

TDMS No. 93025 - 07

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS
ABRIDGED) (a)**

Date Report Requested: 08/07/2009

Test Type: CHRONIC

Tetralin

Time Report Requested: 08:53:47

Route: RESPIRATORY EXPOSURE WHOLE BODY

CAS Number: 119-64-2

First Dose M/F: 06/16/03 / 06/16/03

Species/Strain: RATS/F 344/N

Lab: BNW

F3_R2

C Number: C93025
Lock Date: 03/22/2006
Cage Range: ALL
Date Range: ALL
Reasons For Removal: ALL
Removal Date Range: ALL
Treatment Groups: Include ALL
Study Gender: Both
TDMSE Version: 2.1.0

Test Type: CHRONIC

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First Dose M/F: 06/16/03 / 06/16/03

Species/Strain: RATS/F 344/N

Lab: BNW

FISCHER 344 RATS MALE	CONTROL	30 PPM	60 PPM	120 PPM
Disposition Summary				
Animals Initially in Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	24	14	20	19
Natural Death	6	7	5	3
Survivors				
Natural Death		1		
Terminal Sacrifice	20	28	25	28
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Intestine Small, Duodenum	(49)	(47)	(48)	(50)
Carcinoma				1 (2%)
Intestine Small, Ileum	(44)	(46)	(45)	(48)
Liver	(50)	(50)	(50)	(50)
Hepatocellular Adenoma	1 (2%)			
Mesentery	(15)	(13)	(12)	(11)
Oral Mucosa	(1)	(0)	(3)	(0)
Pancreas	(50)	(50)	(50)	(50)
Adenoma			1 (2%)	
Carcinoma				1 (2%)
Stomach, Forestomach	(50)	(50)	(50)	(50)
Stomach, Glandular	(50)	(50)	(50)	(50)
Tongue	(1)	(3)	(3)	(1)
Squamous Cell Papilloma		1 (33%)		
Tooth	(3)	(2)	(1)	(0)
Adamantinoma Malignant	1 (33%)			
CARDIOVASCULAR SYSTEM				
Blood Vessel	(0)	(0)	(0)	(1)
Heart	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung		1 (2%)		

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

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Species/Strain: RATS/F 344/N

Lab: BNW

FISCHER 344 RATS MALE	CONTROL	30 PPM	60 PPM	120 PPM
ENDOCRINE SYSTEM				
Adrenal Cortex	(50)	(50)	(49)	(50)
Adenoma		1 (2%)	3 (6%)	
Adrenal Medulla	(50)	(50)	(49)	(50)
Pheochromocytoma Benign	7 (14%)	8 (16%)	12 (24%)	9 (18%)
Pheochromocytoma Complex			1 (2%)	
Pheochromocytoma Malignant	3 (6%)	2 (4%)	1 (2%)	
Bilateral, Pheochromocytoma Benign	2 (4%)	2 (4%)		
Bilateral, Pheochromocytoma Malignant	1 (2%)			
Islets, Pancreatic	(50)	(50)	(50)	(50)
Adenoma	3 (6%)	4 (8%)	4 (8%)	1 (2%)
Carcinoma	1 (2%)	4 (8%)	3 (6%)	4 (8%)
Pituitary Gland	(50)	(49)	(49)	(49)
Adenoma	36 (72%)	35 (71%)	36 (73%)	33 (67%)
Carcinoma	1 (2%)		1 (2%)	
Thyroid Gland	(50)	(50)	(50)	(50)
Bilateral, C-cell, Adenoma		1 (2%)	1 (2%)	
C-cell, Adenoma	5 (10%)	3 (6%)	4 (8%)	4 (8%)
C-cell, Carcinoma	2 (4%)	4 (8%)	2 (4%)	2 (4%)
Follicular Cell, Adenoma		1 (2%)	2 (4%)	1 (2%)
Follicular Cell, Carcinoma		1 (2%)		1 (2%)
GENERAL BODY SYSTEM				
Peritoneum	(0)	(2)	(0)	(3)
GENITAL SYSTEM				
Epididymis	(50)	(50)	(50)	(50)
Preputial Gland	(50)	(50)	(50)	(49)
Adenoma			1 (2%)	
Carcinoma			1 (2%)	2 (4%)
Prostate	(50)	(50)	(50)	(50)
Carcinoma			1 (2%)	
Seminal Vesicle	(50)	(50)	(50)	(50)
Testes	(50)	(50)	(50)	(50)
Bilateral, Interstitial Cell, Adenoma	18 (36%)	20 (40%)	17 (34%)	30 (60%)
Interstitial Cell, Adenoma	11 (22%)	19 (38%)	14 (28%)	11 (22%)

