

**TDMS No.** 20008 - 04

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

**Date Report Requested:** 09/30/2008

**Test Type:** CHRONIC

Milk thistle extract

**Time Report Requested:** 13:13:48

**Route:** DOSED FEED

**CAS Number:** 84604-20-6

**First Dose M/F:** 03/25/03 / 03/25/03

**Species/Strain:** MICE/B6C3F1

**Lab:** SRI

F1\_M3

**C Number:** C20008

**Lock Date:** 06/29/2006

**Cage Range:** ALL

**Date Range:** ALL

**Reasons For Removal:** ALL

**Removal Date Range:** ALL

**Treatment Groups:** Include ALL

**Study Gender:** Both

**TDMSE Version:** 2.0.0

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Species/Strain: MICE/B6C3F1

Lab: SRI

B6C3F1 MICE MALE	0 PPM	12500 PPM	25000 PPM	50000 PPM
<b>Disposition Summary</b>				
Animals Initially in Study	50	50	50	50
Early Deaths				
Moribund Sacrifice		1	1	1
Natural Death	5	3	6	
Survivors				
Terminal Sacrifice	45	46	43	49
Animals Examined Microscopically	50	50	50	50
<b>ALIMENTARY SYSTEM</b>				
Intestine Large, Cecum	(48)	(47)	(49)	(50)
Adenoma		1 (2%)		
Intestine Small, Ileum	(49)	(48)	(50)	(50)
Intestine Small, Jejunum	(49)	(49)	(46)	(50)
Carcinoma		1 (2%)	1 (2%)	
Liver	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung		1 (2%)	1 (2%)	
Cholangiocarcinoma			1 (2%)	
Hemangiosarcoma		1 (2%)	1 (2%)	1 (2%)
Hepatoblastoma		1 (2%)		
Hepatocellular Adenoma	7 (14%)	11 (22%)	5 (10%)	
Hepatocellular Adenoma, Multiple	5 (10%)	2 (4%)		1 (2%)
Hepatocellular Carcinoma	13 (26%)	13 (26%)	12 (24%)	7 (14%)
Hepatocellular Carcinoma, Multiple	4 (8%)	2 (4%)	2 (4%)	
Sarcoma		1 (2%)		
Mesentery	(2)	(3)	(3)	(3)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung			1 (33%)	
Carcinoma, Metastatic, Islets, Pancreatic				1 (33%)
Hemangioma	1 (50%)			
Hemangiosarcoma		1 (33%)		
Pancreas	(49)	(49)	(49)	(50)
Cholangiocarcinoma, Metastatic, Liver			1 (2%)	
Salivary Glands	(50)	(50)	(50)	(50)
Stomach, Forestomach	(50)	(50)	(50)	(50)

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

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Species/Strain: MICE/B6C3F1

Lab: SRI

B6C3F1 MICE MALE	0 PPM	12500 PPM	25000 PPM	50000 PPM
Stomach, Glandular Sarcoma	(49)	(50) 1 (2%)	(50)	(50)
<b>CARDIOVASCULAR SYSTEM</b>				
Heart Alveolar/Bronchiolar Carcinoma, Metastatic, Lung	(50)	(50)	(50) 1 (2%)	(50)
<b>ENDOCRINE SYSTEM</b>				
Adrenal Cortex Adenoma	(50) 1 (2%)	(50)	(50) 4 (8%)	(50) 3 (6%)
Capsule, Adenoma		1 (2%)	1 (2%)	
Adrenal Medulla Pheochromocytoma Benign	(49) 1 (2%)	(50)	(49)	(49)
Islets, Pancreatic Adenoma	(49)	(49)	(49)	(50)
Carcinoma		1 (2%)	1 (2%)	1 (2%)
Parathyroid Gland	(50)	(50)	(50)	(50)
Pituitary Gland	(48)	(48)	(47)	(50)
Thyroid Gland Follicular Cell, Adenoma	(48)	(49) 1 (2%)	(50)	(50)
<b>GENERAL BODY SYSTEM</b>				
Tissue NOS Hemangiosarcoma	(0)	(0)	(0)	(1) 1 (100%)
<b>GENITAL SYSTEM</b>				
Epididymis	(50)	(50)	(50)	(50)
Preputial Gland Adenoma	(50) 1 (2%)	(50)	(50)	(49)
Carcinoma			1 (2%)	
Prostate	(50)	(50)	(50)	(50)
Seminal Vesicle	(50)	(50)	(50)	(50)
Testes	(50)	(50)	(50)	(50)

