079	P=0.047 *	P=0.032 *	P=0.462	P=0.015 *
POLY 3	P=0.062	P=0.576	P=0.063N	P=0.151	P=0.024 *	P=0.089	P=0.511	P=0.016 *
POLY 1.5	P=0.076	P=0.572	P=0.064N	P=0.177	P=0.023 *	P=0.099	P=0.505	P=0.016 *
POLY 6	P=0.048 *	P=0.581	P=0.066N	P=0.122	P=0.027 *	P=0.078	P=0.521	P=0.017 *
LOGISTIC REGRESSION	P=0.094	P=0.574	P=0.072N	P=0.183	P=0.033 *	P=0.078	P=0.509	P=0.019 *
COCH-ARM / FISHERS	P=0.098	P=0.580N	P=0.072N	P=0.212	P=0.024 *	P=0.105	P=0.500	P=0.017 *

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Liver								
Hepatocellular Carcinoma								
TUMOR RATES								
OVERALL (a)	10/50 (20%)	7/50 (14%)	10/50 (20%)	11/50 (22%)	4/50 (8%)	16/50 (32%)	6/50 (12%)	5/50 (10%)
POLY-3 RATE (b)	10/47.33	7/47.13	10/46.98	11/46.68	4/44.92	16/45.09	6/45.89	5/45.87
POLY-3 PERCENT (g)	21.1%	14.9%	21.3%	23.6%	8.9%	35.5%	13.1%	10.9%
TERMINAL (d)	6/40 (15%)	3/41 (7%)	5/36 (14%)	4/34 (12%)	3/37 (8%)	7/28 (25%)	3/35 (9%)	3/36 (8%)
FIRST INCIDENCE	384	497	561	552	703	488	594	636
STATISTICAL TESTS								
LIFE TABLE	P=0.242	P=0.309N	P=0.534	P=0.408	P=0.108N	P<0.001 **	P=0.357	P=0.499
POLY 3	P=0.298	P=0.300N	P=0.592	P=0.486	P=0.112N	P=0.002 **	P=0.383	P=0.513
POLY 1.5	P=0.306	P=0.303N	P=0.595	P=0.492	P=0.115N	P=0.002 **	P=0.377	P=0.509
POLY 6	P=0.288	P=0.294N	P=0.587	P=0.479	P=0.104N	P=0.002 **	P=0.392	P=0.523
LOGISTIC REGRESSION	P=0.312	P=0.265N	P=0.589	P=0.521	P=0.128N	P=0.003 **	P=0.370	P=0.509
COCH-ARM / FISHERS	P=0.310	P=0.298N	P=0.598N	P=0.500	P=0.130N	P=0.003 **	P=0.370	P=0.500

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Liver								
Hepatocellular Carcinoma or Hepatoblastoma								
TUMOR RATES								
OVERALL (a)	10/50 (20%)	8/50 (16%)	10/50 (20%)	12/50 (24%)	4/50 (8%)	16/50 (32%)	6/50 (12%)	6/50 (12%)
POLY-3 RATE (b)	10/47.33	8/47.13	10/46.98	12/46.74	4/44.92	16/45.09	6/45.89	6/45.90
POLY-3 PERCENT (g)	21.1%	17.0%	21.3%	25.7%	8.9%	35.5%	13.1%	13.1%
TERMINAL (d)	6/40 (15%)	4/41 (10%)	5/36 (14%)	4/34 (12%)	3/37 (8%)	7/28 (25%)	3/35 (9%)	3/36 (8%)
FIRST INCIDENCE	384	497	561	552	703	488	594	636
STATISTICAL TESTS								
LIFE TABLE	P=0.193	P=0.403N	P=0.534	P=0.325	P=0.178N	P<0.001 **	P=0.357	P=0.372
POLY 3	P=0.243	P=0.401N	P=0.592	P=0.391	P=0.194N	P=0.002 **	P=0.383	P=0.383
POLY 1.5	P=0.249	P=0.404N	P=0.595	P=0.397	P=0.199N	P=0.002 **	P=0.377	P=0.379
POLY 6	P=0.234	P=0.394N	P=0.587	P=0.386	P=0.183N	P=0.002 **	P=0.392	P=0.393
LOGISTIC REGRESSION	P=0.254	P=0.366N	P=0.589	P=0.422	P=0.213N	P=0.003 **	P=0.370	P=0.378
COCH-ARM / FISHERS	P=0.253	P=0.398N	P=0.598N	P=0.405	P=0.216N	P=0.003 **	P=0.370	P=0.370

Statistical Analysis of Primary Tumors in Mice(B6C3F1) - DECALIN
Terminal Sacrifice at 105 weeks

