

Lesions in Male Mice

C-31

TABLE C4
Summary of the Incidence of Nonneoplastic Lesions in Male Mice in the 2-Year Inhalation Study of Talc (continued)

	0 mg/m ³	6 mg/m ³	18 mg/m ³
Respiratory System			
Larynx	(42)	(41)	(46)
Inflammation, acute	1 (2%)		1 (2%)
Lung	(45)	(47)	(48)
Congestion	3 (7%)	1 (2%)	1 (2%)
Hyperplasia, macrophage	3 (7%)	46 (98%)	48 (100%)
Inflammation, chronic active		16 (34%)	40 (83%)
Thrombosis			1 (2%)
Alveolar epithelium, hyperplasia, focal	1 (2%)		
Peribronchiolar, inflammation, chronic active		1 (2%)	
Perivascular, inflammation, suppurative	1 (2%)		
Nose	(45)	(46)	(47)
Cytoplasmic alteration, focal	5 (11%)	23 (50%)	40 (85%)
Erosion, focal	1 (2%)	1 (2%)	2 (4%)
Inflammation, acute	4 (9%)	4 (9%)	7 (15%)
Special Senses System			
Ear	(1)		
Inflammation, granulomatous	1 (100%)		
Urinary System			
Kidney	(45)	(46)	(48)
Casts protein	1 (2%)		
Cyst	2 (4%)		
Hydronephrosis	3 (7%)	1 (2%)	
Inflammation, suppurative, focal	3 (7%)	5 (11%)	3 (6%)
Metaplasia, osseous, focal		3 (7%)	
Nephropathy, chronic	3 (7%)		2 (4%)
Capsule, inflammation, suppurative			1 (2%)
Pelvis, inflammation, suppurative	2 (4%)	5 (11%)	1 (2%)
Urinary bladder	(43)	(38)	(43)
Dysplasia, focal	1 (2%)		
Inflammation, chronic active	6 (14%)	5 (13%)	2 (5%)
Ulcer, focal			1 (2%)
Transitional epithelium, hyperplasia		1 (3%)	

^a Incidences are expressed as the ratio of animals with lesions to the number of animals examined microscopically at the site.

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**APPENDIX D
SUMMARY LESIONS IN FEMALE MICE
IN THE 2-YEAR INHALATION STUDY
OF TALC**

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Lesions in Female Mice

D-3

TABLE D1
Summary of the Incidence of Neoplasms in Female Mice in the 2-Year Inhalation Study of Talc^a

	0 mg/m ³	6 mg/m ³	18 mg/m ³
Disposition Summary			
Animals initially in study	50	50	50
Early deaths			
Moribund	2	4	4
Natural deaths	17	21	21
Survivors			
Terminal sacrifice	30	23	25
Missing	1	1	
Culled		1	
Animals examined microscopically	46	48	50
Alimentary System			
Esophagus	(43)	(47)	(48)
Gallbladder	(31)	(28)	(29)
Intestine large, cecum	(35)	(29)	(34)
Leiomyoma			1 (3%)
Intestine large, colon	(38)	(33)	(32)
Leiomyosarcoma		1 (3%)	
Intestine small, ileum	(33)	(27)	(31)
Liver	(46)	(46)	(50)
Hemangioma		1 (2%)	
Hepatocellular carcinoma	7 (15%)	5 (11%)	4 (8%)
Hepatocellular adenoma	5 (11%)	1 (2%)	4 (8%)
Mesentery	(2)		
Pancreas	(42)	(39)	(44)
Salivary glands	(46)	(48)	(50)
Hemangioma	1 (2%)		
Stomach, glandular	(45)	(39)	(46)
Cardiovascular System			
Heart	(46)	(48)	(50)
Alveolar/bronchiolar carcinoma, metastatic, lung		1 (2%)	
Endocrine System			
Adrenal gland	(46)	(45)	(50)
Spindle cell, adenoma	1 (2%)		
Adrenal gland, cortex	(46)	(44)	(50)
Adenoma	1 (2%)		
Adrenal gland, medulla	(41)	(43)	(45)
Pheochromocytoma malignant	1 (2%)		
Pituitary gland	(42)	(42)	(48)
Adenoma	5 (12%)	4 (10%)	2 (4%)
Carcinoma		2 (5%)	
Thyroid gland	(43)	(47)	(49)
Follicular cell, adenoma	1 (2%)	2 (4%)	2 (4%)

