

**Experiment Number:** 99920-94  
**Test Type:** SPECIAL STUDY  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 13:22:32  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

**C Number:** MG96006  
**Lock Date:** 12/02/2008  
**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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CD Rat MALE	F1	0PPB	F1	2PPB	F1	10PPB	F1	50PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
<b>Disposition Summary</b>										
Animals Initially In Study		51		50		50		50		50
Early Deaths										
Moribund Sacrifice		9		13		17		12		15
Natural Death		7		6		3		4		4
Survivors										
Moribund Sacrifice								2		
Natural Death		1								
Terminal Sacrifice		34		31		30		32		31
Animals Examined Microscopically		51		50		50		50		50
<b>ALIMENTARY SYSTEM</b>										
Esophagus		(51)		(50)		(50)		(50)		(49)
Intestine Large, Cecum		(44)		(45)		(47)		(46)		(48)
Leukemia Granulocytic				1 (2%)						
Lymphoma Malignant		1 (2%)						1 (2%)		
Intestine Large, Colon		(45)		(47)		(48)		(47)		(49)
Leukemia Granulocytic				2 (4%)						
Lymphoma Malignant								2 (4%)		
Intestine Large, Rectum		(45)		(45)		(47)		(46)		(49)
Intestine Small, Duodenum		(44)		(45)		(48)		(47)		(49)
Adenocarcinoma		1 (2%)								2 (4%)
Intestine Small, Ileum		(43)		(45)		(47)		(46)		(48)
Adenocarcinoma						1 (2%)				
Lymphoma Malignant								1 (2%)		
Intestine Small, Jejunum		(43)		(45)		(46)		(46)		(48)
Adenocarcinoma										
Lymphoma Malignant								1 (2%)		

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Sarcoma				1 (2%)						
Liver	(49)		(49)		(50)		(49)		(50)	(48)
Cholangiocarcinoma					1 (2%)				1 (2%)	
Hepatocellular Adenoma			3 (6%)		1 (2%)					
Hepatocellular Carcinoma							1 (2%)			1 (2%)
Leukemia Granulocytic			2 (4%)							
Lymphoma Malignant	1 (2%)						2 (4%)		1 (2%)	2 (4%)
Mesentery	(1)		(1)		(2)		(1)		(1)	(2)
Carcinoma, Metastatic, Uncertain Primary Site										1 (50%)
Fat, Lymphoma Malignant	1 (100%)									
Oral Mucosa	(3)		(2)		(4)		(9)		(5)	(1)
Sarcoma			1 (50%)							
Squamous Cell Carcinoma	3 (100%)				4 (100%)		7 (78%)		3 (60%)	
Pancreas	(46)		(48)		(48)		(48)		(49)	(47)
Leukemia Granulocytic			2 (4%)							
Lymphoma Malignant	1 (2%)						2 (4%)			2 (4%)
Salivary Glands	(48)		(50)		(49)		(50)		(50)	(48)
Leukemia Granulocytic			2 (4%)							
Lymphoma Malignant	1 (2%)									1 (2%)
Stomach, Forestomach	(47)		(48)		(49)		(48)		(50)	(46)
Squamous Cell Papilloma	1 (2%)									
Stomach, Glandular	(45)		(47)		(48)		(46)		(50)	(45)
Adenoma									1 (2%)	
Tongue	(0)		(0)		(0)		(0)		(0)	(0)
CARDIOVASCULAR SYSTEM										
Blood Vessel	(51)		(50)		(50)		(50)		(50)	(50)
Heart	(51)		(50)		(50)		(50)		(50)	(48)

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Endocardium, Schwannoma Malignant	1 (2%)	2 (4%)				
Leukemia Granulocytic		2 (4%)				
Mesothelioma Benign			1 (2%)			
Schwannoma Benign				1 (2%)		
ENDOCRINE SYSTEM						
Adrenal Cortex	(47)	(50)	(50)	(50)	(49)	(45)
Adenoma	2 (4%)	1 (2%)	2 (4%)	1 (2%)		1 (2%)
Carcinoma			2 (4%)			
Leukemia Granulocytic		2 (4%)				
Adrenal Medulla	(46)	(48)	(49)	(49)	(49)	(45)
Bilateral, Pheochromocytoma Benign					1 (2%)	
Leukemia Granulocytic		1 (2%)				
Pheochromocytoma Benign	2 (4%)	2 (4%)	4 (8%)	1 (2%)	3 (6%)	1 (2%)
Pheochromocytoma Complex	1 (2%)	1 (2%)	1 (2%)			
Pheochromocytoma Malignant	1 (2%)	1 (2%)	2 (4%)			
Islets, Pancreatic	(46)	(48)	(49)	(49)	(49)	(47)
Adenoma				2 (4%)		2 (4%)
Leukemia Granulocytic		1 (2%)				
Parathyroid Gland	(49)	(46)	(46)	(46)	(50)	(44)
Adenoma	4 (8%)		1 (2%)	1 (2%)	3 (6%)	1 (2%)
Leukemia Granulocytic		1 (2%)				
Pituitary Gland	(48)	(50)	(50)	(50)	(50)	(47)
Leukemia Granulocytic		2 (4%)				
Lymphoma Malignant	1 (2%)			1 (2%)		2 (4%)
Pars Distalis, Adenoma	25 (52%)	24 (48%)	28 (56%)	16 (32%)	29 (58%)	28 (60%)
Schwannoma Malignant	1 (2%)					
Thyroid Gland	(47)	(49)	(50)	(49)	(50)	(47)
C Cell, Adenoma	5 (11%)		1 (2%)		3 (6%)	1 (2%)

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C Cell, Carcinoma			1	(2%)					2	(4%)				
Follicular Cel, Adenoma					1	(2%)								
Follicular Cel, Carcinoma							1	(2%)						
Leukemia Granulocytic			2	(4%)										
Lymphoma Malignant							1	(2%)		1	(2%)			
GENERAL BODY SYSTEM														
Tissue NOS		(1)		(0)		(1)		(0)		(1)		(0)		
Lipoma						1	(100%)							
Schwannoma Malignant									1	(100%)				
GENITAL SYSTEM														
Coagulating Gland		(46)		(49)		(49)		(49)		(49)		(47)		
Carcinoma, Metastatic, Prostate, Dorsal/Lateral Lobe												1	(2%)	
Carcinoma, Metastatic, Uncertain Primary Site												1	(2%)	
Leukemia Granulocytic				1	(2%)									
Lymphoma Malignant		1	(2%)											
Ductus Deferens		(0)		(0)		(0)		(0)		(0)		(1)		
Epididymis		(51)		(50)		(50)		(50)		(50)		(49)		
Leukemia Granulocytic				1	(2%)									
Lymphoma Malignant		1	(2%)					1	(2%)		1	(2%)	1	(2%)
Mesothelioma Benign						1	(2%)							
Penis		(0)		(1)		(0)		(0)		(1)		(1)		
Squamous Cell Carcinoma, Metastatic, Preputial Gland										1	(100%)			
Preputial Gland		(51)		(50)		(50)		(50)		(50)		(50)		
Adenoma										1	(2%)			
Leukemia Granulocytic				2	(4%)									