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Lab: SRI

B6C3F1 MICE MALE	0 PPM	12500 PPM	25000 PPM	50000 PPM
Interstitial Cell, Adenoma	1 (2%)			
<b>HEMATOPOIETIC SYSTEM</b>				
Bone Marrow	(49)	(49)	(49)	(50)
Hemangiosarcoma	1 (2%)	1 (2%)		
Lymph Node	(2)	(1)	(2)	(0)
Iliac, Sarcoma		1 (100%)		
Mediastinal, Alveolar/Bronchiolar Carcinoma, Metastatic, Lung			1 (50%)	
Mediastinal, Carcinoma, Metastatic, Lung			1 (50%)	
Lymph Node, Mandibular	(48)	(45)	(49)	(47)
Sarcoma		1 (2%)		
Lymph Node, Mesenteric	(47)	(44)	(48)	(48)
Hemangioma	1 (2%)			
Spleen	(50)	(50)	(49)	(50)
Hemangiosarcoma	2 (4%)	3 (6%)	1 (2%)	1 (2%)
Sarcoma		1 (2%)		
Thymus	(45)	(46)	(49)	(40)
Carcinoma, Metastatic, Lung			1 (2%)	
<b>INTEGUMENTARY SYSTEM</b>				
Skin	(50)	(50)	(50)	(50)
Squamous Cell Carcinoma			1 (2%)	
Sebaceous Gland, Carcinoma	1 (2%)			
Subcutaneous Tissue, Fibroma	1 (2%)			
Subcutaneous Tissue, Fibrosarcoma				1 (2%)
Subcutaneous Tissue, Fibrous Histiocytoma	2 (4%)	2 (4%)	1 (2%)	
Subcutaneous Tissue, Hemangiosarcoma	2 (4%)			
<b>MUSCULOSKELETAL SYSTEM</b>				
Bone	(50)	(50)	(50)	(49)
Skeletal Muscle	(1)	(2)	(1)	(0)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung			1 (100%)	

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Lab: SRI

B6C3F1 MICE MALE	0 PPM	12500 PPM	25000 PPM	50000 PPM
Hemangiosarcoma Sarcoma	1 (100%)	1 (50%)		
<b>NERVOUS SYSTEM</b>				
Brain	(50)	(50)	(50)	(50)
Peripheral Nerve	(1)	(1)	(1)	(1)
<b>RESPIRATORY SYSTEM</b>				
Lung	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Adenoma		1 (2%)	4 (8%)	2 (4%)
Alveolar/Bronchiolar Adenoma, Multiple	1 (2%)	1 (2%)		
Alveolar/Bronchiolar Carcinoma	7 (14%)	4 (8%)	3 (6%)	7 (14%)
Alveolar/Bronchiolar Carcinoma, Multiple	3 (6%)	2 (4%)	1 (2%)	
Carcinoma, Metastatic, Skin			1 (2%)	
Carcinoma, Multiple			1 (2%)	
Hepatocellular Carcinoma, Metastatic, Liver	4 (8%)	4 (8%)	3 (6%)	1 (2%)
Sarcoma	1 (2%)	1 (2%)		
<b>SPECIAL SENSES SYSTEM</b>				
Eye	(50)	(50)	(50)	(50)
Harderian Gland	(50)	(50)	(50)	(50)
Adenoma	5 (10%)	4 (8%)	7 (14%)	5 (10%)
Carcinoma		2 (4%)		1 (2%)
<b>URINARY SYSTEM</b>				
Kidney	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung		1 (2%)		
Urinary Bladder	(50)	(50)	(49)	(50)
<b>SYSTEMIC LESIONS</b>				
Multiple Organs	*(50)	*(50)	*(50)	*(50)

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B6C3F1 MICE MALE	0 PPM	12500 PPM	25000 PPM	50000 PPM
Lymphoma Malignant	6 (12%)		1 (2%)	2 (4%)

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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: SRI

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B6C3F1 MICE MALE	0 PPM	12500 PPM	25000 PPM	50000 PPM
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**Tumor Summary for Males**

<b>Total Animals with Primary Neoplasms (b)</b>	39	33	31	26
<b>Total Primary Neoplasms</b>	68	63	49	34
<b>Total Animals with Benign Neoplasms</b>	21	19	16	11
<b>Total Benign Neoplasms</b>	25	23	22	12
<b>Total Animals with Malignant Neoplasms</b>	29	24	24	19
<b>Total Malignant Neoplasms</b>	43	40	27	22
<b>Total Animals with Metastatic Neoplasms</b>	4	5	7	2
<b>Total Metastatic Neoplasms</b>	4	6	12	2
<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>				

