

Experiment Number: 92004-01
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)
Test Compound: NTP 91/92 diet study
CAS Number: DIET9192

Date Report Requested: 10/20/2014
Time Report Requested: 18:16:45
First Dose M/F: NA / NA
Lab: NIEHS

C Number:	C92004
Lock Date:	Not Entered.
Cage Range:	All
Date Range:	All
Reasons For Removal:	All
Removal Date Range:	All
Treatment Groups:	All
Study Gender:	Both
PWG Approval Date	NONE

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F 344/N Rat MALE	07M	91M	92M
Disposition Summary			
Animals Initially In Study	60	60	60
Early Deaths			
Moribund Sacrifice	1	1	
Natural Death	3	5	8
Survivors			
Moribund Sacrifice	21	16	15
Natural Death	12	6	7
Terminal Sacrifice	23	32	30
Animals Examined Microscopically	58	60	56
ALIMENTARY SYSTEM			
Liver	(57)	(60)	(56)
Hepatocellular Adenoma	3 (5%)	1 (2%)	
Hepatocellular Carcinoma	1 (2%)		
Leukemia Mononuclear	30 (53%)	31 (52%)	25 (45%)
Mesentery	(8)	(4)	(5)
Lipoma	1 (13%)		
Mesothelioma Malignant		1 (25%)	
Mesothelioma Malignant, Metastatic, Testes	1 (13%)		
Pancreas	(56)	(59)	(52)
Leukemia Mononuclear	13 (23%)	5 (8%)	5 (10%)
Salivary Glands	(0)	(0)	(1)
Stomach, Forestomach	(4)	(0)	(0)
Stomach, Glandular	(1)	(0)	(0)
Tongue	(1)	(0)	(0)
Squamous Cell Papilloma	1 (100%)		

CARDIOVASCULAR SYSTEM

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

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* Number of animals with any tissue examined microscopically

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F 344/N Rat MALE	07M	91M	92M
Heart	(57)	(60)	(56)
Leukemia Mononuclear	17 (30%)	15 (25%)	9 (16%)
Schwannoma Malignant	2 (4%)	2 (3%)	
ENDOCRINE SYSTEM			
Adrenal Cortex	(56)	(60)	(56)
Adenoma	1 (2%)		
Leukemia Mononuclear	11 (20%)	9 (15%)	7 (13%)
Adrenal Medulla	(56)	(60)	(56)
Bilateral, Pheochromocytoma Benign	7 (13%)	2 (3%)	1 (2%)
Leukemia Mononuclear	17 (30%)	10 (17%)	14 (25%)
Pheochromocytoma Benign	10 (18%)	10 (17%)	6 (11%)
Pheochromocytoma Malignant	1 (2%)		
Islets, Pancreatic	(56)	(59)	(52)
Adenoma	5 (9%)	6 (10%)	1 (2%)
Leukemia Mononuclear, Metastatic, Spleen		1 (2%)	1 (2%)
Parathyroid Gland	(36)	(41)	(40)
Adenoma	1 (3%)		1 (3%)
Leukemia Mononuclear, Metastatic, Spleen	1 (3%)	1 (2%)	
Pituitary Gland	(55)	(58)	(56)
Leukemia Mononuclear	1 (2%)		1 (2%)
Pars Distalis, Adenoma	26 (47%)	25 (43%)	18 (32%)
Pars Distalis, Carcinoma			1 (2%)
Pars Distalis, Leukemia Mononuclear	7 (13%)	7 (12%)	5 (9%)
Thyroid Gland	(51)	(58)	(56)
C Cell, Adenoma	5 (10%)	9 (16%)	1 (2%)
Cystadenoma	1 (2%)		
Follicular Cel, Adenoma		1 (2%)	1 (2%)
Leukemia Mononuclear	1 (2%)	1 (2%)	