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Lymphoma Malignant	1	(2%)						1 (2%)	1 (2%)	1 (2%)
Squamous Cell Carcinoma	4	(8%)	5	(10%)	5	(10%)	2	(4%)	4 (8%)	3 (6%)
Prostate, Dorsal/Lateral Lobe		(36)		(37)		(45)		(41)	(38)	(42)
Carcinoma										1 (2%)
Carcinoma, Metastatic, Uncertain Primary Site										1 (2%)
Leukemia Granulocytic			2	(5%)						
Lymphoma Malignant	1	(3%)						1 (2%)		
Prostate, Dorsal/lateral Lobe		(13)		(13)		(5)		(9)	(12)	(7)
Prostate, Ventral Lobe		(49)		(50)		(50)		(50)	(50)	(49)
Carcinoma										1 (2%)
Lymphoma Malignant	1	(2%)						1 (2%)		
Rete Testes		(46)		(44)		(46)		(47)	(47)	(43)
Seminal Vesicle		(43)		(46)		(47)		(47)	(49)	(43)
Adenoma	1	(2%)								
Carcinoma						1 (2%)		1 (2%)		
Carcinoma, Metastatic, Prostate, Dorsal/Lateral Lobe										1 (2%)
Carcinoma, Metastatic, Uncertain Primary Site										1 (2%)
Leukemia Granulocytic			1	(2%)						
Testes		(48)		(50)		(50)		(50)	(50)	(48)
Lymphoma Malignant	1	(2%)								1 (2%)
Sarcoma									1 (2%)	
Seminoma Benign								1 (2%)		
HEMATOPOIETIC SYSTEM										
Bone Marrow		(46)		(48)		(48)		(48)	(50)	(46)
Leukemia Granulocytic				2	(4%)					
Lymphoma Malignant	1	(2%)						2 (4%)	1 (2%)	2 (4%)

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Lymph Node		(14)		(16)		(16)		(15)	(19)	(14)
Axillary, Leukemia Granulocytic				1 (6%)						
Axillary, Lymphoma Malignant	1 (7%)							1 (7%)		1 (7%)
Deep Cervical, Leukemia Granulocytic				1 (6%)						
Deep Cervical, Lymphoma Malignant										1 (7%)
Inguinal, Lymphoma Malignant										1 (7%)
Lumbar, Leukemia Granulocytic				1 (6%)						
Lumbar, Lymphoma Malignant								1 (7%)		1 (7%)
Mediastinal, Lymphoma Malignant	1 (7%)									1 (7%)
Pancreatic, Leukemia Granulocytic				1 (6%)						
Pancreatic, Lymphoma Malignant								1 (7%)		
Renal, Leukemia Granulocytic				1 (6%)						
Renal, Lymphoma Malignant	1 (7%)							1 (7%)		1 (7%)
Squamous Cell Carcinoma, Metastatic, Preputial Gland									1 (5%)	
Lymph Node, Mandibular		(49)		(50)		(50)		(48)	(50)	(47)
Leukemia Granulocytic				2 (4%)						
Lymphoma Malignant	1 (2%)							2 (4%)	1 (2%)	2 (4%)
Lymph Node, Mesenteric		(45)		(46)		(49)		(47)	(50)	(44)
Leukemia Granulocytic				2 (4%)						
Lymphoma Malignant	1 (2%)							2 (4%)	1 (2%)	2 (5%)
Spleen		(48)		(49)		(49)		(49)	(50)	(47)
Hemangiosarcoma										
Leukemia Granulocytic				2 (4%)						
Lymphoma Malignant	1 (2%)							2 (4%)	1 (2%)	2 (4%)
Thymus		(45)		(44)		(46)		(44)	(46)	(40)
Leukemia Granulocytic				2 (5%)						
Lymphoma Malignant	1 (2%)							1 (2%)		1 (3%)
Sarcoma						1 (2%)		1 (2%)		

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Thymoma Benign									1 (2%)	
<b>INTEGUMENTARY SYSTEM</b>										
Mammary Gland		(44)		(45)		(47)		(44)	(45)	(47)
Adenocarcinoma	1 (2%)									
Adenoma									1 (2%)	1 (2%)
Fibroadenoma	1 (2%)		3 (7%)		1 (2%)		2 (5%)			1 (2%)
Fibroma	1 (2%)		3 (7%)						1 (2%)	
Leukemia Granulocytic			2 (4%)							
Lipoma	1 (2%)									
Lymphoma Malignant	1 (2%)						1 (2%)			1 (2%)
Skin		(51)		(50)		(50)		(50)	(50)	(49)
Basal Cell Adenoma	1 (2%)		1 (2%)		1 (2%)					
Fibroma	2 (4%)				1 (2%)		2 (4%)			1 (2%)
Hemangioma					1 (2%)					
Keratoacanthoma	2 (4%)		3 (6%)		1 (2%)		2 (4%)		1 (2%)	2 (4%)
Lipoma									1 (2%)	
Lymphoma Malignant							1 (2%)			1 (2%)
Osteosarcoma										
Prepuce, Keratoacanthoma										1 (2%)
Prepuce, Squamous Cell Carcinoma										
Sarcoma	4 (8%)				1 (2%)				1 (2%)	
Schwannoma Malignant							1 (2%)			
Sebaceous GI, Adenoma									1 (2%)	
Squamous Cell Carcinoma			1 (2%)							1 (2%)
Squamous Cell Papilloma					1 (2%)				2 (4%)	1 (2%)
<b>MUSCULOSKELETAL SYSTEM</b>										
Bone		(2)		(0)		(0)		(1)	(0)	(0)

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Cranium, Nerve, Squamous Cell Carcinoma, Deep Invasion										
Cranium, Osteosarcoma		1 (50%)								
Cranium, Schwannoma Malignant, Metastatic, Uncertain Primary Site		1 (50%)								
Bone, Femur		(51)		(50)		(50)		(50)	(50)	(50)
Leukemia Granulocytic				1 (2%)						
Skeletal Muscle		(1)		(1)		(1)		(2)	(2)	(0)
NERVOUS SYSTEM										
Brain, Brain Stem		(49)		(50)		(50)		(50)	(50)	(48)
Astrocytoma Malignant		1 (2%)								
Leukemia Granulocytic				1 (2%)						
Lymphoma Malignant								1 (2%)		
Brain, Cerebellum		(49)		(50)		(50)		(50)	(50)	(48)
Astrocytoma Malignant										
Brain, Cerebrum		(49)		(50)		(50)		(50)	(50)	(48)
Astrocytoma Malignant		1 (2%)								
Granular Cell Tumor Benign				1 (2%)						
Granular Cell Tumor Malignant				1 (2%)		1 (2%)				
Lymphoma Malignant		1 (2%)								
Reticulosis Malignant									1 (2%)	
Peripheral Nerve		(0)		(1)		(1)		(2)	(2)	(0)
RESPIRATORY SYSTEM										
Lung		(46)		(46)		(48)		(48)	(50)	(45)
Alveolar/Bronchiolar Adenoma		1 (2%)								
Alveolar/Bronchiolar Carcinoma									1 (2%)	
Carcinoma, Metastatic, Adrenal Cortex						1 (2%)				
Leukemia Granulocytic				2 (4%)						

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Lymphoma Malignant	1 (2%)			2 (4%)		2 (4%)
Sarcoma, Metastatic, Thymus				1 (2%)		
Squamous Cell Carcinoma, Metastatic, Preputial Gland		1 (2%)				
Nose	(48)	(49)	(50)	(49)	(49)	(48)
Adenoma	1 (2%)					
Leukemia Granulocytic		2 (4%)				
Lymphoma Malignant	1 (2%)			1 (2%)	1 (2%)	2 (4%)
Osteosarcoma		1 (2%)				
Schwannoma Malignant			1 (2%)			
Trachea	(49)	(50)	(50)	(50)	(50)	(46)
Leukemia Granulocytic		2 (4%)				
Lymphoma Malignant	1 (2%)					
SPECIAL SENSES SYSTEM						
Eye	(46)	(46)	(47)	(46)	(49)	(45)
Leukemia Granulocytic		2 (4%)				
Lymphoma Malignant	1 (2%)			1 (2%)		2 (4%)
Retrobulbar, Squamous Cell Carcinoma, Deep Invasion				1 (2%)		
Schwannoma Malignant			1 (2%)			
Harderian Gland	(48)	(47)	(48)	(48)	(50)	(46)
Leukemia Granulocytic		2 (4%)				
Lymphoma Malignant	1 (2%)			1 (2%)		1 (2%)
Schwannoma Malignant			1 (2%)			
Squamous Cell Carcinoma, Deep Invasion					1 (2%)	
Lacrimal Gland	(0)	(0)	(0)	(2)	(0)	(1)
Lymphoma Malignant				1 (50%)		
Zymbal's Gland	(1)	(0)	(0)	(2)	(1)	(0)
Adenoma					1 (100%)	

