

Experiment Number: 10119 - 01

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

Date Report Requested: 06/03/2014

Test Type: CHRONIC

Furan

Time Report Requested: 08:42:42

Route: GAVAGE

CAS Number: 110-00-9

First Dose M/F: 09/07/09 / NA

Species/Strain: RATS/F 344/NCTR

Lab: NCTR

104 Week

NTP Study Number: C10119

Lock Date: 06/02/2014

Cage Range: ALL

Date Range: ALL

Reasons For Removal: ALL

Removal Date Range: ALL

Treatment Groups:	Include 001 0 Vehicle 104 wk	Include 002 0.02 Furan 104wk	Include 003 0.044 Furan104wk
	Include 004 0.092 Furan104wk	Include 005 0.2 Furan 104 wk	Include 006 0.44 Furan 104wk
	Include 007 0.92 Furan 104wk	Include 008 2 Furan 104 wk	

Study Gender: Male

TDMSE Version: 3.0.2.0_001

PWG Approval Date: NONE

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Species/Strain: RATS/F 344/NCTR

Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE	0 Vehicle 104 wk	0.02 Furan 104wk	0.044 Furan104wk	0.092 Furan104wk	0.2 Furan 104 wk	0.44 Furan 104wk
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Disposition Summary

Animals Initially In Study	150	150	100	100	50	50
Early Deaths						
Accidentally Killed				1		
Moribund Sacrifice	71	68	45	38	19	20
Natural Death	8	3	7	6	2	5
Survivors						
Moribund Sacrifice	24	30	17	25	12	11
Natural Death	2	7	3	2	1	1
Terminal Sacrifice	45	42	28	28	16	13
Animals Examined Microscopically	150	150	100	100	50	50

ALIMENTARY SYSTEM

Esophagus	(150)	(150)	(100)	(100)	(50)	(50)
Intestine Large, Cecum	(140)	(142)	(91)	(93)	(47)	(44)
Fibrous Histiocytoma		1 (1%)				
Intestine Large, Colon	(143)	(146)	(94)	(95)	(49)	(44)
Adenocarcinoma, Metastatic, Prostate		1 (1%)				
Adenoma		1 (1%)			1 (2%)	
Fibrous Histiocytoma		1 (1%)				
Intestine Large, Rectum	(143)	(146)	(94)	(95)	(49)	(45)
Intestine Small, Duodenum	(144)	(145)	(94)	(95)	(48)	(44)
Intestine Small, Ileum	(139)	(142)	(91)	(92)	(47)	(44)
Intestine Small, Jejunum	(140)	(142)	(91)	(93)	(47)	(44)
Adenoma					1 (2%)	
Fibrous Histiocytoma		1 (1%)				
Leiomyosarcoma						
Liver	(149)	(150)	(99)	(100)	(50)	(49)
Adenocarcinoma, Metastatic, Prostate		1 (1%)				
Fibrous Histiocytoma		1 (1%)				
Fibrous Histiocytoma, Metastatic, Skin				1 (1%)		
Hepatocellular Adenoma	2 (1%)	2 (1%)	1 (1%)	2 (2%)		1 (2%)
Hepatocellular Carcinoma	3 (2%)					
Hepatocholangiocarcinoma						

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

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Species/Strain: RATS/F 344/NCTR

Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE	0 Vehicle 104 wk	0.02 Furan 104wk	0.044 Furan104wk	0.092 Furan104wk	0.2 Furan 104 wk	0.44 Furan 104wk
Leiomyosarcoma, Metastatic, Intestine Small, Jejunum						
Sarcoma, Metastatic, Skin						
Mesentery	(31)	(35)	(25)	(25)	(14)	(8)
Adenocarcinoma, Metastatic, Prostate		1 (3%)				
Leiomyosarcoma, Metastatic, Intestine Small, Jejunum						
Lipoma	1 (3%)					
Sarcoma		1 (3%)				
Oral Mucosa	(1)	(1)	(3)	(1)	(0)	(1)
Squamous Cell Carcinoma		1 (100%)		1 (100%)		
Squamous Cell Papilloma	1 (100%)		2 (67%)			
Pancreas	(150)	(149)	(99)	(100)	(50)	(49)
Adenocarcinoma, Metastatic, Prostate		1 (1%)				
Leiomyosarcoma, Metastatic, Intestine Small, Jejunum						
Acinar Cell, Adenoma	22 (15%)	20 (13%)	19 (19%)	22 (22%)	7 (14%)	5 (10%)
Acinar Cell, Adenoma, Multiple	17 (11%)	10 (7%)	4 (4%)	11 (11%)	2 (4%)	5 (10%)
Acinar Cell, Carcinoma	1 (1%)	1 (1%)				
Salivary Glands	(150)	(150)	(99)	(100)	(50)	(49)
Adenocarcinoma		1 (1%)				
Adenoma				1 (1%)		
Sarcoma				1 (1%)		
Schwannoma Malignant				1 (1%)		
Stomach, Forestomach	(149)	(150)	(99)	(100)	(50)	(49)
Squamous Cell Papilloma				1 (1%)		1 (2%)
Stomach, Glandular	(146)	(145)	(96)	(97)	(49)	(44)
Adenocarcinoma		1 (1%)				
Tongue	(1)	(1)	(1)	(2)	(0)	(0)
Squamous Cell Carcinoma		1 (100%)				
Squamous Cell Papilloma	1 (100%)			1 (50%)		
CARDIOVASCULAR SYSTEM						
Blood Vessel	(150)	(150)	(100)	(100)	(49)	(50)
Adventitia, Sarcoma				1 (1%)		

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Species/Strain: RATS/F 344/NCTR

Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE	0 Vehicle 104 wk	0.02 Furan 104wk	0.044 Furan104wk	0.092 Furan104wk	0.2 Furan 104 wk	0.44 Furan 104wk
Heart	(150)	(150)	(100)	(100)	(50)	(50)
Adenocarcinoma, Metastatic, Prostate		1 (1%)				
Carcinoma, Metastatic, Preputial Gland			1 (1%)			
Hemangiosarcoma				1 (1%)		
Schwannoma Benign						1 (2%)
Schwannoma Malignant	6 (4%)	5 (3%)	3 (3%)	2 (2%)	2 (4%)	4 (8%)
ENDOCRINE SYSTEM						
Adrenal Cortex	(150)	(150)	(99)	(100)	(50)	(49)
Adenoma		5 (3%)				1 (2%)
Adrenal Medulla	(150)	(150)	(99)	(100)	(50)	(49)
Pheochromocytoma Benign	31 (21%)	34 (23%)	17 (17%)	17 (17%)	10 (20%)	7 (14%)
Pheochromocytoma Benign, Multiple		1 (1%)				
Pheochromocytoma Complex				1 (1%)		
Pheochromocytoma Malignant	4 (3%)	4 (3%)	4 (4%)	4 (4%)	4 (8%)	1 (2%)
Bilateral, Pheochromocytoma Benign	9 (6%)	6 (4%)	7 (7%)	8 (8%)	1 (2%)	2 (4%)
Bilateral, Pheochromocytoma Malignant	1 (1%)			1 (1%)		
Islets, Pancreatic	(150)	(150)	(99)	(100)	(50)	(49)
Adenoma	23 (15%)	18 (12%)	13 (13%)	15 (15%)	7 (14%)	8 (16%)
Carcinoma	3 (2%)		3 (3%)	1 (1%)		1 (2%)
Parathyroid Gland	(149)	(150)	(98)	(98)	(50)	(49)
Adenoma	1 (1%)					
Pituitary Gland	(150)	(148)	(100)	(100)	(50)	(49)
Craniopharyngioma	1 (1%)					
Pars Distalis, Adenoma	104 (69%)	104 (70%)	64 (64%)	68 (68%)	37 (74%)	35 (71%)
Pars Distalis, Carcinoma	2 (1%)			1 (1%)		
Pars Intermedia, Adenoma	1 (1%)					
Thyroid Gland	(150)	(150)	(99)	(100)	(50)	(49)
C-cell, Adenoma	10 (7%)	15 (10%)	9 (9%)	13 (13%)	7 (14%)	8 (16%)
C-cell, Adenoma, Multiple	1 (1%)					
C-cell, Carcinoma	1 (1%)	6 (4%)	2 (2%)	1 (1%)	1 (2%)	1 (2%)
Follicular Cell, Adenoma		2 (1%)	5 (5%)		1 (2%)	1 (2%)
Follicular Cell, Carcinoma	2 (1%)	3 (2%)	2 (2%)	1 (1%)		