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TABLE D1
Summary of the Incidence of Neoplasms in Female Mice in the 2-Year Inhalation Study of Talc (continued)

	0 mg/m ³	6 mg/m ³	18 mg/m ³
General Body System			
Tissue NOS	(4)	(1)	(2)
Fibrosarcoma	1 (25%)		
Hemangioma	1 (25%)		1 (50%)
Hemangiosarcoma			1 (50%)
Genital System			
Ovary	(38)	(43)	(46)
Adenocarcinoma, metastatic, uterus	1 (3%)		
Adenoma	1 (3%)	1 (2%)	
Cystadenoma		1 (2%)	
Luteoma	2 (5%)		
Uterus	(44)	(45)	(49)
Adenocarcinoma	1 (2%)		
Carcinoma adenosquamous			1 (2%)
Hematopoietic System			
Bone marrow	(41)	(43)	(45)
Lymph node	(46)	(46)	(49)
Lymph node, bronchial	(38)	(37)	(43)
Adenocarcinoma, metastatic, kidney		1 (3%)	
Adenocarcinoma, metastatic, uterus	1 (3%)		
Alveolar/bronchiolar carcinoma, metastatic, lung		3 (8%)	
Lymph node, mandibular	(35)	(38)	(36)
Lymph node, mediastinal	(13)	(17)	(14)
Adenocarcinoma, metastatic, kidney		1 (6%)	
Alveolar/bronchiolar carcinoma, metastatic, lung		1 (6%)	
Lymph node, mesenteric	(35)	(31)	(37)
Spleen	(45)	(44)	(50)
Hemangiosarcoma			1 (2%)
Thymus	(40)	(40)	(41)
Alveolar/bronchiolar carcinoma, metastatic, lung		2 (5%)	
Integumentary System			
Mammary gland	(41)	(45)	(48)
Fibrosarcoma			1 (2%)
Musculoskeletal System			
Bone	(46)	(48)	(50)
Vertebra, alveolar/bronchiolar carcinoma, metastatic, lung		1 (2%)	
Nervous System			
Spinal cord			(1)
Thoracic, ganglioneuroma			1 (100%)

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Lesions in Female Mice

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TABLE D1
Summary of the Incidence of Neoplasms in Female Mice in the 2-Year Inhalation Study of Talc (continued)

	0 mg/m ³	6 mg/m ³	18 mg/m ³
Respiratory System			
Lung	(46)	(48)	(50)
Adenocarcinoma, metastatic, kidney		1 (2%)	
Alveolar/bronchiolar adenoma	3 (7%)	2 (4%)	2 (4%)
Alveolar/bronchiolar carcinoma	2 (4%)	4 (8%)	1 (2%)
Hemangiosarcoma, metastatic, tissue NOS			1 (2%)
Hepatocellular carcinoma, metastatic, liver	2 (4%)	2 (4%)	
Trachea	(40)	(36)	(45)
Special Senses System			
Harderian gland	(2)	(2)	(1)
Adenocarcinoma			1 (100%)
Adenoma	2 (100%)	1 (50%)	
Urinary System			
Kidney	(46)	(46)	(50)
Adenocarcinoma		1 (2%)	
Hepatocellular carcinoma, metastatic, liver	1 (2%)		
Urinary bladder	(44)	(40)	(41)
Systemic Lesions			
Multiple organs ^b	(46)	(48)	(50)
Lymphoma malignant histiocytic			1 (2%)
Lymphoma malignant lymphocytic	2 (4%)	3 (6%)	3 (6%)
Lymphoma malignant mixed	3 (7%)	4 (8%)	2 (4%)
Lymphoma malignant undifferentiated cell	2 (4%)		2 (4%)
Tumor Summary			
Total animals with primary neoplasms ^c	31	26	21
Total primary neoplasms	42	33	31
Total animals with benign neoplasms	18	9	10
Total benign neoplasms	23	13	13
Total animals with malignant neoplasms	19	19	15
Total malignant neoplasms	19	20	18
Total animals with metastatic neoplasms	3	5	1
Total metastatic neoplasms	5	13	1

^a Incidences are expressed as the ratio of animals with lesions to the number of animals examined microscopically at the site.