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Carcinoma	1	(100%)						1	(50%)	
Squamous Cell Carcinoma								1	(50%)	
URINARY SYSTEM										
Kidney		(46)		(49)		(48)		(49)	(49)	(47)
Bilateral, Renal Tubule, Adenoma									1	(2%)
Bilateral, Renal Tubule, Carcinoma				1	(2%)			1	(2%)	
Leukemia Granulocytic				2	(4%)					
Lymphoma Malignant	1	(2%)						2	(4%)	2
Mesenchymal Tumor Malignant								1	(2%)	
Renal Tubule, Adenoma									2	(4%)
Renal Tubule, Carcinoma									1	(2%)
Sarcoma										
Transit Epithe, Papilloma	1	(2%)								
Urethra		(2)		(2)		(0)		(2)	(1)	(5)
Urinary Bladder		(45)		(48)		(49)		(49)	(49)	(45)
SYSTEMIC LESIONS										
Multiple Organ		*(51)		*(50)		*(50)		*(50)	*(50)	*(50)
Leukemia Granulocytic				2	(4%)					
Lymphoma Malignant	1	(2%)						2	(4%)	2
Mesothelioma Benign						2	(4%)			

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

**Experiment Number:** 99920-94  
**Test Type:** SPECIAL STUDY  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 13:22:33  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

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CD Rat MALE	F1/50PPB TO CTL
<b>Disposition Summary</b>	
<b>Animals Initially In Study</b>	<b>50</b>
<b>Early Deaths</b>	
<b>Moribund Sacrifice</b>	<b>14</b>
<b>Natural Death</b>	<b>3</b>
<b>Survivors</b>	
<b>Moribund Sacrifice</b>	
<b>Natural Death</b>	
<b>Terminal Sacrifice</b>	<b>33</b>
<b>Animals Examined Microscopically</b>	<b>50</b>

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ALIMENTARY SYSTEM

Esophagus	(50)
Intestine Large, Cecum	(46)
Leukemia Granulocytic	
Lymphoma Malignant	
Intestine Large, Colon	(48)
Leukemia Granulocytic	
Lymphoma Malignant	
Intestine Large, Rectum	(48)
Intestine Small, Duodenum	(47)
Adenocarcinoma	
Intestine Small, Ileum	(45)
Adenocarcinoma	
Lymphoma Malignant	
Intestine Small, Jejunum	(48)
Adenocarcinoma	1 (2%)
Lymphoma Malignant	

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

**Experiment Number:** 99920-94

**Test Type:** SPECIAL STUDY

**Route:** DOSED FEED

**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**

**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)

**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 13:22:33

**First Dose M/F:** NA / NA

**Lab:** NCTR

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CD Rat MALE	F1/50PPB TO CTL
Sarcoma	
Liver	(49)
Cholangiocarcinoma	1 (2%)
Hepatocellular Adenoma	1 (2%)
Hepatocellular Carcinoma	1 (2%)
Leukemia Granulocytic	
Lymphoma Malignant	
Mesentery	(0)
Carcinoma, Metastatic, Uncertain Primary Site	
Fat, Lymphoma Malignant	
Oral Mucosa	(6)
Sarcoma	
Squamous Cell Carcinoma	4 (67%)
Pancreas	(50)
Leukemia Granulocytic	
Lymphoma Malignant	
Salivary Glands	(49)
Leukemia Granulocytic	
Lymphoma Malignant	
Stomach, Forestomach	(49)
Squamous Cell Papilloma	
Stomach, Glandular	(49)
Adenoma	
Tongue	(1)
<hr/>	
CARDIOVASCULAR SYSTEM	
Blood Vessel	(50)
Heart	(50)

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

**Experiment Number:** 99920-94

**Test Type:** SPECIAL STUDY

**Route:** DOSED FEED

**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**

**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)

**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 13:22:33

**First Dose M/F:** NA / NA

**Lab:** NCTR

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CD Rat MALE	F1/50PPB TO CTL
Endocardium, Schwannoma Malignant	
Leukemia Granulocytic	
Mesothelioma Benign	
Schwannoma Benign	
<hr/>	
ENDOCRINE SYSTEM	
Adrenal Cortex	(50)
Adenoma	1 (2%)
Carcinoma	
Leukemia Granulocytic	
Adrenal Medulla	(50)
Bilateral, Pheochromocytoma Benign	
Leukemia Granulocytic	
Pheochromocytoma Benign	1 (2%)
Pheochromocytoma Complex	
Pheochromocytoma Malignant	
Islets, Pancreatic	(50)
Adenoma	
Leukemia Granulocytic	
Parathyroid Gland	(50)
Adenoma	
Leukemia Granulocytic	
Pituitary Gland	(49)
Leukemia Granulocytic	
Lymphoma Malignant	
Pars Distalis, Adenoma	24 (49%)
Schwannoma Malignant	
Thyroid Gland	(49)
C Cell, Adenoma	1 (2%)

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

**Experiment Number:** 99920-94  
**Test Type:** SPECIAL STUDY  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 13:22:33  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

CD Rat MALE	F1/50PPB TO CTL
C Cell, Carcinoma	1 (2%)
Follicular Cel, Adenoma	
Follicular Cel, Carcinoma	
Leukemia Granulocytic	
Lymphoma Malignant	
<b>GENERAL BODY SYSTEM</b>	
Tissue NOS	(0)
Lipoma	
Schwannoma Malignant	
<b>GENITAL SYSTEM</b>	
Coagulating Gland	(48)
Carcinoma, Metastatic, Prostate, Dorsal/Lateral Lobe	
Carcinoma, Metastatic, Uncertain Primary Site	
Leukemia Granulocytic	
Lymphoma Malignant	
Ductus Deferens	(0)
Epididymis	(50)
Leukemia Granulocytic	
Lymphoma Malignant	
Mesothelioma Benign	
Penis	(0)
Squamous Cell Carcinoma, Metastatic, Preputial Gland	
Preputial Gland	(50)
Adenoma	
Leukemia Granulocytic	

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

**Experiment Number:** 99920-94

**Test Type:** SPECIAL STUDY

**Route:** DOSED FEED

**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**

**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)

**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 13:22:33

**First Dose M/F:** NA / NA

**Lab:** NCTR

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<b>CD Rat MALE</b>	<b>F1/50PPB TO CTL</b>
Lymphoma Malignant	
Squamous Cell Carcinoma	1 (2%)
Prostate, Dorsal/Lateral Lobe	(38)
Carcinoma	
Carcinoma, Metastatic, Uncertain Primary Site	
Leukemia Granulocytic	
Lymphoma Malignant	
Prostate, Dorsal/lateral Lobe	(12)
Prostate, Ventral Lobe	(50)
Carcinoma	
Lymphoma Malignant	
Rete Testes	(46)
Seminal Vesicle	(48)
Adenoma	
Carcinoma	
Carcinoma, Metastatic, Prostate, Dorsal/Lateral Lobe	
Carcinoma, Metastatic, Uncertain Primary Site	
Leukemia Granulocytic	
Testes	(50)
Lymphoma Malignant	
Sarcoma	
Seminoma Benign	

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<b>HEMATOPOIETIC SYSTEM</b>	
Bone Marrow	(49)
Leukemia Granulocytic	
Lymphoma Malignant	