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Species/Strain: RATS/F 344/N

Lab: BNW

FISCHER 344 RATS MALE	CONTROL	30 PPM	60 PPM	120 PPM
HEMATOPOIETIC SYSTEM				
Bone Marrow	(50)	(50)	(50)	(50)
Lymph Node	(8)	(2)	(7)	(1)
Deep Cervical, Carcinoma, Metastatic,			1 (14%)	
Thyroid Gland				
Lymph Node, Bronchial	(7)	(5)	(4)	(4)
Lymph Node, Mandibular	(0)	(1)	(3)	(0)
Lymph Node, Mediastinal	(33)	(36)	(36)	(31)
Carcinoma, Metastatic, Thyroid Gland	1 (3%)			
Carcinoma, Metastatic, Zymbal'S Gland				1 (3%)
Fibrous Histiocytoma, Metastatic, Skin			1 (3%)	
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Spleen	(50)	(50)	(50)	(50)
Thymus	(47)	(43)	(44)	(43)
Thymoma Benign			1 (2%)	
INTEGUMENTARY SYSTEM				
Mammary Gland	(50)	(50)	(50)	(50)
Carcinoma		1 (2%)	2 (4%)	1 (2%)
Fibroadenoma	1 (2%)	1 (2%)		1 (2%)
Skin	(50)	(50)	(50)	(50)
Basal Cell Adenoma				1 (2%)
Basal Cell Adenoma, Multiple	1 (2%)			
Basal Cell Carcinoma	3 (6%)	1 (2%)	2 (4%)	3 (6%)
Keratoacanthoma		1 (2%)	2 (4%)	2 (4%)
Keratoacanthoma, Multiple	1 (2%)			
Osteosarcoma		1 (2%)		
Squamous Cell Carcinoma			1 (2%)	
Squamous Cell Papilloma		1 (2%)	1 (2%)	4 (8%)
Pinna, Neural Crest Tumor		1 (2%)		
Sebaceous Gland, Adenoma	2 (4%)			2 (4%)
Subcutaneous Tissue, Fibroma	3 (6%)	4 (8%)	4 (8%)	5 (10%)
Subcutaneous Tissue, Fibrosarcoma	3 (6%)	1 (2%)	1 (2%)	
Subcutaneous Tissue, Fibrous			1 (2%)	
Histiocytoma				
Subcutaneous Tissue,	1 (2%)			

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Species/Strain: RATS/F 344/N

Lab: BNW

FISCHER 344 RATS MALE	CONTROL	30 PPM	60 PPM	120 PPM
Hemangiosarcoma Subcutaneous Tissue, Lipoma			1 (2%)	1 (2%)
Subcutaneous Tissue, Osteosarcoma, Metastatic, Bone	1 (2%)			
Subcutaneous Tissue, Sarcoma			1 (2%)	
Subcutaneous Tissue, Schwannoma Benign		1 (2%)		
Subcutaneous Tissue, Schwannoma Malignant	1 (2%)			
Subcutaneous Tissue, Schwannoma Malignant, Multiple		1 (2%)		
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Zymbal'S Gland				1 (2%)
Osteosarcoma	2 (4%)			
Cranium, Osteosarcoma			1 (2%)	1 (2%)
Maxilla, Osteosarcoma	1 (2%)			
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Pituitary Gland	1 (2%)		1 (2%)	
Osteosarcoma, Metastatic, Bone			1 (2%)	
Pineal Gland, Carcinoma				1 (2%)
RESPIRATORY SYSTEM				
Larynx	(50)	(50)	(50)	(50)
Lung	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Adenoma			1 (2%)	2 (4%)
Alveolar/Bronchiolar Carcinoma	1 (2%)	2 (4%)	1 (2%)	
Osteosarcoma, Metastatic, Bone	1 (2%)			
Pheochromocytoma Complex, Metastatic, Adrenal Medulla			1 (2%)	
Pheochromocytoma Malignant, Metastatic, Adrenal Medulla	2 (4%)			
Nose	(50)	(50)	(49)	(50)