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F 344/N Rat MALE	07M	91M	92M
GENERAL BODY SYSTEM			
Peritoneum	(1)	(0)	(2)
Mesothelium, Mesothelioma Malignant			1 (50%)
Tunica Vaginal, Mesothelioma Malignant	1 (100%)		1 (50%)
GENITAL SYSTEM			
Penis	(1)	(0)	(0)
Preputial Gland	(5)	(3)	(3)
Adenoma	4 (80%)	3 (100%)	2 (67%)
Squamous Cell Papilloma			1 (33%)
Seminal Vesicle	(2)	(3)	(5)
Testes	(56)	(60)	(56)
Bilateral, Interstit Cell, Adenoma	36 (64%)	42 (70%)	37 (66%)
Interstit Cell, Adenoma	12 (21%)	11 (18%)	14 (25%)
Interstit Cell, Mesothelioma Malignant		1 (2%)	
Leukemia Mononuclear	1 (2%)		1 (2%)
Mesothelioma Malignant	1 (2%)		
Mesothelioma Malignant, Metastatic, Peritoneum			1 (2%)
Tunic, Mesothelioma Malignant	1 (2%)		
HEMATOPOIETIC SYSTEM			
Lymph Node	(1)	(1)	(2)
Mediastinal, Leukemia Mononuclear	1 (100%)	1 (100%)	2 (100%)
Lymph Node, Mandibular	(2)	(0)	(1)
Leukemia Mononuclear	1 (50%)		1 (100%)
Lymph Node, Mesenteric	(56)	(57)	(54)
Leukemia Mononuclear	20 (36%)	22 (39%)	16 (30%)
Spleen	(57)	(59)	(56)

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F 344/N Rat MALE	07M	91M	92M
Fibroma			1 (2%)
Fibrous Histiocytoma			1 (2%)
Leukemia Mononuclear	32 (56%)	30 (51%)	27 (48%)
Osteosarcoma	1 (2%)		
Thymus	(30)	(46)	(38)
Leukemia Mononuclear	3 (10%)	6 (13%)	4 (11%)
Thymoma Benign	2 (7%)		
INTEGUMENTARY SYSTEM			
Mammary Gland	(5)	(1)	(3)
Adenocarcinoma	1 (20%)		
Adenoma	1 (20%)		
Carcinoma	1 (20%)		
Fibroadenoma	2 (40%)	1 (100%)	2 (67%)
Inguinal, Fibroadenoma			1 (33%)
Skin	(10)	(9)	(3)
Basal Cell Carcinoma		2 (22%)	
Fibroma	2 (20%)	2 (22%)	
Keratoacanthoma	3 (30%)		2 (67%)
Melanoma Malignant	1 (10%)		
Squamous Cell Carcinoma	1 (10%)		
Subcut Tiss, Fibroma	2 (20%)	3 (33%)	1 (33%)
Trichoepithelioma		1 (11%)	
MUSCULOSKELETAL SYSTEM			
Bone	(0)	(0)	(1)
Vertebra, Osteosarcoma			1 (100%)
NERVOUS SYSTEM			
Brain	(1)	(1)	(0)

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Lab: NIEHS

F 344/N Rat MALE	07M	91M	92M
Brain, Cerebellum	(1)	(0)	(1)
Leukemia Mononuclear	1 (100%)		1 (100%)
Brain, Cerebrum	(0)	(1)	(0)
Leukemia Mononuclear		1 (100%)	
RESPIRATORY SYSTEM			
Lung	(57)	(59)	(56)
Alveolar/Bronchiolar Adenoma	1 (2%)		1 (2%)
Alveolar/Bronchiolar Carcinoma	1 (2%)		1 (2%)
Leukemia Mononuclear	26 (46%)	24 (41%)	21 (38%)
Mesothelioma Malignant		1 (2%)	
Osteosarcoma, Metastatic, Bone			1 (2%)
Squamous Cell Carcinoma	1 (2%)		1 (2%)
SPECIAL SENSES SYSTEM			
Zymbal's Gland	(0)	(1)	(1)
Adenoma		1 (100%)	
Carcinoma			1 (100%)
URINARY SYSTEM			
Kidney	(57)	(60)	(56)
Leukemia Mononuclear	16 (28%)	13 (22%)	12 (21%)
Urinary Bladder	(55)	(59)	(52)
Leukemia Mononuclear	8 (15%)	7 (12%)	7 (13%)
Papilloma			1 (2%)
SYSTEMIC LESIONS			
Multiple Organ	*(58)	*(60)	*(56)
Leukemia Mononuclear	32 (55%)	31 (52%)	27 (48%)
Mesothelioma Malignant	3 (5%)	3 (5%)	2 (4%)