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically



**Experiment Number:** 99920-94

**Test Type:** SPECIAL STUDY

**Route:** DOSED FEED

**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**

**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)

**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 13:22:34

**First Dose M/F:** NA / NA

**Lab:** NCTR

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<b>CD Rat MALE</b>	<b>F1/50PPB TO CTL</b>
Lymph Node	(19)
Axillary, Leukemia Granulocytic	
Axillary, Lymphoma Malignant	
Deep Cervical, Leukemia Granulocytic	
Deep Cervical, Lymphoma Malignant	
Inguinal, Lymphoma Malignant	
Lumbar, Leukemia Granulocytic	
Lumbar, Lymphoma Malignant	
Mediastinal, Lymphoma Malignant	
Pancreatic, Leukemia Granulocytic	
Pancreatic, Lymphoma Malignant	
Renal, Leukemia Granulocytic	
Renal, Lymphoma Malignant	
Squamous Cell Carcinoma, Metastatic, Preputial Gland	
Lymph Node, Mandibular	(50)
Leukemia Granulocytic	
Lymphoma Malignant	
Lymph Node, Mesenteric	(48)
Leukemia Granulocytic	
Lymphoma Malignant	
Spleen	(50)
Hemangiosarcoma	1 (2%)
Leukemia Granulocytic	
Lymphoma Malignant	
Thymus	(47)
Leukemia Granulocytic	
Lymphoma Malignant	
Sarcoma	

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

**Experiment Number:** 99920-94  
**Test Type:** SPECIAL STUDY  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 13:22:34  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

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CD Rat MALE	F1/50PPB TO CTL
<hr/>	
Thymoma Benign	
<hr/>	
INTEGUMENTARY SYSTEM	
Mammary Gland	(48)
Adenocarcinoma	
Adenoma	2 (4%)
Fibroadenoma	1 (2%)
Fibroma	1 (2%)
Leukemia Granulocytic	
Lipoma	
Lymphoma Malignant	
Skin	(50)
Basal Cell Adenoma	2 (4%)
Fibroma	
Hemangioma	
Keratoacanthoma	1 (2%)
Lipoma	
Lymphoma Malignant	
Osteosarcoma	1 (2%)
Prepuce, Keratoacanthoma	
Prepuce, Squamous Cell Carcinoma	1 (2%)
Sarcoma	
Schwannoma Malignant	
Sebaceous GI, Adenoma	
Squamous Cell Carcinoma	1 (2%)
Squamous Cell Papilloma	
<hr/>	
MUSCULOSKELETAL SYSTEM	
Bone	(1)

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

**Experiment Number:** 99920-94

**Test Type:** SPECIAL STUDY

**Route:** DOSED FEED

**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**

**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)

**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 13:22:34

**First Dose M/F:** NA / NA

**Lab:** NCTR

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<b>CD Rat MALE</b>	<b>F1/50PPB TO CTL</b>
Cranium, Nerve, Squamous Cell Carcinoma, Deep Invasion	1 (100%)
Cranium, Osteosarcoma	
Cranium, Schwannoma Malignant, Metastatic, Uncertain Primary Site	
Bone, Femur	(50)
Leukemia Granulocytic	
Skeletal Muscle	(1)
<hr/>	
<b>NERVOUS SYSTEM</b>	
Brain, Brain Stem	(50)
Astrocytoma Malignant	1 (2%)
Leukemia Granulocytic	
Lymphoma Malignant	
Brain, Cerebellum	(50)
Astrocytoma Malignant	1 (2%)
Brain, Cerebrum	(50)
Astrocytoma Malignant	1 (2%)
Granular Cell Tumor Benign	1 (2%)
Granular Cell Tumor Malignant	
Lymphoma Malignant	
Reticulosis Malignant	
Peripheral Nerve	(0)
<hr/>	
<b>RESPIRATORY SYSTEM</b>	
Lung	(50)
Alveolar/Bronchiolar Adenoma	
Alveolar/Bronchiolar Carcinoma	
Carcinoma, Metastatic, Adrenal Cortex	
Leukemia Granulocytic	

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

**Experiment Number:** 99920-94  
**Test Type:** SPECIAL STUDY  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 13:22:34  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

CD Rat MALE	F1/50PPB TO CTL
Lymphoma Malignant	
Sarcoma, Metastatic, Thymus	
Squamous Cell Carcinoma, Metastatic, Preputial Gland	
Nose	(50)
Adenoma	
Leukemia Granulocytic	
Lymphoma Malignant	
Osteosarcoma	
Schwannoma Malignant	
Trachea	(50)
Leukemia Granulocytic	
Lymphoma Malignant	
<hr/>	
SPECIAL SENSES SYSTEM	
Eye	(48)
Leukemia Granulocytic	
Lymphoma Malignant	
Retrobulbar, Squamous Cell Carcinoma, Deep Invasion	
Schwannoma Malignant	
Harderian Gland	(50)
Leukemia Granulocytic	
Lymphoma Malignant	
Schwannoma Malignant	
Squamous Cell Carcinoma, Deep Invasion	1 (2%)
Lacrimal Gland	(1)
Lymphoma Malignant	
Zymbal's Gland	(0)
Adenoma	

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

**Experiment Number:** 99920-94

**Test Type:** SPECIAL STUDY

**Route:** DOSED FEED

**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**

**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)

**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 13:22:34

**First Dose M/F:** NA / NA

**Lab:** NCTR

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CD Rat MALE	F1/50PPB TO CTL
Carcinoma	
Squamous Cell Carcinoma	
<hr/>	
URINARY SYSTEM	
Kidney	(49)
Bilateral, Renal Tubule, Adenoma	2 (4%)
Bilateral, Renal Tubule, Carcinoma	
Leukemia Granulocytic	
Lymphoma Malignant	
Mesenchymal Tumor Malignant	
Renal Tubule, Adenoma	
Renal Tubule, Carcinoma	
Sarcoma	1 (2%)
Transit Epithe, Papilloma	
Urethra	(1)
Urinary Bladder	(49)
<hr/>	
SYSTEMIC LESIONS	
Multiple Organ	*(50)
Leukemia Granulocytic	
Lymphoma Malignant	
Mesothelioma Benign	

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

Experiment Number: 99920-94  
 Test Type: SPECIAL STUDY  
 Route: DOSED FEED  
 Species/Strain: Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
 Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014  
 Time Report Requested: 13:22:34  
 First Dose M/F: NA / NA  
 Lab: NCTR

CD Rat MALE	F1	0PPB	F1	2PPB	F1	10PPB	F1	50PPB	F1/2PPB TO CTL	F1/10PPB TO CTL	
<b>Tumor Summary for MALE</b>											
Total Animals with Primary Neoplasms (b)		42		36		43		35		41	33
Total Primary Neoplasms		73		59		70		50		74	50
Total Animals with Benign Neoplasms		36		29		34		23		37	29
Total Benign Neoplasms		51		41		45		29		53	41
Total Animals with Malignant Neoplasms		19		15		19		19		17	8
Total Malignant Neoplasms		22		18		23		21		21	9
Total Animals with Metastatic Neoplasms		1		1		1		1		2	2
Total Metastatic Neoplasms		1		1		1		1		2	6
Total Animals with Malignant Neoplasms Uncertain Primary Site		1									1
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

\* Number of animals with any tissue examined microscopically

**Experiment Number:** 99920-94  
**Test Type:** SPECIAL STUDY  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 13:22:34  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