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Liver Hepatocellular Carcinoma or Hepatocellular Adenoma								
TUMOR RATES								
OVERALL (a)	28/50 (56%)	26/50 (52%)	22/50 (44%)	34/50 (68%)	11/50 (22%)	27/50 (54%)	14/50 (28%)	20/50 (40%)
POLY-3 RATE (b)	28/48.71	26/48.44	22/48.98	34/47.10	11/44.92	27/46.25	14/46.28	20/46.03
POLY-3 PERCENT (g)	57.5%	53.7%	44.9%	72.2%	24.5%	58.4%	30.3%	43.5%
TERMINAL (d)	21/40 (53%)	20/41 (49%)	12/36 (33%)	24/34 (71%)	10/37 (27%)	15/28 (54%)	9/35 (26%)	16/36 (44%)
FIRST INCIDENCE	384	495	448	552	703	488	594	636
STATISTICAL TESTS								
LIFE TABLE	P=0.018 *	P=0.404N	P=0.298N	P=0.061	P=0.473	P<0.001 **	P=0.291	P=0.040 *
POLY 3	P=0.026 *	P=0.431N	P=0.148N	P=0.094	P=0.345	P<0.001 **	P=0.351	P=0.043 *
POLY 1.5	P=0.034 *	P=0.436N	P=0.150N	P=0.114	P=0.338	P<0.001 **	P=0.337	P=0.042 *
POLY 6	P=0.020 *	P=0.423N	P=0.149N	P=0.076	P=0.366	P<0.001 **	P=0.374	P=0.048 *
LOGISTIC REGRESSION	P=0.050	P=0.412N	P=0.146N	P=0.149	P=0.362	P<0.001 **	P=0.325	P=0.048 *
COCH-ARM / FISHERS	P=0.048 *	P=0.421N	P=0.159N	P=0.151	P=0.330	P<0.001 **	P=0.322	P=0.041 *

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Liver Hepatocellular Carcinoma, Hepatocellular Adenoma, or Hepatoblastoma								
TUMOR RATES								
OVERALL (a)	28/50 (56%)	27/50 (54%)	22/50 (44%)	34/50 (68%)	11/50 (22%)	27/50 (54%)	14/50 (28%)	21/50 (42%)
POLY-3 RATE (b)	28/48.71	27/48.44	22/48.98	34/47.10	11/44.92	27/46.25	14/46.28	21/46.07
POLY-3 PERCENT (g)	57.5%	55.7%	44.9%	72.2%	24.5%	58.4%	30.3%	45.6%
TERMINAL (d)	21/40 (53%)	21/41 (51%)	12/36 (33%)	24/34 (71%)	10/37 (27%)	15/28 (54%)	9/35 (26%)	16/36 (44%)
FIRST INCIDENCE	384	495	448	552	703	488	594	636
STATISTICAL TESTS								
LIFE TABLE	P=0.022 *	P=0.471N	P=0.298N	P=0.061	P=0.387	P<0.001 **	P=0.291	P=0.027 *
POLY 3	P=0.033 *	P=0.512N	P=0.148N	P=0.094	P=0.255	P<0.001 **	P=0.351	P=0.027 *
POLY 1.5	P=0.042 *	P=0.517N	P=0.150N	P=0.114	P=0.250	P<0.001 **	P=0.337	P=0.026 *
POLY 6	P=0.025 *	P=0.504N	P=0.149N	P=0.076	P=0.274	P<0.001 **	P=0.374	P=0.030 *
LOGISTIC REGRESSION	P=0.060	P=0.492N	P=0.146N	P=0.149	P=0.275	P<0.001 **	P=0.325	P=0.031 *
COCH-ARM / FISHERS	P=0.059	P=0.500N	P=0.159N	P=0.151	P=0.247	P<0.001 **	P=0.322	P=0.026 *

Statistical Analysis of Primary Tumors in Mice(B6C3F1) - DECALIN
Terminal Sacrifice at 105 weeks

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Lung								
Alveolar/Bronchiolar Adenoma								
TUMOR RATES								
OVERALL (a)	8/50 (16%)	5/50 (10%)	4/50 (8%)	2/50 (4%)	1/50 (2%)	4/50 (8%)	0/50 (0%)	4/50 (8%)
POLY-3 RATE (b)	8/45.54	5/45.02	4/45.13	2/44.55	1/44.80	4/42.98	0/45.02	4/45.58
POLY-3 PERCENT (g)	17.6%	11.1%	8.9%	4.5%	2.2%	9.3%	0.0%	8.8%
TERMINAL (d)	7/40 (18%)	5/41 (12%)	3/36 (8%)	1/34 (3%)	1/37 (3%)	3/28 (11%)	0/35 (0%)	2/36 (6%)
FIRST INCIDENCE	649	733 (T)	699	622	735 (T)	616	---	714
STATISTICAL TESTS								
LIFE TABLE	P=0.099N	P=0.262N	P=0.225N	P=0.079N	P=0.255	P=0.117	P=0.511N	P=0.183
POLY 3	P=0.063N	P=0.283N	P=0.180N	P=0.048N*	P=0.218	P=0.166	P=0.499N	P=0.184
POLY 1.5	P=0.061N	P=0.282N	P=0.178N	P=0.047N*	P=0.217	P=0.174	P=0.500N	P=0.183
POLY 6	P=0.067N	P=0.281N	P=0.186N	P=0.051N	P=0.222	P=0.157	P=0.498N	P=0.188
LOGISTIC REGRESSION	P=0.067N	P=0.272N	P=0.183N	P=0.050N	P=0.230	P=0.167	(e)	P=0.188
COCH-ARM / FISHERS	P=0.062N	P=0.277N	P=0.178N	P=0.046N*	P=0.215	P=0.181	P=0.500N	P=0.181

