TABLE A2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE RATS: VEHICLE CONTROL (Continued)

WEEKS ON STUDY	039	053	055	066	069	074	078	080	081	085	086	086	088	091	093	094	095	097	098	098	101	102	102	103
CARCASS ID	031	061	095	134	045	133	132	054	014	094	073	065	085	103	044	035	114	053	043	113	102	124	123	093	084
GENITAL SYSTEM																									
Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	M	+	+	+	+	+
Histiocytic sarcoma, metastatic													X												
Leukemia mononuclear															X										
Mesothelioma malignant, metastatic																									
Preputial gland	M	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenoma														X											
Carcinoma																									
Histiocytic sarcoma, metastatic													X												
Leukemia mononuclear						X			X						X						X				
Mesothelioma malignant, metastatic																									
Prostate	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear						X									X										
Serosa, histiocytic sarcoma, metastatic													X												
Seminal vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear															X						X				
Serosa, histiocytic sarcoma, metastatic													X												
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+
Leukemia mononuclear			X			X		X	X						X						X	X			
Bilateral, interstitial cell, adenoma						X				X	X		X	X	X	X	X		X		X	X	X	X	X
Interstitial cell, adenoma					X		X	X	X											X					
Tunic, histiocytic sarcoma, metastatic													X												
Tunic, mesothelioma malignant																									
HEMATOPOIETIC SYSTEM																									
Blood		+	+			+	+	+	+				+		+	+					+	+			
Histiocytic sarcoma, metastatic													X												
Leukemia mononuclear		X	X			X	X	X	X						X	X					X	X			
Bone marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Histiocytic sarcoma, metastatic				X																					
Leukemia mononuclear			X			X		X	X						X	X					X	X			
Lymph node	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Axillary, leukemia mononuclear									X																
Bronchial, leukemia mononuclear																									
Deep cervical, leukemia mononuclear																									
Iliac, leukemia mononuclear						X																			
Inguinal, leukemia mononuclear																									
Lumbar, leukemia mononuclear																X					X				
Mediastinal, leukemia mononuclear																									
Pancreatic, leukemia mononuclear						X									X	X					X				
Renal, leukemia mononuclear						X																			
Lymph node, mandibular	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+
Leukemia mononuclear			X			X		X	X						X						X	X			
Lymph node, mesenteric	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear		X	X			X	X	X	X						X	X					X	X			
Inguinal, lumbar, mediastinal, histiocytic sarcoma, metastatic													X												
Mediastinal, mandibular, histiocytic sarcoma, metastatic				X																					
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Histiocytic sarcoma, metastatic				X																					
Leukemia mononuclear		X	X			X	X	X	X						X	X					X	X			
Capsule, histiocytic sarcoma, metastatic													X												
Thymus	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Histiocytic sarcoma, metastatic				X																					
Leukemia mononuclear			X			X		X	X						X						X	X			
INTEGUMENTARY SYSTEM																									
Mammary gland	M	M	+	+	+	+	+	+	M	+	M	+	+	+	+	+	+	+	+	+	M	+	+	+	+
Adenocarcinoma																									
Adenoma																									
Fibroadenoma																									
Histiocytic sarcoma, metastatic													X												
Leukemia mononuclear																									
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Keratoacanthoma									X																
Hair follicle, leukemia mononuclear																					X				
Posterior, leukemia mononuclear			X																						
Subcutaneous tissue, fibroma											X														
Subcutaneous tissue, fibrosarcoma													X												
Subcutaneous tissue, histiocytic sarcoma				X									X												
Subcutaneous tissue, leukemia mononuclear			X			X			X												X				
MUSCULOSKELETAL SYSTEM																									
Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Vertebra, leukemia mononuclear						X																			
Skeletal muscle						+			+				+												
Histiocytic sarcoma, metastatic													X												
Leukemia mononuclear						X			X																
NERVOUS SYSTEM																									
Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X			X									X						X				
Meninges, leukemia mononuclear															X	X									
Spinal cord		+	+	M	+	+	+	+	+												+				
Leukemia mononuclear			X																		X				
Meninges, leukemia mononuclear						X			X																

TABLE A2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE RATS: VEHICLE CONTROL (Continued)