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CD Rat MALE	F1/50PPB TO CTL
<b>Tumor Summary for MALE</b>	
<b>Total Animals with Primary Neoplasms (b)</b>	<b>35</b>
<b>Total Primary Neoplasms</b>	<b>57</b>
<b>Total Animals with Benign Neoplasms</b>	<b>29</b>
<b>Total Benign Neoplasms</b>	<b>38</b>
<b>Total Animals with Malignant Neoplasms</b>	<b>15</b>
<b>Total Malignant Neoplasms</b>	<b>19</b>
<b>Total Animals with Metastatic Neoplasms</b>	
<b>Total Metastatic Neoplasms</b>	
<b>Total Animals with Malignant Neoplasms Uncertain Primary Site</b>	
<b>Total Animals with Neoplasms Uncertain - Benign or Malignant</b>	
<b>Total Uncertain Neoplasms</b>	

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\*\*\*END OF MALE DATA\*\*\*

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

Experiment Number: 99920-94  
 Test Type: SPECIAL STUDY  
 Route: DOSED FEED  
 Species/Strain: Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
**CAS Number:** 57-63-6

Date Report Requested: 10/23/2014  
 Time Report Requested: 13:22:34  
 First Dose M/F: NA / NA  
 Lab: NCTR

CD Rat FEMALE	F1	0PPB	F1	2PPB	F1	10 PPB	F1	50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
<b>Disposition Summary</b>										
Animals Initially In Study		51		50		50		50		50
Early Deaths										
Moribund Sacrifice		24		22		27		17		26
Natural Death				5		3		8		7
Survivors										
Moribund Sacrifice		1				1				1
Terminal Sacrifice		26		23		19		25		16
Animals Examined Microscopically		51		50		50		50		50
<b>ALIMENTARY SYSTEM</b>										
Esophagus		(51)		(50)		(49)		(50)		(50)
Intestine Large, Cecum		(51)		(50)		(49)		(49)		(50)
Lymphoid Tiss, Leukemia Mononuclear								1 (2%)		
Lymphoma Malignant										1 (2%)
Intestine Large, Colon		(51)		(50)		(49)		(49)		(50)
Carcinoma										1 (2%)
Lymphoid Tiss, Leukemia Mononuclear								1 (2%)		
Lymphoma Malignant										1 (2%)
Intestine Large, Rectum		(51)		(50)		(49)		(50)		(50)
Granular Cell Tumor Malignant, Metastatic, Vagina								1 (2%)		
Leiomyosarcoma, Metastatic, Uterus				1 (2%)						
Intestine Small, Duodenum		(51)		(50)		(49)		(49)		(50)
Leiomyoma										
Lymphoma Malignant										1 (2%)
Intestine Small, Ileum		(51)		(50)		(48)		(49)		(48)
Lymphoma Malignant										1 (2%)
Intestine Small, Jejunum		(51)		(50)		(47)		(47)		(48)

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically



Experiment Number: 99920-94

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:22:34

First Dose M/F: NA / NA

Lab: NCTR

CD Rat FEMALE	F1	0PPB	F1	2PPB	F1	10 PPB	F1	50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Leiomyoma										1 (2%)
Lymphoma Malignant										1 (2%)
Liver	(51)		(50)		(49)		(50)		(50)	(50)
Cholangiocarcinoma	1 (2%)									
Cholangioma										
Hepatocellular Adenoma	1 (2%)		1 (2%)		1 (2%)		2 (4%)		1 (2%)	1 (2%)
Hepatocellular Adenoma, Multiple										
Leukemia Mononuclear							1 (2%)			
Lymphoma Malignant							1 (2%)		2 (4%)	1 (2%)
Mesentery	(2)		(2)		(0)		(1)		(2)	(1)
Leiomyosarcoma, Metastatic, Uterus			1 (50%)							
Mesothelioma Malignant										1 (100%)
Oral Mucosa	(3)		(1)		(4)		(4)		(5)	(7)
Lymphoma Malignant										1 (14%)
Squamous Cell Carcinoma	3 (100%)		1 (100%)		1 (25%)		2 (50%)		3 (60%)	2 (29%)
Pancreas	(51)		(50)		(49)		(49)		(50)	(50)
Acinar Cell, Adenocarcinoma							1 (2%)			
Acinar Cell, Adenoma			1 (2%)							
Lymphoma Malignant									2 (4%)	1 (2%)
Salivary Glands	(51)		(49)		(49)		(50)		(50)	(50)
Leukemia Mononuclear							1 (2%)			
Lymphoma Malignant									2 (4%)	1 (2%)
Stomach, Forestomach	(51)		(50)		(49)		(50)		(50)	(50)
Lymphoma Malignant										1 (2%)
Squamous Cell Papilloma	1 (2%)				1 (2%)				1 (2%)	
Stomach, Glandular	(51)		(50)		(49)		(50)		(50)	(50)
Tooth	(0)		(0)		(0)		(0)		(1)	(0)

CARDIOVASCULAR SYSTEM

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

Experiment Number: 99920-94

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:22:34

First Dose M/F: NA / NA

Lab: NCTR

CD Rat FEMALE	F1	0PPB	F1	2PPB	F1	10 PPB	F1	50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Blood Vessel	(51)		(50)		(49)		(50)		(50)	(50)
Heart	(51)		(50)		(49)		(50)		(50)	(50)
Endocardium, Schwannoma Malignant			1 (2%)							
Leukemia Mononuclear							1 (2%)			
Lymphoma Malignant									1 (2%)	
ENDOCRINE SYSTEM										
Adrenal Cortex	(51)		(50)		(49)		(50)		(50)	(50)
Adenoma	1 (2%)		2 (4%)		1 (2%)		1 (2%)		1 (2%)	2 (4%)
Leukemia Mononuclear							1 (2%)			
Lymphoma Malignant										1 (2%)
Adrenal Medulla	(48)		(50)		(49)		(50)		(49)	(48)
Leukemia Mononuclear							1 (2%)			
Pheochromocytoma Benign	2 (4%)									1 (2%)
Islets, Pancreatic	(51)		(50)		(49)		(49)		(50)	(50)
Adenoma	1 (2%)		1 (2%)				1 (2%)			
Carcinoma					1 (2%)		1 (2%)			
Lymphoma Malignant									2 (4%)	1 (2%)
Parathyroid Gland	(48)		(47)		(46)		(43)		(46)	(44)
Adenoma			1 (2%)				1 (2%)			
Carcinoma, Metastatic, Thyroid Gland			1 (2%)							
Leukemia Mononuclear							1 (2%)			
Lymphoma Malignant										1 (2%)
Pituitary Gland	(51)		(50)		(50)		(50)		(50)	(50)
Leukemia Mononuclear							1 (2%)			
Lymphoma Malignant										1 (2%)
Pars Distalis, Adenoma	38 (75%)		35 (70%)		40 (80%)		37 (74%)		37 (74%)	36 (72%)
Pars Distalis, Carcinoma			1 (2%)				1 (2%)		1 (2%)	1 (2%)

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

Experiment Number: 99920-94

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:22:34

First Dose M/F: NA / NA

Lab: NCTR

CD Rat FEMALE	F1	0PPB	F1	2PPB	F1	10 PPB	F1	50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Pars Nervosa, Schwannoma Malignant, Metastatic, Nose								1 (2%)		
Thyroid Gland	(51)		(50)		(49)		(50)		(50)	(50)
Bilateral, C Cell, Carcinoma				1 (2%)						
C Cell, Adenoma	2 (4%)		3 (6%)		1 (2%)		1 (2%)		1 (2%)	3 (6%)
C Cell, Carcinoma									1 (2%)	
Follicular Cel, Adenoma	1 (2%)								1 (2%)	
Follicular Cel, Carcinoma									2 (4%)	
Leukemia Mononuclear							1 (2%)			
Lymphoma Malignant									2 (4%)	1 (2%)
GENERAL BODY SYSTEM										
Tissue NOS	(0)		(0)		(1)		(0)		(0)	(0)
Sarcoma					1 (100%)					
GENITAL SYSTEM										
Clitoral Gland	(50)		(49)		(48)		(50)		(50)	(49)
Adenoma							2 (4%)			
Carcinoma			1 (2%)				1 (2%)		1 (2%)	
Leukemia Mononuclear							1 (2%)			
Lymphoma Malignant									2 (4%)	1 (2%)
Sarcoma									1 (2%)	
Squamous Cell Carcinoma			1 (2%)				1 (2%)			
Squamous Cell Papilloma	1 (2%)									
Ovary	(51)		(50)		(49)		(50)		(50)	(50)
Carcinoma, Metastatic, Kidney									1 (2%)	
Granulosa Cell Tumor Benign					1 (2%)				1 (2%)	
Leukemia Mononuclear							1 (2%)			
Lymphoma Malignant									1 (2%)	1 (2%)
Sertoli Cell Tumor Benign	1 (2%)		1 (2%)		1 (2%)					