\*\*\* 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

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B6C3F1 MICE FEMALE	0 PPM	12500 PPM	25000 PPM	50000 PPM
<b>Disposition Summary</b>				
Animals Initially in Study	50	50	50	50
Early Deaths				
Accidently Killed				1
Moribund Sacrifice	3	2	2	3
Natural Death	7	5	6	1
Survivors				
Natural Death		1		
Terminal Sacrifice	40	42	42	45
Animals Examined Microscopically	50	50	50	50

## ALIMENTARY SYSTEM

Intestine Large, Cecum	(48)	(48)	(49)	(50)
Intestine Small, Duodenum	(49)	(47)	(47)	(49)
Intestine Small, Ileum	(46)	(49)	(48)	(49)
Intestine Small, Jejunum	(49)	(45)	(48)	(49)
Liver	(50)	(50)	(50)	(50)
Hemangiosarcoma		1 (2%)		
Hepatocellular Adenoma	3 (6%)	1 (2%)	4 (8%)	
Hepatocellular Carcinoma		1 (2%)		4 (8%)
Mesentery	(5)	(2)	(1)	(3)
Hemangiosarcoma			1 (100%)	
Osteosarcoma, Metastatic, Bone	1 (20%)			
Oral Mucosa	(0)	(0)	(1)	(0)
Squamous Cell Carcinoma			1 (100%)	
Pancreas	(49)	(48)	(49)	(50)
Salivary Glands	(50)	(50)	(49)	(50)
Stomach, Forestomach	(50)	(50)	(50)	(50)
Squamous Cell Papilloma	1 (2%)		1 (2%)	
Stomach, Glandular	(50)	(48)	(50)	(50)
Carcinoma		1 (2%)		
Sarcoma Stromal, Metastatic, Uterus			1 (2%)	

## CARDIOVASCULAR SYSTEM

Heart	(50)	(50)	(50)	(50)
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Lab: SRI

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Sarcoma, Metastatic, Skeletal Muscle				1 (2%)
<b>ENDOCRINE SYSTEM</b>				
Adrenal Cortex	(50)	(50)	(50)	(50)
Adrenal Medulla	(49)	(49)	(50)	(50)
Pheochromocytoma Benign		1 (2%)		1 (2%)
Islets, Pancreatic	(49)	(48)	(49)	(50)
Adenoma		1 (2%)	1 (2%)	1 (2%)
Parathyroid Gland	(48)	(48)	(48)	(48)
Adenoma				1 (2%)
Pituitary Gland	(49)	(49)	(48)	(48)
Pars Distalis, Adenoma	2 (4%)	2 (4%)	1 (2%)	2 (4%)
Pars Intermedia, Adenoma			1 (2%)	
Thyroid Gland	(50)	(48)	(49)	(50)
Follicular Cell, Adenoma				1 (2%)
<b>GENERAL BODY SYSTEM</b>				
Tissue NOS	(0)	(1)	(0)	(1)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung		1 (100%)		
Schwannoma Malignant				1 (100%)
<b>GENITAL SYSTEM</b>				
Clitoral Gland	(47)	(47)	(49)	(47)
Ovary	(46)	(50)	(48)	(49)
Cystadenoma	1 (2%)	1 (2%)	1 (2%)	
Hemangioma			1 (2%)	
Luteoma				1 (2%)
Uterus	(50)	(50)	(50)	(50)
Hemangiosarcoma		1 (2%)		
Polyp Stromal	4 (8%)	1 (2%)	4 (8%)	1 (2%)
Sarcoma Stromal			1 (2%)	
<b>HEMATOPOIETIC SYSTEM</b>				