^b Number of animals with any tissue examined microscopically

^c Primary tumors: all tumors except metastatic tumors

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TABLE D2
Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of Talc: 0 mg/m³

Number of Days on Study	0	4	4	4	5	5	5	5	5	6	6	6	6	7	7	7	7	7	7
	3	2	6	8	0	0	0	4	5	9	4	8	8	8	9	2	2	2	2
	0	6	5	7	5	6	9	4	2	8	1	0	3	6	2	3	9	9	9
Carcass ID Number	5	5	5	3	4	4	3	4	4	4	5	5	4	5	4	4	3	3	3
	3	0	3	7	1	2	8	1	7	7	0	2	9	0	4	9	7	8	8
	3	0	4	6	7	0	2	5	5	3	5	8	7	7	6	6	7	1	4
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Alimentary System																			
Esophagus	+	+	M	+	+	M	M	+	+	+	+	+	+	+	+	+	+	+	+
Gallbladder	A	M	A	M	A	M	A	+	A	A	A	A	+	A	A	+	+	+	+
Intestine large	A	+	+	A	A	A	+	+	A	+	A	+	+	+	+	+	+	+	+
Intestine large, cecum	A	+	A	A	A	A	A	+	A	+	A	+	A	+	+	+	+	+	+
Intestine large, colon	A	+	A	A	A	A	+	+	A	+	A	+	+	+	+	+	M	+	+
Intestine large, rectum	A	M	+	M	M	A	+	+	M	A	A	M	+	+	+	+	+	+	M
Intestine small	A	+	A	A	A	A	+	A	A	A	A	A	+	+	+	+	+	+	+
Intestine small, duodenum	A	+	A	A	A	A	A	A	A	A	A	A	+	+	A	+	+	+	M
Intestine small, ileum	A	+	A	A	A	A	A	A	A	A	A	A	+	+	+	+	+	+	+
Intestine small, jejunum	A	+	A	A	A	A	+	A	A	A	A	A	+	A	+	+	+	+	+
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hepatocellular carcinoma			X			X				X			X						X
Hepatocellular adenoma																			X
Mesentery								+											
Pancreas	+	+	A	+	A	A	+	+	+	+	+	I	+	+	+	+	+	+	+
Salivary glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hemangioma																			
Stomach	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, forestomach	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, glandular	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+
Cardiovascular System																			
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Endocrine System																			
Adrenal gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Spindle cell, adenoma																			
Adrenal gland, cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenoma																			
Adrenal gland, medulla	+	+	+	+	M	+	M	+	+	+	I	I	+	+	+	+	+	+	+
Pheochromocytoma malignant																			
Islets, pancreatic	+	+	M	+	A	A	M	+	I	M	I	M	I	M	+	+	+	+	+
Parathyroid gland	M	M	+	M	+	+	M	+	M	I	+	M	+	+	+	M	M	I	M
Pituitary gland	M	+	+	+	M	M	+	+	+	+	I	+	+	+	+	+	+	+	+
Adenoma												X	X	X					X
Thyroid gland	A	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+
Follicular cell, adenoma																			

+: Tissue examined microscopically
 A: Autolysis precludes examination
 M: Missing tissue
 I: Insufficient tissue
 X: Lesion present
 Blank: Not examined

Lesions in Female Mice

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TABLE D2
Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of Talc: 0 mg/m³ (continued)