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GENERAL BODY SYSTEM						
Peritoneum	(1)	(5)	(1)	(0)	(0)	(1)
Tissue NOS	(2)	(1)	(2)	(2)	(0)	(0)
Carcinoma, Metastatic, Preputial Gland			1 (50%)			
Abdominal, Lipoma				1 (50%)		
Abdominal, Paraganglioma Malignant				1 (50%)		
GENITAL SYSTEM						
Ductus Deferens	(0)	(1)	(0)	(0)	(0)	(0)
Adenocarcinoma, Metastatic, Prostate		1 (100%)				
Epididymis	(149)	(149)	(98)	(100)	(50)	(50)
Adenocarcinoma, Metastatic, Prostate		1 (1%)				
Preputial Gland	(150)	(150)	(99)	(100)	(50)	(49)
Adenoma	9 (6%)	8 (5%)	4 (4%)	8 (8%)	3 (6%)	6 (12%)
Adenoma, Multiple		1 (1%)				
Carcinoma	13 (9%)	4 (3%)	7 (7%)	16 (16%)	3 (6%)	4 (8%)
Sarcoma, Metastatic, Skin						
Squamous Cell Carcinoma	3 (2%)	5 (3%)	5 (5%)	4 (4%)	2 (4%)	
Squamous Cell Papilloma		2 (1%)	2 (2%)	1 (1%)		
Bilateral, Adenoma		1 (1%)				
Prostate	(149)	(150)	(98)	(100)	(50)	(49)
Adenocarcinoma, Mucinous		1 (1%)				
Adenoma	5 (3%)	4 (3%)	3 (3%)	3 (3%)	2 (4%)	3 (6%)
Adenoma, Multiple				1 (1%)		
Seminal Vesicle	(143)	(146)	(96)	(98)	(50)	(46)
Adenocarcinoma, Metastatic, Prostate		1 (1%)				
Testes	(150)	(149)	(98)	(100)	(50)	(49)
Bilateral, Interstitial Cell, Adenoma	32 (21%)	28 (19%)	22 (22%)	24 (24%)	14 (28%)	13 (27%)
Interstitial Cell, Adenoma	46 (31%)	47 (32%)	30 (31%)	30 (30%)	18 (36%)	15 (31%)
HEMATOPOIETIC SYSTEM						

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Bone Marrow	(148)	(150)	(95)	(100)	(49)	(49)
Lymph Node	(59)	(69)	(35)	(38)	(23)	(20)
Lumbar, Squamous Cell Carcinoma, Metastatic, Preputial Gland	1 (2%)					
Mediastinal, Adenocarcinoma, Metastatic, Prostate		1 (1%)				
Mediastinal, Fibrous Histiocytoma		1 (1%)				
Pancreatic, Adenocarcinoma, Metastatic, Prostate		1 (1%)				
Lymph Node, Mandibular	(150)	(150)	(99)	(100)	(50)	(49)
Fibrous Histiocytoma		1 (1%)				
Lymph Node, Mesenteric	(147)	(146)	(93)	(97)	(49)	(47)
Fibrous Histiocytoma		1 (1%)				
Spleen	(150)	(149)	(98)	(100)	(50)	(49)
Fibrous Histiocytoma		1 (1%)				
Hemangiosarcoma			1 (1%)			
Leiomyosarcoma, Metastatic, Intestine Small, Jejunum						
Thymus	(144)	(149)	(98)	(98)	(49)	(48)
Thymoma Benign	1 (1%)					
Thymoma Malignant		1 (1%)				
Adventitia, Sarcoma				1 (1%)		