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First Dose M/F: NA / NA

Lab: NIEHS

F 344/N Rat MALE	07M	91M	92M
<hr/>			
Tumor Summary for MALE			
Total Animals with Primary Neoplasms (b)	57	60	55
Total Primary Neoplasms	172	156	127
Total Animals with Benign Neoplasms	56	57	55
Total Benign Neoplasms	126	118	92
Total Animals with Malignant Neoplasms	40	37	31
Total Malignant Neoplasms	46	38	35
Total Animals with Metastatic Neoplasms	2	2	3
Total Metastatic Neoplasms	2	2	3
Total Animals with Malignant Neoplasms Uncertain Primary Site			
Total Animals with Neoplasms Uncertain - Benign or Malignant			
Total Uncertain Neoplasms			

END OF MALE DATA

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Lab: NIEHS

F 344/N Rat FEMALE	07F	91F	92F
Disposition Summary			
Animals Initially In Study	60	60	60
Early Deaths			
Moribund Sacrifice	2	2	
Natural Death	6	3	6
Survivors			
Moribund Sacrifice	11	13	10
Natural Death	10	5	7
Terminal Sacrifice	31	37	37
Animals Examined Microscopically	56	60	59
ALIMENTARY SYSTEM			
Intestine Large, Cecum	(0)	(0)	(1)
Intestine Large, Colon	(1)	(0)	(0)
Liver	(56)	(56)	(59)
Hepatocellular Adenoma		1 (2%)	1 (2%)
Histiocytic Sarcoma	1 (2%)		
Leukemia Mononuclear	15 (27%)	15 (27%)	12 (20%)
Pheochromocytoma Malignant, Metastatic, Adrenal Medulla	1 (2%)		
Mesentery	(2)	(3)	(2)
Leukemia Granulocytic	1 (50%)		
Pancreas	(55)	(58)	(57)
Leukemia Granulocytic	1 (2%)		
Leukemia Mononuclear	1 (2%)	5 (9%)	2 (4%)
Stomach, Forestomach	(0)	(1)	(0)
Stomach, Glandular	(0)	(1)	(0)

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Lab: NIEHS

F 344/N Rat FEMALE	07F	91F	92F
Heart	(56)	(57)	(59)
Leukemia Mononuclear	1 (2%)	3 (5%)	3 (5%)
ENDOCRINE SYSTEM			
Adrenal Cortex	(56)	(58)	(59)
Leukemia Mononuclear	2 (4%)	3 (5%)	3 (5%)
Adrenal Medulla	(55)	(58)	(58)
Bilateral, Pheochromocytoma Malignant	1 (2%)		
Leukemia Mononuclear	3 (5%)	5 (9%)	2 (3%)
Pheochromocytoma Benign	3 (5%)	2 (3%)	1 (2%)
Islets, Pancreatic	(55)	(58)	(57)
Leukemia Mononuclear, Metastatic, Spleen			1 (2%)
Parathyroid Gland	(36)	(40)	(37)
Pituitary Gland	(55)	(57)	(57)
Pars Distalis, Adenoma	33 (60%)	31 (54%)	27 (47%)
Pars Distalis, Leukemia Mononuclear	2 (4%)	2 (4%)	2 (4%)
Pars Intermed, Adenoma		1 (2%)	
Thyroid Gland	(54)	(55)	(56)
C Cell, Adenoma	4 (7%)	1 (2%)	4 (7%)
C Cell, Carcinoma			1 (2%)
Cystadenoma	1 (2%)		
Follicular Cel, Adenoma	1 (2%)		
Leukemia Mononuclear	1 (2%)		
GENERAL BODY SYSTEM			
None			
GENITAL SYSTEM			
Clitoral Gland	(7)	(5)	(7)
Adenoma	3 (43%)	3 (60%)	4 (57%)