Number of Days on Study	7 7																				Total Tissues/ Tumors
	2 3																				
Carcass ID Number	9 1																				Total Tissues/ Tumors
	9 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1																				
Alimentary System																					
Esophagus	+																				43
Gallbladder	+																				31
Intestine large	+																				40
Intestine large, cecum	+																				35
Intestine large, colon	+																				38
Intestine large, rectum	+																				34
Intestine small	+																				35
Intestine small, duodenum	+																				27
Intestine small, ileum	+																				33
Intestine small, jejunum	+																				33
Liver	+																				46
Hepatocellular carcinoma	X																				7
Hepatocellular adenoma	X X X X																				5
Mesentery	+																				2
Pancreas	+																				42
Salivary glands	+																				46
Hemangioma	X																				1
Stomach	+																				45
Stomach, forestomach	+																				45
Stomach, glandular	+																				45
Cardiovascular System																					
Heart	+																				46
Endocrine System																					
Adrenal gland	+																				46
Spindle cell, adenoma	X																				1
Adrenal gland, cortex	+																				46
Adenoma	X																				1
Adrenal gland, medulla	+																				41
Pheochromocytoma malignant	X																				1
Islets, pancreatic	+																				25
Parathyroid gland	+																				23
Pituitary gland	+																				42
Adenoma	X																				5
Thyroid gland	+																				43
Follicular cell, adenoma	X																				1

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TABLE D2
Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of Talc: 0 mg/m³ (continued)

Number of Days on Study	0 4 4 4 5 5 5 5 5 5 6 6 6 6 6 7 7 7 7 7 7
	3 2 6 8 0 0 0 4 5 9 4 8 8 8 9 2 2 2 2 2 2
	0 6 5 7 5 6 9 4 2 8 1 0 3 6 2 3 9 9 9 9 9
Carcass ID Number	5 5 5 3 4 4 3 4 4 4 5 5 4 5 4 4 3 3 3 3 3
	3 0 3 7 1 2 8 1 7 7 0 2 9 0 4 9 7 8 8 8 8
	3 0 4 6 7 0 2 5 5 3 5 8 7 7 6 6 7 1 4 6 9
	1 1
General Body System	
Tissue NOS	
Fibrosarcoma	
Hemangioma	
Genital System	
Ovary	+ + + + + + I + + I M + + + + + + + +
Adenocarcinoma, metastatic, uterus	
Adenoma	
Luteoma	
Uterus	M I + + + + + + + + + + + + + + + +
Adenocarcinoma	
Hematopoietic System	
Bone marrow	+ + A + A A + A A + + + + + + + + + +
Lymph node	+ + + + + + + + + + + + + + + + + +
Lymph node, bronchial	M + + + + M + M M + + + M + + + + + +
Adenocarcinoma, metastatic, uterus	
Lymph node, mandibular	+ + M + + + + + M + + + M + + + + M M +
Lymph node, mediastinal	M M + M M M + M + M M M + M + + M M + M +
Lymph node, mesenteric	M + + M M M + M M + + + I + + + M + + +
Spleen	+ + + + + A + + + + + + + + + + + + + +
Thymus	M M + + + M + + + + + + + M + M + + + + +
Integumentary System	
Mammary gland	A + + + + A + I + + + + M + + + + + + + +
Skin	+ + + + + + + + + + + + + + + + + + + +
Musculoskeletal System	
Bone	+ + + + + + + + + + + + + + + + + + + +
Nervous System	
Brain	+ + + + + + + + + + + + + + + + + + + +

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Lesions in Female Mice

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TABLE D2
Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of Talc: 0 mg/m³ (continued)