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Species/Strain: RATS/F 344/N

Lab: BNW

FISCHER 344 RATS MALE	CONTROL	30 PPM	60 PPM	120 PPM
Adenoma, Tubular Pleura	(2)	(1)	1 (2%) (3)	(10)
SPECIAL SENSES SYSTEM				
Eye	(50)	(49)	(48)	(50)
Harderian Gland	(50)	(50)	(50)	(50)
Zymbal's Gland	(0)	(0)	(1)	(1)
Carcinoma			1 (100%)	1 (100%)
URINARY SYSTEM				
Kidney	(50)	(50)	(50)	(50)
Cortex, Renal Tubule, Adenoma		1 (2%)	1 (2%)	2 (4%)
Urinary Bladder	(50)	(50)	(50)	(50)
SYSTEMIC LESIONS				
Multiple Organs	*(50)	*(50)	*(50)	*(50)
Histiocytic Sarcoma		1 (2%)		1 (2%)
Leukemia Mononuclear	25 (50%)	16 (32%)	5 (10%)	2 (4%)
Mesothelioma Malignant		2 (4%)	1 (2%)	3 (6%)

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

* Number of animals with any tissue examined microscopically

Test Type: CHRONIC

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First Dose M/F: 06/16/03 / 06/16/03

Species/Strain: RATS/F 344/N

Lab: BNW

FISCHER 344 RATS MALE	CONTROL	30 PPM	60 PPM	120 PPM
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Tumor Summary for Males

Total Animals with Primary Neoplasms (b)	50	50	49	50
Total Primary Neoplasms	137	142	134	133
Total Animals with Benign Neoplasms	48	49	48	49
Total Benign Neoplasms	91	104	107	109
Total Animals with Malignant Neoplasms	33	29	21	20
Total Malignant Neoplasms	46	37	27	24
Total Animals with Metastatic Neoplasms	6	1	5	1
Total Metastatic Neoplasms	6	1	5	2
Total Animals with Malignant Neoplasms Uncertain Primary Site				
Total Animals with Neoplasms Uncertain-Benign or Malignant		1		
Total Uncertain Neoplasms		1		

*** END OF MALE ***

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

b - Primary tumors: all tumors except metastatic tumors

Test Type: CHRONIC

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CAS Number: 119-64-2

First Dose M/F: 06/16/03 / 06/16/03

Species/Strain: RATS/F 344/N

Lab: BNW

FISCHER 344 RATS FEMALE	CONTROL	30 PPM	60 PPM	120 PPM
Disposition Summary				
Animals Initially in Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	16	11	15	11
Natural Death	3	3	4	1
Survivors				
Terminal Sacrifice	31	36	31	38
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Esophagus	(50)	(50)	(50)	(50)
Intestine Large, Cecum	(49)	(50)	(48)	(49)
Intestine Large, Colon	(50)	(50)	(50)	(49)
Intestine Large, Rectum	(50)	(50)	(50)	(49)
Polyp Adenomatous		1 (2%)		
Intestine Small, Ileum	(49)	(50)	(48)	(49)
Liver	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Kidney				1 (2%)
Fibrous Histiocytoma			1 (2%)	
Fibrous Histiocytoma, Metastatic, Skin			1 (2%)	
Hepatocellular Adenoma				3 (6%)
Hepatocellular Carcinoma			1 (2%)	1 (2%)
Mesentery	(10)	(18)	(18)	(14)
Oral Mucosa	(1)	(0)	(1)	(1)
Pancreas	(50)	(50)	(50)	(50)
Salivary Glands	(50)	(50)	(50)	(50)
Stomach, Forestomach	(50)	(50)	(50)	(50)
Stomach, Glandular	(50)	(50)	(50)	(50)
Epithelium, Adenoma			1 (2%)	
Tongue	(1)	(1)	(0)	(3)
Squamous Cell Carcinoma	1 (100%)			
CARDIOVASCULAR SYSTEM				
Blood Vessel	(0)	(0)	(0)	(1)
Heart	(50)	(50)	(50)	(50)