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Lab: NIEHS

F 344/N Rat FEMALE	07F	91F	92F
Carcinoma	3 (43%)		
Fibroma			1 (14%)
Leukemia Granulocytic, Metastatic, Spleen	1 (14%)		
Squamous Cell Papilloma		1 (20%)	2 (29%)
Ovary	(55)	(57)	(59)
Granulosa Cell Tumor Benign	2 (4%)	1 (2%)	
Leiomyoma			1 (2%)
Leukemia Granulocytic	1 (2%)		
Leukemia Mononuclear	1 (2%)	2 (4%)	2 (3%)
Tubulostromal Carcinoma	1 (2%)		
Uterus	(52)	(57)	(59)
Endometrium, Polyp Stromal	3 (6%)	5 (9%)	5 (8%)
Leukemia Mononuclear		2 (4%)	
Sarcoma Stromal		2 (4%)	
HEMATOPOIETIC SYSTEM			
Lymph Node, Mesenteric	(56)	(58)	(59)
Leukemia Granulocytic	1 (2%)		
Leukemia Mononuclear	5 (9%)	8 (14%)	7 (12%)
Spleen	(56)	(58)	(59)
Carcinoma, Metastatic, Tissue Nos			1 (2%)
Hemangiosarcoma			1 (2%)
Leukemia Granulocytic	1 (2%)		
Leukemia Mononuclear	15 (27%)	16 (28%)	13 (22%)
Thymus	(40)	(39)	(40)
Leukemia Granulocytic	1 (3%)		
Leukemia Mononuclear	2 (5%)		1 (3%)
Osteosarcoma, Metastatic, Bone	1 (3%)		
Thymoma Benign	1 (3%)		

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F 344/N Rat FEMALE	07F	91F	92F
INTEGUMENTARY SYSTEM			
Mammary Gland	(29)	(26)	(26)
Adenocarcinoma	2 (7%)		1 (4%)
Adenoma	1 (3%)	1 (4%)	
Carcinoma		1 (4%)	
Fibroadenoma	23 (79%)	20 (77%)	18 (69%)
Fibroadenoma, Multiple	4 (14%)	5 (19%)	4 (15%)
Inguinal, Fibroadenoma			2 (8%)
Skin	(4)	(2)	(3)
Carcinoma, Metastatic, Zymbal'S Gland	1 (25%)		
Subcut Tiss, Fibroma		1 (50%)	1 (33%)
Subcut Tiss, Fibrosarcoma			1 (33%)
Subcut Tiss, Lipoma	1 (25%)		
MUSCULOSKELETAL SYSTEM			
Bone	(1)	(0)	(0)
Rib, Osteosarcoma	1 (100%)		
NERVOUS SYSTEM			
Brain	(0)	(0)	(1)
RESPIRATORY SYSTEM			
Lung	(56)	(57)	(59)
Alveolar/Bronchiolar Adenoma		1 (2%)	
Carcinoma, Metastatic, Tissue Nos			1 (2%)
Carcinoma, Metastatic, Zymbal'S Gland	1 (2%)		
Leukemia Granulocytic	1 (2%)		
Leukemia Mononuclear	12 (21%)	7 (12%)	8 (14%)
Osteosarcoma, Metastatic, Bone	1 (2%)		

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F 344/N Rat FEMALE	07F	91F	92F
SPECIAL SENSES SYSTEM			
Eye	(0)	(0)	(2)
Lacrimal Gland	(0)	(1)	(0)
Adenoma		1 (100%)	
Zymbal's Gland	(1)	(0)	(0)
Carcinoma	1 (100%)		
URINARY SYSTEM			
Kidney	(56)	(58)	(59)
Leukemia Granulocytic	1 (2%)		
Leukemia Mononuclear	1 (2%)	4 (7%)	2 (3%)
Sarcoma			1 (2%)
Urinary Bladder	(54)	(56)	(57)
Adenoma	1 (2%)		
Leukemia Granulocytic	1 (2%)		
Leukemia Mononuclear		3 (5%)	2 (4%)
SYSTEMIC LESIONS			
Multiple Organ	*(56)	*(60)	*(59)
Histiocytic Sarcoma	1 (2%)		
Leukemia Granulocytic	1 (2%)		
Leukemia Mononuclear	15 (27%)	16 (27%)	13 (22%)

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Tumor Summary for FEMALE			
Total Animals with Primary Neoplasms (b)	53	51	52
Total Primary Neoplasms	107	94	89
Total Animals with Benign Neoplasms	49	44	47
Total Benign Neoplasms	81	75	71
Total Animals with Malignant Neoplasms	22	19	16
Total Malignant Neoplasms	26	19	18
Total Animals with Metastatic Neoplasms	4		2
Total Metastatic Neoplasms	6		3
Total Animals with Malignant Neoplasms Uncertain Primary Site			
Total Animals with Neoplasms Uncertain - Benign or Malignant			
Total Uncertain Neoplasms			

**** END OF REPORT ****

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