Number of Days on Study	7 7																									Total Tissues/ Tumors		
	2 3																											
	9 0 0 0 0 0 0 0 1 1 1 1 1 1 2 2 2 2 2 3 3 3 3 3 3																											
Carcass ID Number	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	4	4	5	5	5	5		
	9	1	1	4	4	4	4	4	5	7	7	7	7	7	7	0	0	0	0	2	0	8	3	3	3	3		
	0	1	8	0	1	2	3	5	0	0	1	4	8	9	1	2	4	9	9	9	0	0	1	8	9	1		
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
General Body System																												
Tissue NOS																										+	4	
Fibrosarcoma																										X	+	1
Hemangioma																											X	1
Genital System																												
Ovary	+	+	+	M	+	+	+	M	+	+	+	M	+	+	+	+	+	+	+	+	I	+	+	+	+	38		
Adenocarcinoma, metastatic, uterus																										X	1	
Adenoma																											X	1
Lutoma																										X	X	2
Uterus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	44		
Adenocarcinoma																										X	1	
Hematopoietic System																												
Bone marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	41		
Lymph node	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	46		
Lymph node, bronchial	M	+	+	+	+	+	+	+	I	+	+	+	+	+	+	+	+	+	+	+	I	+	+	+	+	38		
Adenocarcinoma, metastatic, uterus																										X	1	
Lymph node, mandibular	+	+	+	M	M	+	+	+	+	+	+	+	+	+	+	M	M	+	+	+	M	+	M	+	+	35		
Lymph node, mediastinal	M	M	M	M	M	+	M	M	M	+	+	M	M	M	M	M	M	+	M	M	M	M	M	+	+	13		
Lymph node, mesenteric	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	M	35		
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	45		
Thymus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	I	+	40		
Integumentary System																												
Mammary gland	+	+	+	+	+	I	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	41		
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	46		
Musculoskeletal System																												
Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	46		
Nervous System																												
Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	46		

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TABLE D2
Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of Talc: 0 mg/m³ (continued)

Number of Days on Study	0 4 4 4 5 5 5 5 5 6 6 6 6 7 7 7 7 7 7
	.3 2 6 8 0 0 0 4 5 9 4 8 8 8 9 2 2 2 2 2
	0 6 5 7 5 6 9 4 2 8 1 0 3 6 2 3 9 9 9 9
Carcass ID Number	5 5 5 3 4 4 3 4 4 4 5 4 5 4 4 3 3 3 3
	3 0 3 7 1 2 8 1 7 7 0 2 9 0 4 9 7 8 8 8
	3 0 4 6 7 0 2 5 5 3 5 8 7 7 6 6 7 1 4 6 9
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Respiratory System	
Larynx	+ + + + + A I + + + + + + + + + + + + +
Lung	+ + + + + + + + + + + + + + + + + + +
Alveolar/bronchiolar adenoma	
Alveolar/bronchiolar carcinoma	
Hepatocellular carcinoma, metastatic, liver	
Nose	+ + + + + + + + + + + + + + + + + + +
Trachea	A + A + M A A + + + + + + + + + + + + +
Special Senses System	
Harderian gland Adenoma	
Urinary System	
Kidney	+ + + + + + + + + + + + + + + + + + +
Hepatocellular carcinoma, metastatic, liver	
Urinary bladder	M + + + + A + + + + + + + + + + + + +
Systemic Lesions	
Multiple organs	+ + + + + + + + + + + + + + + + + + +
Lymphoma malignant lymphocytic	
Lymphoma malignant mixed	
Lymphoma malignant undifferentiated cell type	

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Lesions in Female Mice

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**TABLE D2
Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of Talc: 0 mg/m³ (continued)**

Number of Days on Study	7 7																				Total Tissues/ Tumors
	2 3																				
Carcass ID Number	9 0 0 0 0 0 0 0 1 1 1 1 1 1 2 2 2 2 2 3 3 3 3 3																				Total Tissues/ Tumors
	3 4 4 4 4 4 4 4 4 4 4 4 4 4 5 5 5 5 5 4 4 5 5 5 5																				
	9 1 1 4 4 4 4 4 5 7 7 7 7 7 0 0 0 0 2 0 8 3 3 3 3																				
Respiratory System																					
Larynx	+ + + + + + + + + + + M + 1 + + + + + + + + + +																				42
Lung	+ +																				46
Alveolar/bronchiolar adenoma																					3
Alveolar/bronchiolar carcinoma	X																				2
Hepatocellular carcinoma, metastatic, liver																					2
Nose	+ +																				46
Trachea	+ + + + + + + + + + + + + + + + + + + M + + + + + + + +																				40
Special Senses System																					
Harderian gland																					2
Adenoma	X																				2
Urinary System																					
Kidney	+ +																				46
Hepatocellular carcinoma, metastatic, liver																					1
Urinary bladder	+ +																				44
Systemic Lesions																					
Multiple organs	+ +																				46
Lymphoma malignant lymphocytic																					2
Lymphoma malignant mixed	X X X																				3
Lymphoma malignant undifferentiated cell type	X																				2