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Species/Strain: RATS/F 344/N

Lab: BNW

FISCHER 344 RATS FEMALE	CONTROL	30 PPM	60 PPM	120 PPM
Carcinoma, Metastatic, Kidney				1 (2%)
ENDOCRINE SYSTEM				
Adrenal Cortex	(50)	(50)	(50)	(50)
Adenoma	7 (14%)	5 (10%)	4 (8%)	13 (26%)
Fibrous Histiocytoma, Metastatic, Skin			1 (2%)	
Bilateral, Adenoma	1 (2%)		1 (2%)	
Adrenal Medulla	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Kidney				1 (2%)
Pheochromocytoma Benign	2 (4%)	1 (2%)		1 (2%)
Pheochromocytoma Malignant	1 (2%)		1 (2%)	1 (2%)
Islets, Pancreatic	(50)	(50)	(50)	(50)
Adenoma		1 (2%)	1 (2%)	
Carcinoma		1 (2%)		
Parathyroid Gland	(49)	(50)	(48)	(47)
Pituitary Gland	(49)	(50)	(50)	(50)
Adenoma	36 (73%)	29 (58%)	32 (64%)	37 (74%)
Carcinoma		1 (2%)	1 (2%)	1 (2%)
Thyroid Gland	(50)	(50)	(50)	(49)
C-cell, Adenoma	3 (6%)	3 (6%)	4 (8%)	5 (10%)
C-cell, Carcinoma		2 (4%)		1 (2%)
Follicular Cell, Adenoma		1 (2%)		
Follicular Cell, Carcinoma			1 (2%)	1 (2%)
GENERAL BODY SYSTEM				
None				
GENITAL SYSTEM				
Clitoral Gland	(50)	(50)	(50)	(50)
Adenoma				1 (2%)
Carcinoma	4 (8%)	2 (4%)	3 (6%)	4 (8%)
Ovary	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Kidney				1 (2%)
Granulosa Cell Tumor Benign				1 (2%)
Granulosa Cell Tumor Malignant		1 (2%)		1 (2%)
Oviduct	(0)	(1)	(0)	(0)

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Species/Strain: RATS/F 344/N

Lab: BNW

FISCHER 344 RATS FEMALE	CONTROL	30 PPM	60 PPM	120 PPM
Uterus	(50)	(50)	(50)	(50)
Leiomyosarcoma		1 (2%)		
Polyp Stromal	6 (12%)	8 (16%)	9 (18%)	17 (34%)
Sarcoma Stromal		1 (2%)	1 (2%)	
Bilateral, Polyp Stromal		2 (4%)		
Endometrium, Adenoma	1 (2%)			
Endometrium, Carcinoma	1 (2%)	1 (2%)		
HEMATOPOIETIC SYSTEM				
Bone Marrow	(50)	(50)	(50)	(50)
Lymph Node	(4)	(3)	(3)	(3)
Renal, Stromal Nephroma, Metastatic, Kidney			1 (33%)	
Lymph Node, Bronchial	(3)	(5)	(3)	(2)
Carcinoma, Metastatic, Kidney				1 (50%)
Lymph Node, Mediastinal	(33)	(36)	(40)	(34)
Fibrous Histiocytoma, Metastatic, Skin			1 (3%)	
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Spleen	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Kidney				1 (2%)
Fibrous Histiocytoma, Metastatic, Skin			1 (2%)	
Osteosarcoma		1 (2%)		
Thymus	(44)	(45)	(48)	(46)
Thymoma Benign			1 (2%)	
INTEGUMENTARY SYSTEM				
Mammary Gland	(50)	(50)	(50)	(50)
Carcinoma	3 (6%)	3 (6%)	5 (10%)	4 (8%)
Fibroadenoma	13 (26%)	14 (28%)	19 (38%)	11 (22%)
Fibroadenoma, Multiple	1 (2%)	9 (18%)	4 (8%)	5 (10%)
Skin	(50)	(50)	(50)	(50)
Basal Cell Carcinoma		2 (4%)		1 (2%)
Fibrous Histiocytoma			1 (2%)	
Keratoacanthoma		2 (4%)		1 (2%)
Lip, Squamous Cell Carcinoma	1 (2%)			
Subcutaneous Tissue, Fibroma		1 (2%)		
Subcutaneous Tissue, Fibrous			1 (2%)	