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

Experiment Number: 99920-94

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:22:34

First Dose M/F: NA / NA

Lab: NCTR

CD Rat FEMALE	F1	0PPB	F1	2PPB	F1	10 PPB	F1	50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Oviduct	(51)		(50)		(49)		(50)		(50)	(50)
Leukemia Mononuclear							1 (2%)			
Lymphoma Malignant										1 (2%)
Uterus	(51)		(50)		(49)		(50)		(50)	(50)
Cervix, Squamous Cell Carcinoma							1 (2%)			
Endometrium, Adenocarcinoma				1 (2%)						
Endometrium, Adenoma	1 (2%)						2 (4%)		1 (2%)	2 (4%)
Fibrous Histiocytoma										1 (2%)
Leiomyoma				1 (2%)						
Leiomyosarcoma				1 (2%)						
Leukemia Mononuclear							1 (2%)			
Lymphoma Malignant									1 (2%)	1 (2%)
Polyp Stromal	2 (4%)		4 (8%)		5 (10%)		5 (10%)		5 (10%)	6 (12%)
Sarcoma Stromal										1 (2%)
Vagina	(51)		(50)		(49)		(49)		(50)	(48)
Granular Cell Tumor Benign					1 (2%)					
Granular Cell Tumor Malignant							1 (2%)			
Leukemia Mononuclear							1 (2%)			
Lymphoma Malignant									1 (2%)	1 (2%)
Polyp			1 (2%)		1 (2%)				1 (2%)	
HEMATOPOIETIC SYSTEM										
Bone Marrow	(51)		(50)		(49)		(50)		(50)	(50)
Leukemia Mononuclear							1 (2%)			
Lymphoma Malignant							1 (2%)		1 (2%)	1 (2%)
Lymph Node	(16)		(14)		(6)		(10)		(15)	(12)
Axillary, Lymphoma Malignant							1 (10%)			1 (8%)
Carcinoma, Metastatic, Thyroid Gland									1 (7%)	

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\* Number of animals with any tissue examined microscopically

Experiment Number: 99920-94

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:22:34

First Dose M/F: NA / NA

Lab: NCTR

CD Rat FEMALE	F1	0PPB	F1	2PPB	F1	10 PPB	F1	50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Deep Cervical, Carcinoma, Metastatic, Thyroid Gland									1 (7%)	
Deep Cervical, Lymphoma Malignant							1 (10%)			1 (8%)
Inguinal, Lymphoma Malignant										1 (8%)
Lumbar, Leukemia Mononuclear							1 (10%)			
Lumbar, Lymphoma Malignant							1 (10%)	1 (7%)		1 (8%)
Mediastinal, Lymphoma Malignant							1 (10%)	1 (7%)		1 (8%)
Pancreatic, Lymphoma Malignant							1 (10%)			
Popliteal, Lymphoma Malignant							1 (10%)			
Renal, Leukemia Mononuclear							1 (10%)			
Renal, Lymphoma Malignant							1 (10%)			1 (8%)
Lymph Node, Mandibular Leukemia Mononuclear	(51)		(50)		(49)		(50)	(50)	(50)	(49)
Lymph Node, Mandibular Lymphoma Malignant							1 (2%)			
Lymph Node, Mesenteric Leukemia Mononuclear	(51)		(50)		(47)		(50)	(50)	(50)	(50)
Lymph Node, Mesenteric Lymphoma Malignant							1 (2%)		2 (4%)	1 (2%)
Spleen Leukemia Mononuclear	(51)		(50)		(49)		(50)	(50)	(50)	(50)
Spleen Lymphoma Malignant							1 (2%)		1 (2%)	1 (2%)
Spleen Sarcoma							1 (2%)			
Thymus Leukemia Mononuclear	(51)		(44)		(45)		(48)	(44)	(44)	(46)
Thymus Lymphoma Malignant							1 (2%)		1 (2%)	1 (2%)
Thymus Thymoma Benign										
INTEGUMENTARY SYSTEM										
Mammary Gland Adenocarcinoma	(51)		(49)		(49)		(50)	(49)	(49)	(50)
	5 (10%)		9 (18%)		9 (18%)		6 (12%)	3 (6%)	3 (6%)	8 (16%)

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

Experiment Number: 99920-94

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:22:34

First Dose M/F: NA / NA

Lab: NCTR

CD Rat FEMALE	F1 0PPB	F1 2PPB	F1 10 PPB	F1 50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Adenocarcinoma, Multiple	3 (6%)	1 (2%)		3 (6%)		
Fibroadenoma	18 (35%)	14 (29%)	18 (37%)	22 (44%)	16 (33%)	15 (30%)
Fibroadenoma, Multiple	14 (27%)	14 (29%)	15 (31%)	5 (10%)	10 (20%)	13 (26%)
Lymphoma Malignant				1 (2%)	2 (4%)	1 (2%)
Skin	(51)	(50)	(49)	(50)	(50)	(50)
Basal Cell Carcinoma						1 (2%)
Fibrous Histiocytoma						1 (2%)
Keratoacanthoma			1 (2%)			1 (2%)
Lymphoma Malignant					2 (4%)	
Sarcoma		1 (2%)				
Sebaceous GI, Carcinoma	1 (2%)					
Squamous Cell Papilloma	1 (2%)					
Subcut Tiss, Granular Cell Tumor Benign						
Subcut Tiss, Leiomyosarcoma, Metastatic, Uterus		1 (2%)				
Subcut Tiss, Lipoma						
<b>MUSCULOSKELETAL SYSTEM</b>						
Bone, Femur	(51)	(50)	(49)	(50)	(50)	(50)
Lymphoma Malignant						1 (2%)
Skeletal Muscle	(1)	(0)	(1)	(1)	(0)	(4)
Lymphoma Malignant						1 (25%)
<b>NERVOUS SYSTEM</b>						
Brain, Brain Stem	(51)	(50)	(49)	(50)	(50)	(50)
Carcinoma, Metastatic, Pituitary Gland		1 (2%)		1 (2%)	1 (2%)	1 (2%)
Lymphoma Malignant						1 (2%)
Brain, Cerebellum	(51)	(50)	(49)	(50)	(50)	(50)
Brain, Cerebrum	(51)	(50)	(49)	(50)	(50)	(50)
Astrocytoma Nos					1 (2%)	

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

Experiment Number: 99920-94  
 Test Type: SPECIAL STUDY  
 Route: DOSED FEED  
 Species/Strain: Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
 Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014  
 Time Report Requested: 13:22:35  
 First Dose M/F: NA / NA  
 Lab: NCTR