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TABLE D2
Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of Talc: 6 mg/m³

Number of Days on Study	0 0 4 4 5 5 5 5 5 5 6 6 6 6 6 6 6 6 6 6 7 7 7
	2 9 2 9 0 3 4 5 5 6 1 2 2 4 4 6 7 7 8 9 9 0 0 1
	0 2 2 1 0 4 8 4 9 4 8 1 8 1 5 5 6 8 6 2 9 9 9 2
Carcass ID Number	1 0 0 1 0 1 1 1 0 1 0 1 0 0 1 1 0 1 1 0 0 1 1 0
	1 5 1 1 5 4 7 4 1 7 2 2 5 8 3 0 5 7 3 8 6 1 4 2
	7 5 6 5 0 7 6 8 9 5 2 0 6 1 6 8 8 1 9 3 0 8 0 0
	1 1
Alimentary System	
Esophagus	+ + + + M + + + + + + + + + + + + + + + + + +
Gallbladder	A M M M A A + + + A A A A A A A A A M A A + A +
Intestine large	A + A A A + A + + A + + A A A + A + A + A + A +
Intestine large, cecum	A A A A A A A + + A A + A A A + A A A A A + A +
Intestine large, colon	A A A A A + A + + A + + A A A + A + A + A + A +
Leiomyosarcoma	
Intestine large, rectum	A + A A A M M I M A + M M A A M A + A A A + A +
Intestine small	A A A A A A A + + A A + A A A + A A A A A + A +
Intestine small, duodenum	A A A A A A A + + A A + A A A A A A A A A + A +
Intestine small, ileum	A A A A A A A + + A A + A A A A A A A A A + A +
Intestine small, jejunum	A A A A A A A + + A A + A A A + A A A A A + A +
Liver	+ + + A + + + + + + + + + + + + + + + + + +
Hemangioma	
Hepatocellular carcinoma	
Hepatocellular adenoma	
Pancreas	+ + + A A + + + + + + + I M + + A + A + A + + I
Salivary glands	+ +
Stomach	+ + + A + + + + + + + + + + + + + + + + + +
Stomach, forestomach	+ + + A + + + + + + + + + + + + + + + + + +
Stomach, glandular	A + + A A + + + + A A + + A + + A + + + + + A +
Cardiovascular System	
Heart	+ +
Alveolar/bronchiolar carcinoma, metastatic, lung	
	X
Endocrine System	
Adrenal gland	+ + + A + + + + + + + + + + + A + + + + + + +
Adrenal gland, cortex	+ + + A + + + + + + + + M + + + A + + + + + + +
Adrenal gland, medulla	+ + + A + + + + + + + + + + + + + + + + + + +
Ilets, pancreatic	M I + A A I I + + M I M M M + + A + M I M M I I
Parathyroid gland	l + + A M M + + M M M + + M + + M M I + M I + M
Pituitary gland	M + + + + + + + + + + + I + + + M + + M I + + +
Adenoma	
Carcinoma	
Thyroid gland	+ + + A + + + + + + + + + + + + + + + + + +
Follicular cell, adenoma	

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Lesions in Female Mice

D-13

TABLE D2
Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of Talc: 6 mg/m³ (continued)