WEEKS ON STUDY	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
CARCASS ID	083	042	122	011	012	013	024	033	034	052	063	064	071	072	081	082	101	121	021	022	023	032	041	051	062
GENITAL SYSTEM																									
Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Histiocytic sarcoma, metastatic																									
Leukemia mononuclear				X																					
Mesothelioma malignant, metastatic																						X			
Preputial gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenoma						X			X		X						X		X			X		X	X
Carcinoma																						X			
Histiocytic sarcoma, metastatic																									
Leukemia mononuclear																									
Mesothelioma malignant, metastatic																						X			
Prostate	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	M
Leukemia mononuclear																								X	
Serosa, histiocytic sarcoma, metastatic																									
Seminal vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	M
Leukemia mononuclear													X											X	
Serosa, histiocytic sarcoma, metastatic																									
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																								X	
Bilateral, interstitial cell, adenoma	X			X		X	X	X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	
Interstitial cell, adenoma					X							X										X			
Tunic, histiocytic sarcoma, metastatic																									
Tunic, mesothelioma malignant																						X			
HEMATOPOIETIC SYSTEM																									
Blood			+							+	+	+	+				+		+		+			+	+
Histiocytic sarcoma, metastatic																									
Leukemia mononuclear			X							X		X	X								X			X	
Bone marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Histiocytic sarcoma, metastatic																									
Leukemia mononuclear			X														X								
Lymph node	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Axillary, leukemia mononuclear																									
Bronchial, leukemia mononuclear																									X
Deep cervical, leukemia mononuclear																									
Iliac, leukemia mononuclear																									
Inguinal, leukemia mononuclear									X															X	
Lumbar, leukemia mononuclear			X																						
Mediastinal, leukemia mononuclear			X							X		X					X		X						
Pancreatic, leukemia mononuclear			X											X							X				
Renal, leukemia mononuclear																					X			X	X
Lymph node, mandibular	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X						X			X	X						X					X	
Lymph node, mesenteric	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X							X		X					X		X		X			X	
Inguinal, lumbar, mediastinal, histiocytic sarcoma, metastatic																									
Mediastinal, mandibular, histiocytic sarcoma, metastatic																									
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Histiocytic sarcoma, metastatic																									
Leukemia mononuclear			X	X	X		X		X	X		X	X	X			X	X	X		X			X	X
Capsule, histiocytic sarcoma, metastatic																									
Thymus	+	M	+	M	+	+	+	+	+	M	M	M	+	M	+	+	+	+	+	+	M	+	+	+	+
Histiocytic sarcoma, metastatic																									
Leukemia mononuclear									X															X	
INTEGUMENTARY SYSTEM																									
Mammary gland	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenocarcinoma					X																				
Adenoma																				X					
Fibroadenoma						X							X												
Histiocytic sarcoma, metastatic																									
Leukemia mononuclear																								X	
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Keratoacanthoma																	X								
Hair follicle, leukemia mononuclear																									
Posterior, leukemia mononuclear																									
Subcutaneous tissue, fibroma																									
Subcutaneous tissue, fibrosarcoma																									
Subcutaneous tissue, histiocytic sarcoma																									
Subcutaneous tissue, leukemia mononuclear																								X	
MUSCULOSKELETAL SYSTEM																									
Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Vertebra, leukemia mononuclear																									
Skeletal muscle	+																								
Histiocytic sarcoma, metastatic																									
Leukemia mononuclear																									
NERVOUS SYSTEM																									
Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Meninges, leukemia mononuclear																								X	
Spinal cord			+															+						+	
Leukemia mononuclear																									
Meninges, leukemia mononuclear			X																					X	

TABLE A2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE RATS: VEHICLE CONTROL (Continued)