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Lung								
Alveolar/Bronchiolar Carcinoma								
TUMOR RATES								
OVERALL (a)	8/50 (16%)	8/50 (16%)	6/50 (12%)	12/50 (24%)	6/50 (12%)	3/50 (6%)	1/50 (2%)	1/50 (2%)
POLY-3 RATE (b)	8/45.54	8/45.70	6/45.39	12/46.70	6/45.36	3/42.57	1/45.26	1/45.46
POLY-3 PERCENT (g)	17.6%	17.5%	13.2%	25.7%	13.2%	7.1%	2.2%	2.2%
TERMINAL (d)	7/40 (18%)	7/41 (17%)	5/36 (14%)	7/34 (21%)	4/37 (11%)	3/28 (11%)	0/35 (0%)	1/36 (3%)
FIRST INCIDENCE	649	497	623	469	610	735 (T)	672	735 (T)
STATISTICAL TESTS								
LIFE TABLE	P=0.066	P=0.587N	P=0.462N	P=0.153	P=0.069N	P=0.376N	P=0.067N	P=0.063N
POLY 3	P=0.133	P=0.605N	P=0.389N	P=0.244	P=0.072N	P=0.274N	P=0.056N	P=0.055N
POLY 1.5	P=0.130	P=0.607	P=0.386N	P=0.240	P=0.075N	P=0.256N	P=0.056N	P=0.055N
POLY 6	P=0.133	P=0.599N	P=0.396N	P=0.245	P=0.068N	P=0.298N	P=0.056N	P=0.055N
LOGISTIC REGRESSION	P=0.122	P=0.604	P=0.392N	P=0.231	P=0.076N	P=0.271N	P=0.058N	P=0.057N
COCH-ARM / FISHERS	P=0.122	P=0.607N	P=0.387N	P=0.227	P=0.081N	P=0.243N	P=0.056N	P=0.056N

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Lung Alveolar/Bronchiolar Carcinoma or Alveolar/Bronchiolar Adenoma								
TUMOR RATES								
OVERALL (a)	15/50 (30%)	13/50 (26%)	10/50 (20%)	13/50 (26%)	7/50 (14%)	7/50 (14%)	1/50 (2%)	5/50 (10%)
POLY-3 RATE (b)	15/45.54	13/45.70	10/45.52	13/46.70	7/45.36	7/42.98	1/45.26	5/45.58
POLY-3 PERCENT (g)	32.9%	28.4%	22.0%	27.8%	15.4%	16.3%	2.2%	11.0%
TERMINAL (d)	14/40 (35%)	12/41 (29%)	8/36 (22%)	8/34 (24%)	5/37 (14%)	6/28 (21%)	0/35 (0%)	3/36 (8%)
FIRST INCIDENCE	649	497	623	469	610	616	672	714
STATISTICAL TESTS								
LIFE TABLE	P=0.441	P=0.383N	P=0.258N	P=0.578N	P=0.327N	P=0.422	P=0.039N*	P=0.387N
POLY 3	P=0.460N	P=0.406N	P=0.173N	P=0.380N	P=0.369N	P=0.572	P=0.030N*	P=0.376N
POLY 1.5	P=0.468N	P=0.412N	P=0.173N	P=0.389N	P=0.375N	P=0.595	P=0.030N*	P=0.376N
POLY 6	P=0.458N	P=0.396N	P=0.177N	P=0.375N	P=0.360N	P=0.540	P=0.030N*	P=0.372N
LOGISTIC REGRESSION	P=0.502N	P=0.415N	P=0.185N	P=0.414N	P=0.361N	P=0.574	P=0.033N*	P=0.369N
COCH-ARM / FISHERS	P=0.492N	P=0.412N	P=0.178N	P=0.412N	P=0.384N	P=0.613N	P=0.030N*	P=0.380N

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Mammary Gland Carcinoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	1/50 (2%)	2/50 (4%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)	0/45.23	0/45.02	0/45.00	0/44.16	1/45.08	2/43.19	2/45.21	0/45.46
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	0.0%	2.2%	4.6%	4.4%	0.0%
TERMINAL (d)	0/40 (0%)	0/41 (0%)	0/36 (0%)	0/34 (0%)	0/37 (0%)	1/28 (4%)	0/35 (0%)	0/36 (0%)
FIRST INCIDENCE	---	---	---	---	659	532	700	---
STATISTICAL TESTS								
LIFE TABLE	(e)	(e)	(e)	(e)	P=0.220N	P=0.448	P=0.503	P=0.495N
POLY 3	(e)	(e)	(e)	(e)	P=0.229N	P=0.485	P=0.501	P=0.498N
POLY 1.5	(e)	(e)	(e)	(e)	P=0.231N	P=0.494	P=0.500	P=0.498N
POLY 6	(e)	(e)	(e)	(e)	P=0.224N	P=0.473	P=0.502	P=0.497N
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)	P=0.238N	P=0.493	P=0.500	P=0.508N
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	P=0.233N	P=0.500	P=0.500	P=0.500N