INTEGUMENTARY SYSTEM

Mammary Gland	(150)	(148)	(95)	(100)	(50)	(50)
Adenocarcinoma	1 (1%)		2 (2%)	1 (1%)		1 (2%)
Adenoma	1 (1%)			1 (1%)		1 (2%)
Fibroadenoma	7 (5%)	4 (3%)	8 (8%)	4 (4%)	2 (4%)	4 (8%)
Fibroadenoma, Multiple				1 (1%)	1 (2%)	
Skin	(150)	(150)	(100)	(99)	(50)	(50)
Basal Cell Adenoma		2 (1%)		1 (1%)	1 (2%)	1 (2%)
Basal Cell Carcinoma				1 (1%)		
Keratoacanthoma		1 (1%)		1 (1%)		
Squamous Cell Carcinoma	2 (1%)	1 (1%)				
Squamous Cell Papilloma	1 (1%)	1 (1%)	2 (2%)	3 (3%)		1 (2%)

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Trichoepithelioma		1 (1%)				
Dermis, Fibroma						1 (2%)
Dermis, Hemangioma			1 (1%)			
Lip, Fibrous Histiocytoma	1 (1%)					
Sebaceous Gland, Adenoma			1 (1%)		1 (2%)	
Subcutaneous Tissue, Fibroma	6 (4%)	6 (4%)	3 (3%)	4 (4%)	2 (4%)	2 (4%)
Subcutaneous Tissue, Fibrosarcoma	2 (1%)		2 (2%)			
Subcutaneous Tissue, Fibrous Histiocytoma	1 (1%)			1 (1%)		
Subcutaneous Tissue, Lipoma	3 (2%)	4 (3%)	4 (4%)	3 (3%)	2 (4%)	
Subcutaneous Tissue, Liposarcoma	1 (1%)					
Subcutaneous Tissue, Sarcoma		1 (1%)				1 (2%)
Subcutaneous Tissue, Schwannoma Malignant	1 (1%)					

MUSCULOSKELETAL SYSTEM

Bone	(5)	(1)	(0)	(0)	(1)	(0)
Mandible, Osteosarcoma	1 (20%)					
Pelvis, Osteosarcoma					1 (100%)	
Vertebra, Osteosarcoma	1 (20%)					
Bone, Femur	(150)	(150)	(100)	(100)	(50)	(50)
Skeletal Muscle	(7)	(4)	(2)	(1)	(1)	(1)
Fibrous Histiocytoma	1 (14%)					
Lipoma	1 (14%)					
Osteosarcoma, Metastatic, Bone					1 (100%)	
Rhabdomyosarcoma	1 (14%)					
Diaphragm, Adenocarcinoma, Metastatic, Prostate		1 (25%)				

NERVOUS SYSTEM

Brain	(0)	(0)	(0)	(0)	(0)	(0)
Meninges, Granular Cell Tumor Benign						
Brain, Brain Stem	(150)	(150)	(99)	(100)	(50)	(50)
Astrocytoma Malignant	1 (1%)					
Carcinoma, Metastatic, Pituitary Gland				1 (1%)		

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Brain, Cerebellum	(150)	(149)	(99)	(100)	(50)	(50)
Granular Cell Tumor Benign	1 (1%)					
Brain, Cerebrum	(150)	(150)	(99)	(100)	(50)	(50)
Astrocytoma Malignant	1 (1%)					
Carcinoma, Metastatic, Pituitary Gland	1 (1%)					
Granular Cell Tumor Malignant	1 (1%)					
Oligodendroglioma Malignant			1 (1%)			
Peripheral Nerve	(1)	(1)	(1)	(1)	(0)	(0)
Spinal Cord, Cervical	(1)	(1)	(1)	(1)	(0)	(0)
Spinal Cord, Lumbar	(1)	(1)	(1)	(1)	(0)	(0)
Schwannoma Malignant		1 (100%)				
Spinal Cord, Thoracic	(1)	(1)	(1)	(1)	(0)	(0)

RESPIRATORY SYSTEM

Lung	(150)	(149)	(99)	(100)	(50)	(50)
Adenocarcinoma, Metastatic, Prostate		1 (1%)				
Alveolar/Bronchiolar Adenoma	1 (1%)		2 (2%)			1 (2%)
Alveolar/Bronchiolar Carcinoma						2 (4%)
Carcinoma, Metastatic, Preputial Gland			1 (1%)			
Fibrous Histiocytoma	1 (1%)	1 (1%)				
Hepatocholangiocarcinoma, Metastatic, Liver						
Squamous Cell Carcinoma	1 (1%)					
Nose	(149)	(146)	(96)	(97)	(48)	(48)
Fibrous Histiocytoma		1 (1%)				
Squamous Cell Carcinoma, Deep Invasion		1 (1%)				
Trachea	(150)	(150)	(99)	(100)	(50)	(50)