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Lab: BNW

FISCHER 344 RATS FEMALE	CONTROL	30 PPM	60 PPM	120 PPM
Histiocytoma				
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Squamous Cell Carcinoma, Metastatic, Skin	1 (2%)			
Rib, Osteosarcoma			1 (2%)	
Skeletal Muscle	(1)	(1)	(0)	(0)
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Spinal Cord	(0)	(1)	(0)	(0)
Oligodendroglioma Malignant		1 (100%)		
RESPIRATORY SYSTEM				
Larynx	(50)	(50)	(50)	(50)
Lung	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Kidney				1 (2%)
Carcinoma, Metastatic, Zymbal'S Gland	1 (2%)			
Fibrous Histiocytoma, Metastatic, Skin			1 (2%)	
Osteosarcoma, Metastatic, Bone			1 (2%)	
Sarcoma, Metastatic, Uncertain Primary Site		1 (2%)		
Squamous Cell Carcinoma, Metastatic, Tongue	1 (2%)			
Stromal Nephroma, Metastatic, Kidney			1 (2%)	
Nose	(50)	(50)	(50)	(50)
Respiratory Epithelium, Turbinate, Adenoma		1 (2%)		
Pleura	(9)	(16)	(15)	(17)
Carcinoma, Metastatic, Kidney				1 (6%)
Trachea	(50)	(50)	(50)	(50)
SPECIAL SENSES SYSTEM				

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Species/Strain: RATS/F 344/N

Lab: BNW

FISCHER 344 RATS FEMALE	CONTROL	30 PPM	60 PPM	120 PPM
Eye	(49)	(50)	(49)	(50)
Harderian Gland	(50)	(50)	(50)	(50)
Zymbal's Gland	(1)	(0)	(0)	(0)
Carcinoma	1 (100%)			
URINARY SYSTEM				
Kidney	(50)	(50)	(50)	(50)
Carcinoma				1 (2%)
Fibrous Histiocytoma, Metastatic, Skin			1 (2%)	
Nephroblastoma			1 (2%)	
Cortex, Renal Tubule, Adenoma				1 (2%)
Urinary Bladder	(50)	(50)	(50)	(50)
Transitional Epithelium, Papilloma		1 (2%)		
SYSTEMIC LESIONS				
Multiple Organs	*(50)	*(50)	*(50)	*(50)
Histiocytic Sarcoma	2 (4%)	2 (4%)	1 (2%)	1 (2%)
Leukemia Mononuclear	17 (34%)	2 (4%)		4 (8%)

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

* Number of animals with any tissue examined microscopically

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Lab: BNW

FISCHER 344 RATS FEMALE	CONTROL	30 PPM	60 PPM	120 PPM
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Tumor Summary for Females

Total Animals with Primary Neoplasms (b)	46	47	47	49
Total Primary Neoplasms	101	100	95	117
Total Animals with Benign Neoplasms	40	43	44	48
Total Benign Neoplasms	70	79	76	96
Total Animals with Malignant Neoplasms	25	18	16	19
Total Malignant Neoplasms	31	21	19	21
Total Animals with Metastatic Neoplasms	4	1	3	1
Total Metastatic Neoplasms	4	1	9	8
Total Animals with Malignant Neoplasms Uncertain Primary Site		1		
Total Animals with Neoplasms Uncertain-Benign or Malignant				
Total Uncertain Neoplasms				

*** END OF REPORT ***

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

b - Primary tumors: all tumors except metastatic tumors