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Ovary								
Cystadenoma								
TUMOR RATES								
OVERALL (a)					1/50 (2%)	0/49 (0%)	3/49 (6%)	2/48 (4%)
POLY-3 RATE (b)					1/44.80	0/41.57	3/44.32	2/44.36
POLY-3 PERCENT (g)					2.2%	0.0%	6.8%	4.5%
TERMINAL (d)					1/37 (3%)	0/27 (0%)	3/35 (9%)	1/35 (3%)
FIRST INCIDENCE					735 (T)	---	735 (T)	710
STATISTICAL TESTS								
LIFE TABLE					P=0.370	P=0.563N	P=0.285	P=0.499
POLY 3					P=0.354	P=0.515N	P=0.301	P=0.497
POLY 1.5					P=0.341	P=0.509N	P=0.300	P=0.493
POLY 6					P=0.374	P=0.523N	P=0.304	P=0.502
LOGISTIC REGRESSION					P=0.366	(e)	P=0.285	P=0.500
COCH-ARM / FISHERS					P=0.324	P=0.505N	P=0.301	P=0.485

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Ovary								
Granulosa Cell Tumor: Benign, Malignant, NOS								
TUMOR RATES								
OVERALL (a)					1/50 (2%)	0/49 (0%)	1/49 (2%)	2/48 (4%)
POLY-3 RATE (b)					1/44.80	0/41.57	1/44.32	2/44.58
POLY-3 PERCENT (g)					2.2%	0.0%	2.3%	4.5%
TERMINAL (d)					1/37 (3%)	0/27 (0%)	1/35 (3%)	1/35 (3%)
FIRST INCIDENCE					735 (T)	---	735 (T)	644
STATISTICAL TESTS								
LIFE TABLE					P=0.259	P=0.563N	P=0.749	P=0.492
POLY 3					P=0.250	P=0.515N	P=0.758	P=0.498
POLY 1.5					P=0.241	P=0.509N	P=0.757	P=0.494
POLY 6					P=0.263	P=0.523N	P=0.760	P=0.505
LOGISTIC REGRESSION					P=0.237	(e)	P=0.749	P=0.487
COCH-ARM / FISHERS					P=0.229	P=0.505N	P=0.747	P=0.485

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Pituitary Gland: Pars Distalis or Unspecified Site								
Adenoma								
TUMOR RATES								
OVERALL (a)	1/48 (2%)	1/50 (2%)	0/50 (0%)	0/49 (0%)	13/50 (26%)	8/49 (16%)	10/49 (20%)	17/50 (34%)
POLY-3 RATE (b)	1/43.23	1/45.02	0/45.00	0/43.63	13/45.36	8/43.79	10/44.82	17/45.66
POLY-3 PERCENT (g)	2.3%	2.2%	0.0%	0.0%	28.7%	18.3%	22.3%	37.2%
TERMINAL (d)	1/38 (3%)	1/41 (2%)	0/36 (0%)	0/34 (0%)	11/37 (30%)	4/28 (14%)	8/34 (24%)	14/36 (39%)
FIRST INCIDENCE	733 (T)	733 (T)	---	---	659	532	511	714
STATISTICAL TESTS								
LIFE TABLE	P=0.375N	P=0.745N	P=0.511N	P=0.522N	P=0.100	P=0.351N	P=0.388N	P=0.243
POLY 3	P=0.350N	P=0.752N	P=0.492N	P=0.498N	P=0.058	P=0.181N	P=0.326N	P=0.258
POLY 1.5	P=0.349N	P=0.752N	P=0.491N	P=0.497N	P=0.057	P=0.173N	P=0.331N	P=0.260
POLY 6	P=0.351N	P=0.750N	P=0.494N	P=0.501N	P=0.063	P=0.195N	P=0.323N	P=0.262
LOGISTIC REGRESSION	P=0.375N	P=0.745N	(e)	(e)	P=0.067	P=0.182N	P=0.335N	P=0.286
COCH-ARM / FISHERS	P=0.348N	P=0.742N	P=0.490N	P=0.495N	P=0.058	P=0.176N	P=0.337N	P=0.257

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Pituitary Gland: Pars Intermedia								
Adenoma								
TUMOR RATES								
OVERALL (a)	0/48 (0%)	0/50 (0%)	0/50 (0%)	0/49 (0%)	1/50 (2%)	1/49 (2%)	2/49 (4%)	2/50 (4%)
POLY-3 RATE (b)	0/43.23	0/45.02	0/45.00	0/43.63	1/44.80	1/42.30	2/44.37	2/45.46
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	0.0%	2.2%	2.4%	4.5%	4.4%
TERMINAL (d)	0/38 (0%)	0/41 (0%)	0/36 (0%)	0/34 (0%)	1/37 (3%)	0/28 (0%)	0/34 (0%)	2/36 (6%)
FIRST INCIDENCE	---	---	---	---	735 (T)	731	652	735 (T)
STATISTICAL TESTS								
LIFE TABLE	(e)	(e)	(e)	(e)	P=0.441	P=0.705	P=0.496	P=0.490
POLY 3	(e)	(e)	(e)	(e)	P=0.429	P=0.748	P=0.497	P=0.505
POLY 1.5	(e)	(e)	(e)	(e)	P=0.423	P=0.753	P=0.495	P=0.504
POLY 6	(e)	(e)	(e)	(e)	P=0.441	P=0.741	P=0.500	P=0.509
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)	P=0.427	P=0.728	P=0.493	P=0.490
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	P=0.415	P=0.747	P=0.492	P=0.500