Number of Days on Study	7 7		
	1 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3		
	4 9 9 9 9 0 0 0 0 0 1 1 1 1 1 2 2 2 2 2 2 3 3 3		
Carcass ID Number	0 0 0 0 1 0 0 0 0 1 0 0 1 1 1 1 1 1 1 1 1 0 1 1		
	8 2 2 3 0 5 5 7 7 0 8 8 0 1 3 4 4 6 6 6 7 4 7 8		
	5 4 9 0 6 2 4 6 8 7 7 9 9 1 8 4 5 6 8 9 2 7 8 0		
	1 1		Total Tissues/Tumors
Alimentary System			
Esophagus	+ +		47
Gallbladder	A +		28
Intestine large	A +		34
Intestine large, cecum	A +		29
Intestine large, colon	A +		33
Leiomyosarcoma		X	1
Intestine large, rectum	A + + M + + + + + + + M I + + + + + + + + M + + + M		23
Intestine small	A +		29
Intestine small, duodenum	A + M M		25
Intestine small, ileum	A +		27
Intestine small, jejunum	A + M + + + + +		28
Liver	+ +		46
Hemangioma		X	1
Hepatocellular carcinoma			5
Hepatocellular adenoma		X	1
Pancreas	A +		39
Salivary glands	+ +		48
Stomach	A +		45
Stomach, forestomach	A +		45
Stomach, glandular	A +		39
Cardiovascular System			
Heart	+ +		48
Alveolar/bronchiolar carcinoma, metastatic, lung			1
Endocrine System			
Adrenal gland	A +		45
Adrenal gland, cortex	A +		44
Adrenal gland, medulla	A +		43
Isllets, pancreatic	A I + M I + I + M I + + I + I I + + + + + + + + + + + +		20
Parathyroid gland	M M I I + M + + M M M + M + M M I M M + I + M +		18
Pituitary gland	+ M + + + + +		42
Adenoma		X	4
Carcinoma		X X	2
Thyroid gland	+ +		47
Follicular cell, adenoma		X	2

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Talc, NTP TR 421

TABLE D2
Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of Talc: 6 mg/m³ (continued)

Number of Days on Study	0 0 4 4 5 5 5 5 5 6 6 6 6 6 6 6 6 6 6 7 7 7 2 9 2 9 0 3 4 5 5 6 1 2 2 4 4 6 7 7 8 9 9 0 0 1 0 2 2 1 0 4 8 4 9 4 8 1 8 1 5 5 6 8 6 2 9 9 9 2
Carcass ID Number	1 0 0 1 0 1 1 1 0 1 0 1 0 0 1 1 0 1 1 0 0 1 1 0 1 5 1 1 5 4 7 4 1 7 2 2 5 8 3 0 5 7 3 8 6 1 4 2 7 5 6 5 0 7 6 8 9 5 2 0 6 1 6 8 8 1 9 3 0 8 0 0 1
General Body System Tissue NOS	
Genital System	
Ovary	+ + + A + + + + + + + M + + + A + + + + + + +
Adenoma	
Cystadenoma	
Uterus	+ + + A + + + + + + + + + + A + A + + + + + + +
Hematopoietic System	
Bone marrow	+ + + A + + A + + A + + + A + + + + + + + + + +
Lymph node	M + A +
Lymph node, bronchial	M M M + + + M I + + M + + M + + + + M + + + + I
Adenocarcinoma, metastatic, kidney	
Alveolar/bronchiolar carcinoma, metastatic, lung	
Lymph node, mandibular	M + M M M + + + + + + + M + + + + + + M + + +
Lymph node, mediastinal	M M M + M M M M M M M + + + M M M + I M + + M
Adenocarcinoma, metastatic, kidney	
Alveolar/bronchiolar carcinoma, metastatic, lung	
Lymph node, mesenteric	M M A A A + M + + + + + A + + A M M + + + + +
Spleen	A + + A + + + + + + + + + + + + A + + + + + + +
Thymus	M M + + + I + + + + I + + + + + M M M + I + + +
Alveolar/bronchiolar carcinoma, metastatic, lung	
Integumentary System	
Mammary gland	+ + + A + + + + + + + + + + + M + + + + + + +
Skin	+ + + A + + + + + + + + + + + M + + + + + + +
Musculoskeletal System	
Bone	+ +
Vertebra, alveolar/bronchiolar carcinoma, metastatic, lung	
Nervous System	
Brain	+ +