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Lab: SRI

B6C3F1 MICE FEMALE	0 PPM	12500 PPM	25000 PPM	50000 PPM
Bone Marrow	(50)	(50)	(50)	(50)
Hemangiosarcoma		2 (4%)		1 (2%)
Lymph Node	(10)	(4)	(6)	(4)
Iliac, Liposarcoma, Metastatic, Skin			2 (33%)	
Inguinal, Liposarcoma, Metastatic, Skin			2 (33%)	
Mediastinal, Hemangiosarcoma	1 (10%)			
Renal, Liposarcoma, Metastatic, Skin			1 (17%)	
Lymph Node, Mandibular	(48)	(49)	(46)	(47)
Hemangiosarcoma	1 (2%)			
Lymph Node, Mesenteric	(49)	(47)	(49)	(50)
Sarcoma Stromal, Metastatic, Uterus			1 (2%)	
Spleen	(50)	(48)	(49)	(50)
Hemangiosarcoma		3 (6%)	1 (2%)	1 (2%)
Thymus	(49)	(47)	(46)	(49)
Sarcoma, Metastatic, Skeletal Muscle				1 (2%)
<b>INTEGUMENTARY SYSTEM</b>				
Mammary Gland	(50)	(50)	(50)	(50)
Carcinoma		2 (4%)		
Skin	(50)	(50)	(50)	(50)
Subcutaneous Tissue, Fibrosarcoma	3 (6%)	1 (2%)		1 (2%)
Subcutaneous Tissue, Fibrosarcoma, Multiple		1 (2%)		
Subcutaneous Tissue, Fibrous Histiocytoma				1 (2%)
Subcutaneous Tissue, Hemangioma	1 (2%)			
Subcutaneous Tissue, Hemangiosarcoma		1 (2%)		
Subcutaneous Tissue, Liposarcoma			2 (4%)	1 (2%)
<b>MUSCULOSKELETAL SYSTEM</b>				
Bone	(50)	(50)	(50)	(50)
Osteosarcoma	1 (2%)			
Skeletal Muscle	(3)	(2)	(0)	(3)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung		1 (50%)		
Hemangiosarcoma				1 (33%)

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B6C3F1 MICE FEMALE	0 PPM	12500 PPM	25000 PPM	50000 PPM
Liposarcoma, Metastatic, Skin				1 (33%)
Rhabdomyosarcoma	1 (33%)	1 (50%)		
Sarcoma				1 (33%)
<b>NERVOUS SYSTEM</b>				
Brain	(50)	(50)	(50)	(50)
Peripheral Nerve	(3)	(0)	(0)	(0)
Spinal Cord	(3)	(0)	(0)	(0)
<b>RESPIRATORY SYSTEM</b>				
Lung	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Adenoma	1 (2%)	2 (4%)	1 (2%)	1 (2%)
Alveolar/Bronchiolar Carcinoma	1 (2%)	4 (8%)		
Carcinoma, Metastatic, Harderian Gland			2 (4%)	
Carcinoma, Metastatic, Mammary Gland		1 (2%)		
Fibrosarcoma, Metastatic, Skin		1 (2%)		
Liposarcoma, Metastatic, Skin				1 (2%)
Osteosarcoma, Metastatic, Bone	1 (2%)			
Rhabdomyosarcoma, Metastatic, Skeletal Muscle		1 (2%)		
Sarcoma, Metastatic, Skeletal Muscle				1 (2%)
Nose	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Harderian Gland		1 (2%)		
<b>SPECIAL SENSES SYSTEM</b>				
Eye	(50)	(50)	(50)	(50)
Harderian Gland	(50)	(50)	(50)	(50)
Adenoma	6 (12%)	2 (4%)	5 (10%)	6 (12%)
Adenoma, Multiple		1 (2%)		1 (2%)
Carcinoma	2 (4%)	2 (4%)	5 (10%)	
<b>URINARY SYSTEM</b>				
Kidney	(50)	(49)	(50)	(50)
Urinary Bladder	(50)	(50)	(50)	(50)

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Lab: SRI

B6C3F1 MICE FEMALE	0 PPM	12500 PPM	25000 PPM	50000 PPM
Transitional Epithelium, Carcinoma			1 (2%)	
<b>SYSTEMIC LESIONS</b>				
Multiple Organs	*(50)	*(50)	*(50)	*(50)
Histiocytic Sarcoma	1 (2%)			1 (2%)
Leukemia Granulocytic				1 (2%)
Lymphoma Malignant	11 (22%)	13 (26%)	16 (32%)	15 (30%)

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\* Number of animals with any tissue examined microscopically

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B6C3F1 MICE FEMALE	0 PPM	12500 PPM	25000 PPM	50000 PPM
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**Tumor Summary for Females**

<b>Total Animals with Primary Neoplasms (b)</b>	32	33	34	31
<b>Total Primary Neoplasms</b>	41	46	48	45
<b>Total Animals with Benign Neoplasms</b>	18	11	18	15
<b>Total Benign Neoplasms</b>	19	12	20	16
<b>Total Animals with Malignant Neoplasms</b>	19	26	26	22
<b>Total Malignant Neoplasms</b>	22	34	28	29
<b>Total Animals with Metastatic Neoplasms</b>	1	5	5	2
<b>Total Metastatic Neoplasms</b>	2	6	9	5
<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>				

\*\*\* 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