Statistical Analysis of Primary Tumors in Mice(B6C3F1) - DECALIN

Terminal Sacrifice at 105 weeks

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Skin Fibroma, Fibrosarcoma, Sarcoma, Myxoma, Myxosarcoma, or Fibrous Histiocytoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	2/50 (4%)	3/50 (6%)	3/50 (6%)	2/50 (4%)
POLY-3 RATE (b)	0/45.23	0/45.02	0/45.00	0/44.16	2/44.88	3/43.42	3/45.91	2/45.54
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	0.0%	4.5%	6.9%	6.5%	4.4%
TERMINAL (d)	0/40 (0%)	0/41 (0%)	0/36 (0%)	0/34 (0%)	1/37 (3%)	0/28 (0%)	1/35 (3%)	1/36 (3%)
FIRST INCIDENCE	---	---	---	---	714	588	356	714
STATISTICAL TESTS								
LIFE TABLE	(e)	(e)	(e)	(e)	P=0.473N	P=0.437	P=0.488	P=0.684N
POLY 3	(e)	(e)	(e)	(e)	P=0.498N	P=0.485	P=0.510	P=0.689N
POLY 1.5	(e)	(e)	(e)	(e)	P=0.503N	P=0.494	P=0.507	P=0.690N
POLY 6	(e)	(e)	(e)	(e)	P=0.489N	P=0.473	P=0.513	P=0.685N
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)	P=0.523N	P=0.502	P=0.501	P=0.688N
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	P=0.510N	P=0.500	P=0.500	P=0.691N

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Skin Fibrosarcoma, Sarcoma, Myxosarcoma, or Fibrous Histiocytoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	2/50 (4%)	3/50 (6%)	3/50 (6%)	2/50 (4%)
POLY-3 RATE (b)	0/45.23	0/45.02	0/45.00	0/44.16	2/44.88	3/43.42	3/45.91	2/45.54
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	0.0%	4.5%	6.9%	6.5%	4.4%
TERMINAL (d)	0/40 (0%)	0/41 (0%)	0/36 (0%)	0/34 (0%)	1/37 (3%)	0/28 (0%)	1/35 (3%)	1/36 (3%)
FIRST INCIDENCE	---	---	---	---	714	588	356	714
STATISTICAL TESTS								
LIFE TABLE	(e)	(e)	(e)	(e)	P=0.473N	P=0.437	P=0.488	P=0.684N
POLY 3	(e)	(e)	(e)	(e)	P=0.498N	P=0.485	P=0.510	P=0.689N
POLY 1.5	(e)	(e)	(e)	(e)	P=0.503N	P=0.494	P=0.507	P=0.690N
POLY 6	(e)	(e)	(e)	(e)	P=0.489N	P=0.473	P=0.513	P=0.685N
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)	P=0.523N	P=0.502	P=0.501	P=0.688N
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	P=0.510N	P=0.500	P=0.500	P=0.691N

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Skin								
Sarcoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	2/50 (4%)	2/50 (4%)	2/50 (4%)	1/50 (2%)
POLY-3 RATE (b)	0/45.23	0/45.02	0/45.00	0/44.16	2/44.88	2/43.09	2/45.91	1/45.54
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	0.0%	4.5%	4.6%	4.4%	2.2%
TERMINAL (d)	0/40 (0%)	0/41 (0%)	0/36 (0%)	0/34 (0%)	1/37 (3%)	0/28 (0%)	0/35 (0%)	0/36 (0%)
FIRST INCIDENCE	---	---	---	---	714	588	356	714
STATISTICAL TESTS								
LIFE TABLE	(e)	(e)	(e)	(e)	P=0.363N	P=0.634	P=0.684	P=0.486N
POLY 3	(e)	(e)	(e)	(e)	P=0.377N	P=0.679	P=0.686N	P=0.495N
POLY 1.5	(e)	(e)	(e)	(e)	P=0.382N	P=0.688	P=0.688N	P=0.496N
POLY 6	(e)	(e)	(e)	(e)	P=0.368N	P=0.668	P=0.684N	P=0.491N
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)	P=0.402N	P=0.695	P=0.694N	P=0.494N
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)	P=0.387N	P=0.691N	P=0.691N	P=0.500N