WEEKS ON STUDY	105	105	105	105	105	TOTAL: TISSUES TUMORS
CARCASS ID	091	092	111	112	131	
GENITAL SYSTEM						
Epididymis	+	+	+	+	+	53
Histiocytic sarcoma, metastatic						1
Leukemia mononuclear						2
Mesothelioma malignant, metastatic						1
Preputial gland	+	+	+	+	+	53
Adenoma		X			X	11
Carcinoma						1
Histiocytic sarcoma, metastatic						1
Leukemia mononuclear				X		5
Mesothelioma malignant, metastatic						1
Prostate	+	+	+	+	+	53
Leukemia mononuclear				X		4
Serosa, histiocytic sarcoma, metastatic						1
Seminal vesicle	+	+	+	+	+	53
Leukemia mononuclear				X		5
Serosa, histiocytic sarcoma, metastatic						1
Testes	+	+	+	+	+	54
Leukemia mononuclear						8
Bilateral, interstitial cell, adenoma	X		X	X	X	37
Interstitial cell, adenoma		X				9
Tunic, histiocytic sarcoma, metastatic						1
Tunic, mesothelioma malignant						1
HEMATOPOIETIC SYSTEM						
Blood				+		22
Histiocytic sarcoma, metastatic						1
Leukemia mononuclear				X		17
Bone marrow	+	+	+	+	+	55
Histiocytic sarcoma, metastatic						1
Leukemia mononuclear				X		11
Lymph node	+	+	+	+	+	55
Axillary, leukemia mononuclear						1
Bronchial, leukemia mononuclear						1
Deep cervical, leukemia mononuclear				X		1
Iliac, leukemia mononuclear						1
Inguinal, leukemia mononuclear				X		3
Lumbar, leukemia mononuclear				X		4
Mediastinal, leukemia mononuclear				X		6
Pancreatic, leukemia mononuclear		X		X		9
Renal, leukemia mononuclear						4
Lymph node, mandibular	+	+	+	+	+	52
Leukemia mononuclear		X		X		15
Lymph node, mesenteric	+	+	+	+	+	53
Leukemia mononuclear				X		18
Inguinal, lumbar, mediastinal, histiocytic sarcoma, metastatic						1
Mediastinal, mandibular, histiocytic sarcoma, metastatic						1
Spleen	+	+	+	+	+	55
Histiocytic sarcoma, metastatic						1
Leukemia mononuclear		X		X	X	28
Capsule, histiocytic sarcoma, metastatic						1
Thymus	+	+	+	+	M	46
Histiocytic sarcoma, metastatic						1
Leukemia mononuclear				X		10
INTEGUMENTARY SYSTEM						
Mammary gland	+	+	+	+	+	49
Adenocarcinoma						1
Adenoma						1
Fibroadenoma		X				3
Histiocytic sarcoma, metastatic						1
Leukemia mononuclear				X		2
Skin	+	+	+	+	+	55
Keratoacanthoma						2
Hair follicle, leukemia mononuclear						1
Posterior, leukemia mononuclear						1
Subcutaneous tissue, fibroma						1
Subcutaneous tissue, fibrosarcoma						1
Subcutaneous tissue, histiocytic sarcoma						2
Subcutaneous tissue, leukemia mononuclear				X		6
MUSCULOSKELETAL SYSTEM						
Bone	+	+	+	+	+	55
Vertebra, leukemia mononuclear						1
Skeletal muscle						4
Histiocytic sarcoma, metastatic						1
Leukemia mononuclear						2
NERVOUS SYSTEM						
Brain	+	+	+	+	+	55
Leukemia mononuclear				X		5
Meninges, leukemia mononuclear						3
Spinal cord		+		+		13
Leukemia mononuclear						2
Meninges, leukemia mononuclear		X		X		6

TABLE A2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE RATS: VEHICLE CONTROL (Continued)

WEEKS ON STUDY	039	053	055	066	069	074	078	080	081	085	086	086	088	091	093	094	095	097	098	098	101	102	102	103
CARCASS ID	031	061	095	134	045	133	132	054	014	094	073	065	085	103	044	035	114	053	043	113	102	124	123	093	084
RESPIRATORY SYSTEM																									
Larynx																	+								
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Alveolar/bronchiolar adenoma																									
Histiocytic sarcoma, metastatic				X									X												
Leukemia mononuclear		X	X			X	X	X	X						X	X					X	X			
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear						X			X						X						X				
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear						X																			
SPECIAL SENSES SYSTEM																									
Ear									+								+								
Canal, carcinoma, extension, metastatic, Zymbal gland																	X								
Eye								+	+																
Leukemia mononuclear									X																
Harderian gland				+					+																
Leukemia mononuclear									X																
Zymbal gland											+			+			+								
Carcinoma																	X								
URINARY SYSTEM																									
Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X			X	X	X	X						X	X					X	X			
Capsule, histiocytic sarcoma, metastatic													X												
Urinary bladder	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	M	+	+	+	+	+	+	+
Leukemia mononuclear						X															X	X			
Serosa, histiocytic sarcoma, metastatic													X												
Serosa, mesothelioma malignant, metastatic																									

TABLE A2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE RATS: VEHICLE CONTROL (Continued)