CD Rat FEMALE	F1 0PPB	F1 2PPB	F1 10 PPB	F1 50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Granular Cell Tumor Benign	1 (2%)					
Leukemia Mononuclear				1 (2%)		
Oligodendroglioma Nos			1 (2%)			
Peripheral Nerve	(1)	(0)	(0)	(0)	(0)	(2)
<b>RESPIRATORY SYSTEM</b>						
Lung	(51)	(50)	(49)	(50)	(50)	(50)
Alveolar/Bronchiolar Adenoma		1 (2%)				1 (2%)
Leukemia Mononuclear				1 (2%)		
Lymphoma Malignant					2 (4%)	1 (2%)
Nephroblastoma, Metastatic, Kidney						1 (2%)
Nose	(51)	(50)	(49)	(50)	(50)	(50)
Leukemia Mononuclear				1 (2%)		
Lymphoma Malignant					1 (2%)	1 (2%)
Schwannoma Malignant				1 (2%)		
Trachea	(51)	(50)	(49)	(50)	(50)	(50)
Leukemia Mononuclear				1 (2%)		
Lymphoma Malignant						1 (2%)
<b>SPECIAL SENSES SYSTEM</b>						
Ear	(0)	(1)	(0)	(0)	(0)	(0)
Neural Crest Tumor		1 (100%)				
Eye	(51)	(49)	(48)	(49)	(50)	(50)
Bilateral, Leukemia Mononuclear				1 (2%)		
Lymphoma Malignant					2 (4%)	1 (2%)
Squamous Cell Carcinoma, Deep Invasion					1 (2%)	
Harderian Gland	(51)	(49)	(49)	(50)	(50)	(50)
Leukemia Mononuclear				1 (2%)		
Lymphoma Malignant					2 (4%)	1 (2%)

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

**Experiment Number:** 99920-94  
**Test Type:** SPECIAL STUDY  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 13:22:35  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

CD Rat FEMALE	F1 0PPB	F1 2PPB	F1 10 PPB	F1 50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Zymbal's Gland Carcinoma	(0)	(0)	(0)	(0)	(0)	(0)
<b>URINARY SYSTEM</b>						
Kidney	(51)	(50)	(49)	(50)	(50)	(50)
Bilateral, Renal Tubule, Carcinoma		2 (4%)		1 (2%)	1 (2%)	
Leukemia Mononuclear				1 (2%)		
Lymphoma Malignant				1 (2%)	2 (4%)	1 (2%)
Nephroblastoma						1 (2%)
Renal Tubule, Adenoma				1 (2%)		
Urinary Bladder	(51)	(49)	(49)	(48)	(48)	(50)
Leukemia Mononuclear				1 (2%)		
<b>SYSTEMIC LESIONS</b>						
Multiple Organ	*(51)	*(50)	*(50)	*(50)	*(50)	*(50)
Leukemia Mononuclear				1 (2%)		
Lymphoma Malignant				1 (2%)	2 (4%)	1 (2%)
Mesothelioma Malignant						1 (2%)

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically



**Experiment Number:** 99920-94  
**Test Type:** SPECIAL STUDY  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 13:22:35  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

CD Rat FEMALE	F1/50PPB TO CTL
<b>Disposition Summary</b>	
<b>Animals Initially In Study</b>	<b>50</b>
<b>Early Deaths</b>	
<b>Moribund Sacrifice</b>	<b>22</b>
<b>Natural Death</b>	<b>6</b>
<b>Survivors</b>	
<b>Moribund Sacrifice</b>	
<b>Terminal Sacrifice</b>	<b>22</b>
<b>Animals Examined Microscopically</b>	<b>50</b>
<b>ALIMENTARY SYSTEM</b>	
Esophagus	(50)
Intestine Large, Cecum	(50)
Lymphoid Tiss, Leukemia Mononuclear	
Lymphoma Malignant	
Intestine Large, Colon	(50)
Carcinoma	
Lymphoid Tiss, Leukemia Mononuclear	
Lymphoma Malignant	
Intestine Large, Rectum	(50)
Granular Cell Tumor Malignant, Metastatic, Vagina	
Leiomyosarcoma, Metastatic, Uterus	
Intestine Small, Duodenum	(50)
Leiomyoma	1 (2%)
Lymphoma Malignant	
Intestine Small, Ileum	(49)
Lymphoma Malignant	
Intestine Small, Jejunum	(50)

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

**Experiment Number:** 99920-94

**Test Type:** SPECIAL STUDY

**Route:** DOSED FEED

**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**

**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)

**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 13:22:35

**First Dose M/F:** NA / NA

**Lab:** NCTR

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<b>CD Rat FEMALE</b>	<b>F1/50PPB TO CTL</b>
Leiomyoma	
Lymphoma Malignant	
Liver	(50)
Cholangiocarcinoma	
Cholangioma	1 (2%)
Hepatocellular Adenoma	2 (4%)
Hepatocellular Adenoma, Multiple	1 (2%)
Leukemia Mononuclear	
Lymphoma Malignant	
Mesentery	(0)
Leiomyosarcoma, Metastatic, Uterus	
Mesothelioma Malignant	
Oral Mucosa	(4)
Lymphoma Malignant	
Squamous Cell Carcinoma	1 (25%)
Pancreas	(50)
Acinar Cell, Adenocarcinoma	
Acinar Cell, Adenoma	
Lymphoma Malignant	
Salivary Glands	(50)
Leukemia Mononuclear	
Lymphoma Malignant	
Stomach, Forestomach	(50)
Lymphoma Malignant	
Squamous Cell Papilloma	
Stomach, Glandular	(50)
Tooth	(0)

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**CARDIOVASCULAR SYSTEM**

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

**Experiment Number:** 99920-94

**Test Type:** SPECIAL STUDY

**Route:** DOSED FEED

**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**

**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)

**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 13:22:35

**First Dose M/F:** NA / NA

**Lab:** NCTR

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<b>CD Rat FEMALE</b>	<b>F1/50PPB TO CTL</b>
Blood Vessel	(50)
Heart	(50)
Endocardium, Schwannoma Malignant	
Leukemia Mononuclear	
Lymphoma Malignant	
<hr/>	
<b>ENDOCRINE SYSTEM</b>	
Adrenal Cortex	(50)
Adenoma	3 (6%)
Leukemia Mononuclear	
Lymphoma Malignant	
Adrenal Medulla	(49)
Leukemia Mononuclear	
Pheochromocytoma Benign	2 (4%)
Islets, Pancreatic	(50)
Adenoma	1 (2%)
Carcinoma	
Lymphoma Malignant	
Parathyroid Gland	(46)
Adenoma	1 (2%)
Carcinoma, Metastatic, Thyroid Gland	
Leukemia Mononuclear	
Lymphoma Malignant	
Pituitary Gland	(49)
Leukemia Mononuclear	
Lymphoma Malignant	
Pars Distalis, Adenoma	34 (69%)
Pars Distalis, Carcinoma	1 (2%)

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

**Experiment Number:** 99920-94

**Test Type:** SPECIAL STUDY

**Route:** DOSED FEED

**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**

**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)

**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 13:22:35

**First Dose M/F:** NA / NA

**Lab:** NCTR

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CD Rat FEMALE	F1/50PPB TO CTL
Pars Nervosa, Schwannoma Malignant, Metastatic, Nose	
Thyroid Gland	(50)
Bilateral, C Cell, Carcinoma	
C Cell, Adenoma	
C Cell, Carcinoma	1 (2%)
Follicular Cel, Adenoma	
Follicular Cel, Carcinoma	
Leukemia Mononuclear	
Lymphoma Malignant	
<hr/>	
GENERAL BODY SYSTEM	
Tissue NOS	(0)
Sarcoma	
<hr/>	
GENITAL SYSTEM	
Clitoral Gland	(49)
Adenoma	
Carcinoma	
Leukemia Mononuclear	
Lymphoma Malignant	
Sarcoma	
Squamous Cell Carcinoma	
Squamous Cell Papilloma	
Ovary	(50)
Carcinoma, Metastatic, Kidney	
Granulosa Cell Tumor Benign	2 (4%)
Leukemia Mononuclear	
Lymphoma Malignant	
Sertoli Cell Tumor Benign	