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Spleen								
Hemangiosarcoma								
TUMOR RATES								
OVERALL (a)	0/49 (0%)	3/50 (6%)	0/50 (0%)	2/49 (4%)	1/50 (2%)	1/47 (2%)	1/50 (2%)	2/48 (4%)
POLY-3 RATE (b)	0/44.56	3/45.08	0/45.00	2/43.69	1/44.88	1/41.11	1/45.16	2/44.36
POLY-3 PERCENT (g)	0.0%	6.7%	0.0%	4.6%	2.2%	2.4%	2.2%	4.5%
TERMINAL (d)	0/40 (0%)	2/41 (5%)	0/36 (0%)	1/34 (3%)	0/37 (0%)	0/28 (0%)	0/35 (0%)	2/36 (6%)
FIRST INCIDENCE	---	718	---	718	714	700	700	735 (T)
STATISTICAL TESTS								
LIFE TABLE	P=0.377	P=0.129	(e)	P=0.217	P=0.408	P=0.726	P=0.758N	P=0.502
POLY 3	P=0.411	P=0.121	(e)	P=0.233	P=0.376	P=0.741	P=0.759N	P=0.496
POLY 1.5	P=0.415	P=0.121	(e)	P=0.235	P=0.371	P=0.745	P=0.760N	P=0.493
POLY 6	P=0.406	P=0.121	(e)	P=0.229	P=0.385	P=0.736	P=0.758N	P=0.501
LOGISTIC REGRESSION	P=0.401	P=0.123	(e)	P=0.227	P=0.374	P=0.747	P=0.762N	P=0.503
COCH-ARM / FISHERS	P=0.418	P=0.125	(e)	P=0.247	P=0.361	P=0.737	P=0.753N	P=0.485

Statistical Analysis of Primary Tumors in Mice(B6C3F1) - DECALIN
Terminal Sacrifice at 105 weeks

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Testes								
Adenoma								
TUMOR RATES								
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	3/50 (6%)				
POLY-3 RATE (b)	0/45.23	0/45.02	0/45.00	3/44.61				
POLY-3 PERCENT (g)	0.0%	0.0%	0.0%	6.7%				
TERMINAL (d)	0/40 (0%)	0/41 (0%)	0/36 (0%)	2/34 (6%)				
FIRST INCIDENCE	---	---	---	602				
STATISTICAL TESTS								
LIFE TABLE	P=0.006 **	(e)	(e)	P=0.103				
POLY 3	P=0.007 **	(e)	(e)	P=0.116				
POLY 1.5	P=0.008 **	(e)	(e)	P=0.118				
POLY 6	P=0.007 **	(e)	(e)	P=0.113				
LOGISTIC REGRESSION	P=0.008 **	(e)	(e)	P=0.121				
COCH-ARM / FISHERS	P=0.008 **	(e)	(e)	P=0.121				

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Uterus								
Polyp Stromal								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)					0/50 (0%)	0/50 (0%)	2/50 (4%)	3/50 (6%)
POLY-3 RATE (b)					0/44.80	0/42.57	2/45.11	3/45.46
POLY-3 PERCENT (g)					0.0%	0.0%	4.4%	6.6%
TERMINAL (d)					0/37 (0%)	0/28 (0%)	1/35 (3%)	3/36 (8%)
FIRST INCIDENCE					---	---	714	735 (T)
STATISTICAL TESTS								
LIFE TABLE					P=0.059	(e)	P=0.234	P=0.116
POLY 3					P=0.049 *	(e)	P=0.239	P=0.121
POLY 1.5					P=0.047 *	(e)	P=0.238	P=0.121
POLY 6					P=0.053	(e)	P=0.240	P=0.123
LOGISTIC REGRESSION					P=0.057	(e)	P=0.239	P=0.116
COCH-ARM / FISHERS					P=0.046 *	(e)	P=0.247	P=0.121

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
Uterus								
Sarcoma Stromal or Polyp Stromal								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)					0/50 (0%)	0/50 (0%)	2/50 (4%)	4/50 (8%)
POLY-3 RATE (b)					0/44.80	0/42.57	2/45.11	4/45.46
POLY-3 PERCENT (g)					0.0%	0.0%	4.4%	8.8%
TERMINAL (d)					0/37 (0%)	0/28 (0%)	1/35 (3%)	4/36 (11%)
FIRST INCIDENCE					---	---	714	735 (T)
STATISTICAL TESTS								
LIFE TABLE					P=0.018 *	(e)	P=0.234	P=0.059
POLY 3					P=0.013 *	(e)	P=0.239	P=0.062
POLY 1.5					P=0.013 *	(e)	P=0.238	P=0.062
POLY 6					P=0.014 *	(e)	P=0.240	P=0.063
LOGISTIC REGRESSION					P=0.017 *	(e)	P=0.239	P=0.059
COCH-ARM / FISHERS					P=0.012 *	(e)	P=0.247	P=0.059

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
All Organs								
Hemangiosarcoma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	1/50 (2%)	6/50 (12%)	2/50 (4%)	3/50 (6%)	1/50 (2%)	2/50 (4%)	3/50 (6%)	4/50 (8%)
POLY-3 RATE (b)	1/45.23	6/45.08	2/45.00	3/44.22	1/44.88	2/42.71	3/45.16	4/45.46
POLY-3 PERCENT (g)	2.2%	13.3%	4.4%	6.8%	2.2%	4.7%	6.6%	8.8%
TERMINAL (d)	1/40 (3%)	5/41 (12%)	2/36 (6%)	2/34 (6%)	0/37 (0%)	1/28 (4%)	2/35 (6%)	4/36 (11%)
FIRST INCIDENCE	733 (T)	718	733 (T)	718	714	700	700	735 (T)
STATISTICAL TESTS								
LIFE TABLE	P=0.546	P=0.065	P=0.463	P=0.260	P=0.200	P=0.433	P=0.300	P=0.179
POLY 3	P=0.605N	P=0.055	P=0.498	P=0.297	P=0.172	P=0.483	P=0.307	P=0.182
POLY 1.5	P=0.598N	P=0.055	P=0.500	P=0.302	P=0.168	P=0.493	P=0.306	P=0.182
POLY 6	P=0.606	P=0.056	P=0.494	P=0.290	P=0.180	P=0.470	P=0.309	P=0.185
LOGISTIC REGRESSION	P=0.588	P=0.060	P=0.463	P=0.282	P=0.184	P=0.480	P=0.307	P=0.189
COCH-ARM / FISHERS	P=0.592N	P=0.056	P=0.500	P=0.309	P=0.161	P=0.500	P=0.309	P=0.181