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Lesions in Female Mice

D-15

TABLE D2
Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of Talc: 6 mg/m³ (continued)

Number of Days on Study	7 7	
	1 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	
	4 9 9 9 9 0 0 0 0 0 1 1 1 1 1 2 2 2 2 2 2 3 3 3	
Carcass ID Number	0 0 0 0 1 0 0 0 0 1 0 0 1 1 1 1 1 1 1 1 1 0 1 1	Total Tissues/Tumors
	8 2 2 3 0 5 5 7 7 0 8 8 0 1 3 4 4 6 6 6 7 4 7 8	
	1 1	
General Body System		
Tissue NOS	+	1
Genital System		
Ovary	+ + + M + + + + + + + + + + + + + + + + M + +	43
Adenoma		1
Cystadenoma	X	1
Uterus	+ +	45
Hematopoietic System		
Bone marrow	A +	43
Lymph node	+ +	46
Lymph node, bronchial	+ + I + + + + + M + + + + + + + + + + + + + + + +	37
Adenocarcinoma, metastatic, kidney		1
Alveolar/bronchiolar carcinoma, metastatic, lung		3
Lymph node, mandibular	M M + + + + + M + + + + + + + M + + + + + + + +	38
Lymph node, mediastinal	M M + M M + M + + + + + + M M M M M + M M M M	17
Adenocarcinoma, metastatic, kidney		1
Alveolar/bronchiolar carcinoma, metastatic, lung		1
Lymph node, mesenteric	A + + + + + I M + + + + M + I + + M + + M + + + +	31
Spleen	A +	44
Thymus	+ +	40
Alveolar/bronchiolar carcinoma, metastatic, lung		2
Integumentary System		
Mammary gland	+ + + + + + + I + + + + + + + + + + + + + + + +	45
Skin	+ +	46
Musculoskeletal System		
Bone	+ +	48
Vertebra, alveolar/bronchiolar carcinoma, metastatic, lung		1
Nervous System		
Brain	+ +	48

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Talc, NTP TR 421

TABLE D2
Individual Animal Tumor Pathology of Female Mice in the 2-Year Inhalation Study of Talc: 6 mg/m³ (continued)

Number of Days on Study	0	0	4	4	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	7	7	7		
	2	9	2	9	0	3	4	5	5	6	1	2	2	4	4	6	7	7	8	9	9	0	0	1
	0	2	2	1	0	4	8	4	9	4	8	1	8	1	5	5	6	8	6	2	9	9	9	2
Carcass ID Number	1	0	0	1	0	1	1	1	0	1	0	1	0	0	1	1	0	1	1	0	0	1	1	0
	1	5	1	1	5	4	7	4	1	7	2	2	5	8	3	0	5	7	3	8	6	1	4	2
	7	5	6	5	0	7	6	8	9	5	2	0	6	1	6	8	8	1	9	3	0	8	0	0
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Respiratory System																								
Larynx	+	+	+	A	A	I	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Adenocarcinoma, metastatic, kidney																	X							
Alveolar/bronchiolar adenoma												X												
Alveolar/bronchiolar carcinoma						X											X	X				X		
Hepatocellular carcinoma, metastatic, liver																								
Ncsc	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Trachea	+	+	+	A	A	+	M	+	+	A	A	+	A	A	+	+	M	+	M	+	+	+	+	
Special Senses System																								
Eye																								+
Harderian gland																								+
Adenoma																								
Urinary System																								
Kidney	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	
Adenocarcinoma																		X						
Urinary bladder	A	A	+	A	+	+	+	+	+	A	+	+	+	A	A	+	A	+	+	+	+	+	+	
Systemic Lesions																								
Multiple organs	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Lymphoma malignant lymphocytic																		X						
Lymphoma malignant mixed																							X	