SPECIAL SENSES SYSTEM

Ear	(1)	(0)	(3)	(0)	(1)	(0)
Neural Crest Tumor	1 (100%)		2 (67%)		1 (100%)	
Squamous Cell Papilloma			1 (33%)			
Eye	(144)	(143)	(92)	(96)	(48)	(45)
Harderian Gland	(150)	(150)	(99)	(100)	(50)	(49)

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FISCHER 344 RATS-NCTR RATS MALE	0 Vehicle 104 wk	0.02 Furan 104wk	0.044 Furan104wk	0.092 Furan104wk	0.2 Furan 104 wk	0.44 Furan 104wk
Zymbal's Gland	(6)	(3)	(2)	(3)	(0)	(1)
Adenoma	1 (17%)	2 (67%)				
Carcinoma	1 (17%)			2 (67%)		
Squamous Cell Carcinoma	3 (50%)		1 (50%)	1 (33%)		1 (100%)
Squamous Cell Papilloma		1 (33%)	1 (50%)			
URINARY SYSTEM						
Kidney	(150)	(150)	(99)	(100)	(50)	(49)
Fibrous Histiocytoma		1 (1%)				
Liposarcoma		1 (1%)				
Mesenchymal Tumor Malignant			1 (1%)			
Transitional Epithelial Carcinoma	1 (1%)			1 (1%)		
Renal Tubule, Adenoma	1 (1%)	1 (1%)				
Renal Tubule, Carcinoma	3 (2%)				1 (2%)	
Urethra	(0)	(2)	(0)	(1)	(0)	(0)
Urinary Bladder	(150)	(150)	(99)	(100)	(50)	(48)
Transitional Epithelium, Papilloma		1 (1%)			1 (2%)	1 (2%)
SYSTEMIC LESIONS						
Multiple Organ	*(150)	*(150)	*(100)	*(100)	*(50)	*(50)
Histiocytic Sarcoma					1 (2%)	
Leukemia Mononuclear	47 (31%)	56 (37%)	36 (36%)	44 (44%)	29 (58%)	18 (36%)
Lymphoma Malignant		1 (1%)				
Mesothelioma Malignant	6 (4%)	9 (6%)	1 (1%)	2 (2%)		2 (4%)
Mesothelioma Nos						1 (2%)

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* Number of animals with any tissue examined microscopically

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Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE

0.92 Furan 104wk

2 Furan 104 wk

Disposition Summary

Animals Initially In Study	50	50
Early Deaths		
Accidentally Killed		
Moribund Sacrifice	29	22
Natural Death		5
Survivors		
Moribund Sacrifice	9	15
Natural Death		
Terminal Sacrifice	12	8
Animals Examined Microscopically	50	50

ALIMENTARY SYSTEM

Esophagus	(50)	(50)
Intestine Large, Cecum	(50)	(46)
Fibrous Histiocytoma		
Intestine Large, Colon	(50)	(46)
Adenocarcinoma, Metastatic, Prostate		
Adenoma		
Fibrous Histiocytoma		
Intestine Large, Rectum	(50)	(48)
Intestine Small, Duodenum	(50)	(47)
Intestine Small, Ileum	(49)	(46)
Intestine Small, Jejunum	(50)	(46)
Adenoma		
Fibrous Histiocytoma		
Leiomyosarcoma	1 (2%)	
Liver	(50)	(49)
Adenocarcinoma, Metastatic, Prostate		
Fibrous Histiocytoma		
Fibrous Histiocytoma, Metastatic, Skin		
Hepatocellular Adenoma	1 (2%)	3 (6%)
Hepatocellular Carcinoma		
Hepatocholangiocarcinoma		2 (4%)