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
All Organs Hemangiosarcoma or Hemangioma								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	1/50 (2%)	6/50 (12%)	3/50 (6%)	3/50 (6%)	2/50 (4%)	2/50 (4%)	3/50 (6%)	4/50 (8%)
POLY-3 RATE (b)	1/45.23	6/45.08	3/45.46	3/44.22	2/44.88	2/42.71	3/45.16	4/45.46
POLY-3 PERCENT (g)	2.2%	13.3%	6.6%	6.8%	4.5%	4.7%	6.6%	8.8%
TERMINAL (d)	1/40 (3%)	5/41 (12%)	2/36 (6%)	2/34 (6%)	1/37 (3%)	1/28 (4%)	2/35 (6%)	4/36 (11%)
FIRST INCIDENCE	733 (T)	718	596	718	714	700	700	735 (T)
STATISTICAL TESTS								
LIFE TABLE	P=0.567	P=0.065	P=0.281	P=0.260	P=0.292	P=0.614	P=0.487	P=0.333
POLY 3	P=0.582N	P=0.055	P=0.307	P=0.297	P=0.261	P=0.676	P=0.503	P=0.343
POLY 1.5	P=0.574N	P=0.055	P=0.307	P=0.302	P=0.254	P=0.686	P=0.501	P=0.342
POLY 6	P=0.593N	P=0.056	P=0.305	P=0.290	P=0.272	P=0.663	P=0.505	P=0.347
LOGISTIC REGRESSION	P=0.586N	P=0.060	P=0.305	P=0.282	P=0.277	P=0.667	P=0.503	P=0.353
COCH-ARM / FISHERS	P=0.567N	P=0.056	P=0.309	P=0.309	P=0.244	P=0.691N	P=0.500	P=0.339

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
All Organs Malignant Lymphoma: Histiocytic, Lymphocytic, Mixed, NOS, or Undifferentiated Cell Type								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	3/50 (6%)	3/50 (6%)	4/50 (8%)	4/50 (8%)	11/50 (22%)	8/50 (16%)	13/50 (26%)	14/50 (28%)
POLY-3 RATE (b)	3/45.58	3/45.02	4/45.91	4/45.17	11/46.93	8/43.98	13/45.73	14/46.77
POLY-3 PERCENT (g)	6.6%	6.7%	8.7%	8.9%	23.4%	18.2%	28.4%	29.9%
TERMINAL (d)	2/40 (5%)	3/41 (7%)	2/36 (6%)	1/34 (3%)	6/37 (16%)	4/28 (14%)	10/35 (29%)	9/36 (25%)
FIRST INCIDENCE	635	733 (T)	596	552	363	588	612	624
STATISTICAL TESTS								
LIFE TABLE	P=0.373	P=0.656N	P=0.463	P=0.441	P=0.255	P=0.479N	P=0.378	P=0.332
POLY 3	P=0.437	P=0.657	P=0.504	P=0.495	P=0.190	P=0.361N	P=0.378	P=0.317
POLY 1.5	P=0.441	P=0.657	P=0.504	P=0.499	P=0.178	P=0.333N	P=0.387	P=0.319
POLY 6	P=0.428	P=0.657	P=0.502	P=0.488	P=0.215	P=0.395N	P=0.372	P=0.328
LOGISTIC REGRESSION	P=0.440	P=0.661	P=0.494	P=0.504	P=0.170	P=0.299N	P=0.407	P=0.316
COCH-ARM / FISHERS	P=0.440	P=0.661N	P=0.500	P=0.500	P=0.168	P=0.306N	P=0.408	P=0.322

Statistical Analysis of Primary Tumors in Mice(B6C3F1) - DECALIN
Terminal Sacrifice at 105 weeks