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

**Experiment Number:** 99920-94

**Test Type:** SPECIAL STUDY

**Route:** DOSED FEED

**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**

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**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 13:22:35

**First Dose M/F:** NA / NA

**Lab:** NCTR

---

<b>CD Rat FEMALE</b>	<b>F1/50PPB TO CTL</b>
Oviduct	(50)
Leukemia Mononuclear	
Lymphoma Malignant	
Uterus	(50)
Cervix, Squamous Cell Carcinoma	
Endometrium, Adenocarcinoma	
Endometrium, Adenoma	1 (2%)
Fibrous Histiocytoma	
Leiomyoma	
Leiomyosarcoma	
Leukemia Mononuclear	
Lymphoma Malignant	
Polyp Stromal	7 (14%)
Sarcoma Stromal	
Vagina	(50)
Granular Cell Tumor Benign	
Granular Cell Tumor Malignant	
Leukemia Mononuclear	
Lymphoma Malignant	
Polyp	
<hr/>	
HEMATOPOIETIC SYSTEM	
Bone Marrow	(50)
Leukemia Mononuclear	
Lymphoma Malignant	
Lymph Node	(13)
Axillary, Lymphoma Malignant	
Carcinoma, Metastatic, Thyroid Gland	

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

Experiment Number: 99920-94

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:22:35

First Dose M/F: NA / NA

Lab: NCTR

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CD Rat FEMALE	F1/50PPB TO CTL
Deep Cervical, Carcinoma, Metastatic, Thyroid Gland	
Deep Cervical, Lymphoma Malignant	
Inguinal, Lymphoma Malignant	
Lumbar, Leukemia Mononuclear	
Lumbar, Lymphoma Malignant	
Mediastinal, Lymphoma Malignant	
Pancreatic, Lymphoma Malignant	
Popliteal, Lymphoma Malignant	
Renal, Leukemia Mononuclear	
Renal, Lymphoma Malignant	
Lymph Node, Mandibular Leukemia Mononuclear Lymphoma Malignant	(50)
Lymph Node, Mesenteric Leukemia Mononuclear Lymphoma Malignant	(50)
Spleen Leukemia Mononuclear Lymphoma Malignant Sarcoma	(50)
Thymus Leukemia Mononuclear Lymphoma Malignant Thymoma Benign	(48)   1 (2%)
<hr/>	
INTEGUMENTARY SYSTEM	
Mammary Gland Adenocarcinoma	(50) 11 (22%)

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

**Experiment Number:** 99920-94

**Test Type:** SPECIAL STUDY

**Route:** DOSED FEED

**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**

**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)

**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 13:22:35

**First Dose M/F:** NA / NA

**Lab:** NCTR

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CD Rat FEMALE	F1/50PPB TO CTL
Adenocarcinoma, Multiple	
Fibroadenoma	21 (42%)
Fibroadenoma, Multiple	13 (26%)
Lymphoma Malignant	
Skin	(50)
Basal Cell Carcinoma	
Fibrous Histiocytoma	1 (2%)
Keratoacanthoma	
Lymphoma Malignant	
Sarcoma	1 (2%)
Sebaceous GI, Carcinoma	
Squamous Cell Papilloma	
Subcut Tiss, Granular Cell Tumor Benign	1 (2%)
Subcut Tiss, Leiomyosarcoma, Metastatic, Uterus	
Subcut Tiss, Lipoma	1 (2%)
<hr/>	
MUSCULOSKELETAL SYSTEM	
Bone, Femur	(50)
Lymphoma Malignant	
Skeletal Muscle	(1)
Lymphoma Malignant	
<hr/>	
NERVOUS SYSTEM	
Brain, Brain Stem	(50)
Carcinoma, Metastatic, Pituitary Gland	1 (2%)
Lymphoma Malignant	
Brain, Cerebellum	(50)
Brain, Cerebrum	(50)
Astrocytoma Nos	

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

**Experiment Number:** 99920-94  
**Test Type:** SPECIAL STUDY  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 13:22:35  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

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CD Rat FEMALE	F1/50PPB TO CTL
Granular Cell Tumor Benign	
Leukemia Mononuclear	
Oligodendroglioma Nos	
Peripheral Nerve	(0)
<hr/>	
RESPIRATORY SYSTEM	
Lung	(50)
Alveolar/Bronchiolar Adenoma	
Leukemia Mononuclear	
Lymphoma Malignant	
Nephroblastoma, Metastatic, Kidney	
Nose	(50)
Leukemia Mononuclear	
Lymphoma Malignant	
Schwannoma Malignant	
Trachea	(50)
Leukemia Mononuclear	
Lymphoma Malignant	
<hr/>	
SPECIAL SENSES SYSTEM	
Ear	(0)
Neural Crest Tumor	
Eye	(47)
Bilateral, Leukemia Mononuclear	
Lymphoma Malignant	
Squamous Cell Carcinoma, Deep Invasion	
Harderian Gland	(50)
Leukemia Mononuclear	
Lymphoma Malignant	

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**Test Type:** SPECIAL STUDY

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<b>CD Rat FEMALE</b>	<b>F1/50PPB TO CTL</b>
Zymbal's Gland	(1)
Carcinoma	1 (100%)
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<b>URINARY SYSTEM</b>	
Kidney	(50)
Bilateral, Renal Tubule, Carcinoma	
Leukemia Mononuclear	
Lymphoma Malignant	
Nephroblastoma	
Renal Tubule, Adenoma	
Urinary Bladder	(49)
Leukemia Mononuclear	
<hr/>	
<b>SYSTEMIC LESIONS</b>	
Multiple Organ	*(50)
Leukemia Mononuclear	
Lymphoma Malignant	
Mesothelioma Malignant	

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**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
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 Lab: NCTR

CD Rat FEMALE	F1	0PPB	F1	2PPB	F1	10 PPB	F1	50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
<b>Tumor Summary for FEMALE</b>										
Total Animals with Primary Neoplasms (b)	48		47		48		50		46	49
Total Primary Neoplasms	99		102		100		103		94	100
Total Animals with Benign Neoplasms	48		44		48		47		45	45
Total Benign Neoplasms	86		80		87		80		76	82
Total Animals with Malignant Neoplasms	11		18		11		16		13	17
Total Malignant Neoplasms	13		21		12		23		17	18
Total Animals with Metastatic Neoplasms			3				2		4	2
Total Metastatic Neoplasms			5				3		4	2
Total Animals with Malignant Neoplasms Uncertain Primary Site										
Total Animals with Neoplasms Uncertain - Benign or Malignant			1		1				1	
Total Uncertain Neoplasms			1		1				1	

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

**Experiment Number:** 99920-94  
**Test Type:** SPECIAL STUDY  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
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**First Dose M/F:** NA / NA  
**Lab:** NCTR

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CD Rat FEMALE	F1/50PPB TO CTL
<b>Tumor Summary for FEMALE</b>	
<b>Total Animals with Primary Neoplasms (b)</b>	<b>49</b>
<b>Total Primary Neoplasms</b>	<b>110</b>
<b>Total Animals with Benign Neoplasms</b>	<b>47</b>
<b>Total Benign Neoplasms</b>	<b>93</b>
<b>Total Animals with Malignant Neoplasms</b>	<b>16</b>
<b>Total Malignant Neoplasms</b>	<b>17</b>
<b>Total Animals with Metastatic Neoplasms</b>	<b>1</b>
<b>Total Metastatic Neoplasms</b>	<b>1</b>
<b>Total Animals with Malignant Neoplasms Uncertain Primary Site</b>	
<b>Total Animals with Neoplasms Uncertain - Benign or Malignant</b>	
<b>Total Uncertain Neoplasms</b>	

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**\*\* 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

\* Number of animals with any tissue examined microscopically