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Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE	0.92 Furan 104wk	2 Furan 104 wk
Leiomyosarcoma, Metastatic, Intestine Small, Jejunum	1 (2%)	
Sarcoma, Metastatic, Skin	1 (2%)	
Mesentery	(14)	(10)
Adenocarcinoma, Metastatic, Prostate		
Leiomyosarcoma, Metastatic, Intestine Small, Jejunum	1 (7%)	
Lipoma		
Sarcoma		
Oral Mucosa	(0)	(0)
Squamous Cell Carcinoma		
Squamous Cell Papilloma		
Pancreas	(50)	(50)
Adenocarcinoma, Metastatic, Prostate		
Leiomyosarcoma, Metastatic, Intestine Small, Jejunum	1 (2%)	
Acinar Cell, Adenoma	5 (10%)	7 (14%)
Acinar Cell, Adenoma, Multiple	1 (2%)	5 (10%)
Acinar Cell, Carcinoma		
Salivary Glands	(50)	(50)
Adenocarcinoma		
Adenoma		
Sarcoma		
Schwannoma Malignant		
Stomach, Forestomach	(50)	(48)
Squamous Cell Papilloma		
Stomach, Glandular	(50)	(48)
Adenocarcinoma		
Tongue	(0)	(0)
Squamous Cell Carcinoma		
Squamous Cell Papilloma		
CARDIOVASCULAR SYSTEM		
Blood Vessel	(50)	(50)
Adventitia, Sarcoma		

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Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE	0.92 Furan 104wk	2 Furan 104 wk
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Heart	(50)	(50)
Adenocarcinoma, Metastatic, Prostate		
Carcinoma, Metastatic, Preputial Gland		
Hemangiosarcoma		
Schwannoma Benign		1 (2%)
Schwannoma Malignant		2 (4%)

ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(50)
Adenoma		
Adrenal Medulla	(50)	(50)
Pheochromocytoma Benign	6 (12%)	7 (14%)
Pheochromocytoma Benign, Multiple		
Pheochromocytoma Complex		
Pheochromocytoma Malignant	2 (4%)	1 (2%)
Bilateral, Pheochromocytoma Benign	5 (10%)	3 (6%)
Bilateral, Pheochromocytoma Malignant		
Islets, Pancreatic	(50)	(50)
Adenoma	5 (10%)	7 (14%)
Carcinoma		2 (4%)
Parathyroid Gland	(50)	(50)
Adenoma		
Pituitary Gland	(50)	(50)
Craniopharyngioma		
Pars Distalis, Adenoma	32 (64%)	36 (72%)
Pars Distalis, Carcinoma	1 (2%)	
Pars Intermedia, Adenoma		
Thyroid Gland	(50)	(50)
C-cell, Adenoma	1 (2%)	8 (16%)
C-cell, Adenoma, Multiple		
C-cell, Carcinoma		1 (2%)
Follicular Cell, Adenoma		
Follicular Cell, Carcinoma	1 (2%)	1 (2%)

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

Test Type: CHRONIC

Furan

Time Report Requested: 08:42:42

Route: GAVAGE

CAS Number: 110-00-9

First Dose M/F: 09/07/09 / NA

Species/Strain: RATS/F 344/NCTR

Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE

0.92 Furan 104wk

2 Furan 104 wk

GENERAL BODY SYSTEM

Peritoneum	(1)	(1)
Tissue NOS	(3)	(0)
Carcinoma, Metastatic, Preputial Gland		
Abdominal, Lipoma		
Abdominal, Paraganglioma Malignant		

GENITAL SYSTEM

Ductus Deferens	(0)	(0)
Adenocarcinoma, Metastatic, Prostate		
Epididymis	(50)	(50)
Adenocarcinoma, Metastatic, Prostate		
Preputial Gland	(50)	(50)
Adenoma	3 (6%)	3 (6%)
Adenoma, Multiple		
Carcinoma	5 (10%)	3 (6%)
Sarcoma, Metastatic, Skin	1 (2%)	
Squamous Cell Carcinoma	2 (4%)	3 (6%)
Squamous Cell Papilloma		
Bilateral, Adenoma		
Prostate	(50)	(50)
Adenocarcinoma, Mucinous		
Adenoma	1 (2%)	
Adenoma, Multiple		
Seminal Vesicle	(50)	(48)
Adenocarcinoma, Metastatic, Prostate		
Testes	(50)	(50)
Bilateral, Interstitial Cell, Adenoma	9 (18%)	6 (12%)
Interstitial Cell, Adenoma	10 (20%)	16 (32%)