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
All Organs								
Benign Tumors								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	32/50 (64%)	27/50 (54%)	22/50 (44%)	32/50 (64%)	28/50 (56%)	25/50 (50%)	27/50 (54%)	34/50 (68%)
POLY-3 RATE (b)	32/47.09	27/46.99	22/48.40	32/46.64	28/46.33	25/45.83	27/46.74	34/46.58
POLY-3 PERCENT (g)	68.0%	57.5%	45.5%	68.6%	60.4%	54.6%	57.8%	73.0%
TERMINAL (d)	28/40 (70%)	23/41 (56%)	13/36 (36%)	24/34 (71%)	23/37 (62%)	15/28 (54%)	20/35 (57%)	26/36 (72%)
FIRST INCIDENCE	476	495	448	467	568	532	511	636
STATISTICAL TESTS								
LIFE TABLE	P=0.085	P=0.188N	P=0.115N	P=0.248	P=0.174	P=0.357	P=0.565	P=0.159
POLY 3	P=0.227	P=0.198N	P=0.019N*	P=0.562	P=0.046 *	P=0.357N	P=0.479N	P=0.138
POLY 1.5	P=0.249	P=0.206N	P=0.023N*	P=0.578	P=0.046 *	P=0.338N	P=0.490N	P=0.144
POLY 6	P=0.197	P=0.187N	P=0.016N*	P=0.533	P=0.051	P=0.381N	P=0.464N	P=0.145
LOGISTIC REGRESSION	P=0.259	P=0.215N	P=0.035N*	P=0.551	P=0.065	P=0.391N	P=0.494N	P=0.161
COCH-ARM / FISHERS	P=0.267	P=0.208N	P=0.035N*	P=0.582N	P=0.052	P=0.344N	P=0.500N	P=0.151

Dose	Males CONTROL	25 PPM	100 PPM	400 PPM	Females CONTROL	25 PPM	100 PPM	400 PPM
All Organs								
Malignant Tumors								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	23/50 (46%)	20/50 (40%)	23/50 (46%)	23/50 (46%)	22/50 (44%)	28/50 (56%)	29/50 (58%)	26/50 (52%)
POLY-3 RATE (b)	23/48.21	20/47.19	23/47.56	23/48.45	22/47.89	28/47.21	29/47.95	26/46.89
POLY-3 PERCENT (g)	47.7%	42.4%	48.4%	47.5%	45.9%	59.3%	60.5%	55.5%
TERMINAL (d)	16/40 (40%)	15/41 (37%)	16/36 (44%)	12/34 (35%)	13/37 (35%)	12/28 (43%)	18/35 (51%)	19/36 (53%)
FIRST INCIDENCE	384	497	561	469	363	488	356	624
STATISTICAL TESTS								
LIFE TABLE	P=0.251	P=0.342N	P=0.446	P=0.388	P=0.451N	P=0.062	P=0.136	P=0.295
POLY 3	P=0.473	P=0.376N	P=0.556	P=0.571N	P=0.431	P=0.133	P=0.109	P=0.235
POLY 1.5	P=0.467	P=0.369N	P=0.567	P=0.571N	P=0.446	P=0.147	P=0.109	P=0.250
POLY 6	P=0.471	P=0.382N	P=0.537	P=0.578N	P=0.432	P=0.123	P=0.111	P=0.230
LOGISTIC REGRESSION	P=0.448	P=0.339N	P=0.579	P=0.551N	P=0.487	P=0.162	P=0.115	P=0.282
COCH-ARM / FISHERS	P=0.440	P=0.343N	P=0.579N	P=0.579N	P=0.476	P=0.159	P=0.115	P=0.274

Statistical Analysis of Primary Tumors in Mice(B6C3F1) - DECALIN

Terminal Sacrifice at 105 weeks

Dose	Males CONTROL	Males 25 PPM	Males 100 PPM	Males 400 PPM	Females CONTROL	Females 25 PPM	Females 100 PPM	Females 400 PPM
All Organs Malignant and Benign Tumors								
TUMOR RATES	#	#	#	#	#	#	#	#
OVERALL (a)	43/50 (86%)	39/50 (78%)	37/50 (74%)	42/50 (84%)	39/50 (78%)	40/50 (80%)	43/50 (86%)	41/50 (82%)
POLY-3 RATE (b)	43/48.94	39/48.50	37/49.98	42/49.20	39/47.89	40/47.74	43/49.00	41/47.15
POLY-3 PERCENT (g)	87.9%	80.4%	74.0%	85.4%	81.4%	83.8%	87.8%	87.0%
TERMINAL (d)	35/40 (88%)	32/41 (78%)	24/36 (67%)	29/34 (85%)	30/37 (81%)	22/28 (79%)	29/35 (83%)	31/36 (86%)
FIRST INCIDENCE	384	495	448	467	363	488	356	624
STATISTICAL TESTS								
LIFE TABLE	P=0.113	P=0.233N	P=0.380N	P=0.251	P=0.380N	P=0.079	P=0.219	P=0.396
POLY 3	P=0.440	P=0.230N	P=0.065N	P=0.472N	P=0.329	P=0.486	P=0.278	P=0.319
POLY 1.5	P=0.446	P=0.235N	P=0.077N	P=0.474N	P=0.359	P=0.507	P=0.243	P=0.349
POLY 6	P=0.416	P=0.221N	P=0.055N	P=0.489N	P=0.336	P=0.484	P=0.333	P=0.329
LOGISTIC REGRESSION	P=0.414	P=0.229N	P=0.104N	P=0.504N	P=0.475	P=0.475	P=0.210	P=0.418
COCH-ARM / FISHERS	P=0.414	P=0.218N	P=0.105N	P=0.500N	P=0.429	P=0.500	P=0.218	P=0.402

(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).