HEMATOPOIETIC SYSTEM

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

Test Type: CHRONIC

Furan

Time Report Requested: 08:42:42

Route: GAVAGE

CAS Number: 110-00-9

First Dose M/F: 09/07/09 / NA

Species/Strain: RATS/F 344/NCTR

Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE
0.92 Furan 104wk**2 Furan 104 wk**

Bone Marrow	(50)	(49)
Lymph Node	(26)	(33)
Lumbar, Squamous Cell Carcinoma, Metastatic, Preputial Gland		
Mediastinal, Adenocarcinoma, Metastatic, Prostate		
Mediastinal, Fibrous Histiocytoma		
Pancreatic, Adenocarcinoma, Metastatic, Prostate		
Lymph Node, Mandibular	(50)	(50)
Fibrous Histiocytoma		
Lymph Node, Mesenteric	(50)	(50)
Fibrous Histiocytoma		
Spleen	(50)	(50)
Fibrous Histiocytoma		
Hemangiosarcoma		1 (2%)
Leiomyosarcoma, Metastatic, Intestine Small, Jejunum	1 (2%)	
Thymus	(50)	(49)
Thymoma Benign		1 (2%)
Thymoma Malignant		
Adventitia, Sarcoma		

INTEGUMENTARY SYSTEM

Mammary Gland	(48)	(50)
Adenocarcinoma		
Adenoma		1 (2%)
Fibroadenoma	1 (2%)	4 (8%)
Fibroadenoma, Multiple		
Skin	(50)	(50)
Basal Cell Adenoma	1 (2%)	
Basal Cell Carcinoma		
Keratoacanthoma		
Squamous Cell Carcinoma		
Squamous Cell Papilloma		

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Test Type: CHRONIC

Furan

Time Report Requested: 08:42:42

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Species/Strain: RATS/F 344/NCTR

Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE	0.92 Furan 104wk	2 Furan 104 wk
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Trichoepithelioma		
Dermis, Fibroma	1 (2%)	
Dermis, Hemangioma		
Lip, Fibrous Histiocytoma		
Sebaceous Gland, Adenoma		
Subcutaneous Tissue, Fibroma		
Subcutaneous Tissue, Fibrosarcoma	1 (2%)	
Subcutaneous Tissue, Fibrous Histiocytoma		
Subcutaneous Tissue, Lipoma	1 (2%)	1 (2%)
Subcutaneous Tissue, Liposarcoma		
Subcutaneous Tissue, Sarcoma	1 (2%)	1 (2%)
Subcutaneous Tissue, Schwannoma Malignant		

MUSCULOSKELETAL SYSTEM

Bone	(0)	(0)
Mandible, Osteosarcoma		
Pelvis, Osteosarcoma		
Vertebra, Osteosarcoma		
Bone, Femur	(50)	(50)
Skeletal Muscle	(2)	(0)
Fibrous Histiocytoma		
Lipoma		
Osteosarcoma, Metastatic, Bone		
Rhabdomyosarcoma		
Diaphragm, Adenocarcinoma, Metastatic, Prostate		

NERVOUS SYSTEM

Brain	(1)	(0)
Meninges, Granular Cell Tumor Benign	1 (100%)	
Brain, Brain Stem	(50)	(50)
Astrocytoma Malignant		
Carcinoma, Metastatic, Pituitary Gland		

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

Test Type: CHRONIC

Furan

Time Report Requested: 08:42:42

Route: GAVAGE

CAS Number: 110-00-9

First Dose M/F: 09/07/09 / NA

Species/Strain: RATS/F 344/NCTR

Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE	0.92 Furan 104wk	2 Furan 104 wk
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Brain, Cerebellum	(50)	(50)
Granular Cell Tumor Benign		
Brain, Cerebrum	(50)	(50)
Astrocytoma Malignant		
Carcinoma, Metastatic, Pituitary Gland		
Granular Cell Tumor Malignant		
Oligodendroglioma Malignant		
Peripheral Nerve	(0)	(0)
Spinal Cord, Cervical	(0)	(0)
Spinal Cord, Lumbar	(0)	(0)
Schwannoma Malignant		
Spinal Cord, Thoracic	(0)	(0)

RESPIRATORY SYSTEM

Lung	(50)	(50)
Adenocarcinoma, Metastatic, Prostate		
Alveolar/Bronchiolar Adenoma		
Alveolar/Bronchiolar Carcinoma		1 (2%)
Carcinoma, Metastatic, Preputial Gland		
Fibrous Histiocytoma		
Hepatocolangiocarcinoma, Metastatic, Liver		1 (2%)
Squamous Cell Carcinoma		
Nose	(50)	(48)
Fibrous Histiocytoma		
Squamous Cell Carcinoma, Deep Invasion		
Trachea	(50)	(50)

SPECIAL SENSES SYSTEM

Ear	(0)	(0)
Neural Crest Tumor		
Squamous Cell Papilloma		
Eye	(50)	(47)
Harderian Gland	(50)	(50)

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Test Type: CHRONIC

Furan

Time Report Requested: 08:42:42

Route: GAVAGE

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First Dose M/F: 09/07/09 / NA

Species/Strain: RATS/F 344/NCTR

Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE

0.92 Furan 104wk

2 Furan 104 wk

Zymbal's Gland	(1)	(1)
Adenoma		
Carcinoma	1 (100%)	
Squamous Cell Carcinoma		
Squamous Cell Papilloma		

URINARY SYSTEM

Kidney	(50)	(50)
Fibrous Histiocytoma		
Liposarcoma		
Mesenchymal Tumor Malignant		
Transitional Epithelial Carcinoma		
Renal Tubule, Adenoma		
Renal Tubule, Carcinoma		
Urethra	(0)	(0)
Urinary Bladder	(50)	(50)
Transitional Epithelium, Papilloma		1 (2%)

SYSTEMIC LESIONS

Multiple Organ	*(50)	*(50)
Histiocytic Sarcoma		
Leukemia Mononuclear	27 (54%)	28 (56%)
Lymphoma Malignant		
Mesothelioma Malignant	2 (4%)	6 (12%)
Mesothelioma Nos		

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

* Number of animals with any tissue examined microscopically

Experiment Number: 10119 - 01

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

Date Report Requested: 06/03/2014

Test Type: CHRONIC

Furan

Time Report Requested: 08:42:42

Route: GAVAGE

CAS Number: 110-00-9

First Dose M/F: 09/07/09 / NA

Species/Strain: RATS/F 344/NCTR

Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE	0 Vehicle 104 wk	0.02 Furan 104wk	0.044 Furan104wk	0.092 Furan104wk	0.2 Furan 104 wk	0.44 Furan 104wk
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Tumor Summary for Males

Total Animals with Primary Neoplasms (b)	149	149	97	96	48	49
Total Primary Neoplasms	460	450	298	337	166	161
Total Animals with Benign Neoplasms	142	141	93	93	46	47
Total Benign Neoplasms	341	333	225	246	121	124
Total Animals with Malignant Neoplasms	92	88	57	68	36	29
Total Malignant Neoplasms	118	117	71	91	44	36
Total Animals with Metastatic Neoplasms	2	1	1	2	1	
Total Metastatic Neoplasms	2	12	3	2	1	
Total Animals with Malignant Neoplasms Uncertain Primary Site						
Total Animals with Neoplasms Uncertain- Benign or Malignant	1		2		1	1
Total Uncertain Neoplasms	1		2		1	1

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

b - Primary tumors: all tumors except metastatic tumors

Experiment Number: 10119 - 01

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

Date Report Requested: 06/03/2014

Test Type: CHRONIC

Furan

Time Report Requested: 08:42:42

Route: GAVAGE

CAS Number: 110-00-9

First Dose M/F: 09/07/09 / NA

Species/Strain: RATS/F 344/NCTR

Lab: NCTR

FISCHER 344 RATS-NCTR RATS MALE	0.92 Furan 104wk	2 Furan 104 wk
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Tumor Summary for Males

Total Animals with Primary Neoplasms (b)	47	49
Total Primary Neoplasms	128	162
Total Animals with Benign Neoplasms	44	46
Total Benign Neoplasms	84	110
Total Animals with Malignant Neoplasms	34	36
Total Malignant Neoplasms	44	52
Total Animals with Metastatic Neoplasms	2	1
Total Metastatic Neoplasms	6	1
Total Animals with Malignant Neoplasms Uncertain Primary Site		
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