WEEKS ON STUDY	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
CARCASS ID	083	042	122	011	012	013	024	033	034	052	063	064	071	072	081	082	101	121	021	022	023	032	041	051	062
RESPIRATORY SYSTEM																									
Larynx																									
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Alveolar/bronchiolar adenoma																		X							
Histiocytic sarcoma, metastatic																									
Leukemia mononuclear									X	X		X	X	X			X		X		X			X	X
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Trachea	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
Leukemia mononuclear																									
SPECIAL SENSES SYSTEM																									
Ear																									
Canal, carcinoma, extension, metastatic, Zymbal gland																									
Eye																									
Leukemia mononuclear																									
Harderian gland																									
Leukemia mononuclear																									
Zymbal gland																									
Carcinoma																									
URINARY SYSTEM																									
Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X							X		X					X		X					X	
Capsule, histiocytic sarcoma, metastatic																									
Urinary bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	M
Leukemia mononuclear																								X	
Serosa, histiocytic sarcoma, metastatic																									
Serosa, mesothelioma malignant, metastatic																						X			

TABLE A2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE RATS: VEHICLE CONTROL (Continued)

WEEKS ON STUDY	105	105	105	105	105	TOTAL: TISSUES TUMORS
CARCASS ID	091	092	111	112	113	
RESPIRATORY SYSTEM						
Larynx						1
Lung	+	+	+	+	+	55
Alveolar/bronchiolar adenoma						1
Histiocytic sarcoma, metastatic						2
Leukemia mononuclear				X		21
Nose	+	+	+	+	+	55
Leukemia mononuclear				X		5
Trachea	+	+	+	+	+	53
Leukemia mononuclear						1
SPECIAL SENSES SYSTEM						
Ear						2
Canal, carcinoma, extension, metastatic, Zymbal gland						1
Eye						2
Leukemia mononuclear						1
Harderian gland						2
Leukemia mononuclear						1
Zymbal gland						3
Carcinoma						1
URINARY SYSTEM						
Kidney	+	+	+	+	+	55
Leukemia mononuclear				X		16
Capsule, histiocytic sarcoma, metastatic						1
Urinary bladder	+	+	+	+	+	51
Leukemia mononuclear				X		5
Serosa, histiocytic sarcoma, metastatic						1
Serosa, mesothelioma malignant, metastatic						1

TABLE A2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE: LOW DOSE

WEEKS ON STUDY	013	030	038	056	062	062	067	070	077	078	083	084	086	088	088	089	090	091	092	093	094	094	094	095	095
CARCASS ID	1741	2411	1555	2331	2422	1725	1955	1954	1164	1444	1193	1443	1663	1553	2255	1552	1551	1612	2113	1412	2224	2204	2233	2305	2003
ALIMENTARY SYSTEM																									
Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large, cecum	+	+	+	+	+	+	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X														X								
Colon, serosa, rectum, mesothelioma malignant, metastatic																							X		
Intestine large, colon	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+
Leukemia mononuclear			X																		X				
Intestine large, rectum	M	+	M	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	M	+	+		+	+
Leukemia mononuclear										X															
Intestine small	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine small, duodenum	+	+		+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear										X															
Ileum, mesothelioma malignant, metastatic																							X		
Serosa, mesothelioma malignant, metastatic				X																					
Intestine small, ileum	+	+	+	+	+	+	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+
Leukemia mononuclear			X																						
Intestine small, jejunum	+	M	+	+	M	+	A	A	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leiomyosarcoma																						X			
Leukemia mononuclear																					X				
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Histiocytic sarcoma, metastatic														X											
Leukemia mononuclear			X							X	X		X		X	X	X	X			X		X	X	X
Mesothelioma malignant																									
Mesothelioma malignant, metastatic				X																			X		
Neoplastic nodule																									
Bile duct, leiomyosarcoma, extension, metastatic, intestine small																						X			
Mesentery				+				+					+			+	+					+	+	+	
Leiomyosarcoma, extension, metastatic, intestine small																						X			
Leukemia mononuclear																	X							X	
Mesothelioma malignant																									
Mesothelioma malignant, metastatic				X																			X		
Pancreas	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X							X							X								
Mesothelioma malignant, metastatic				X																			X		
Salivary glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Stomach	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, forestomach	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																	X								
Serosa, glandular, mesothelioma malignant, metastatic				X																			X		
Stomach, glandular	+	+	+		+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+
Leukemia mononuclear			X														X				X			X	
Tooth													+				+	+			+			+	
Pulp, leukemia mononuclear													X				X	X			X			X	
CARDIOVASCULAR SYSTEM																									
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X							X	X		X		X	X	X	X			X			X	
Atrium, histiocytic sarcoma, metastatic														X											
Atrium right, liposarcoma, metastatic, skin		X																							
ENDOCRINE SYSTEM																									
Adrenal gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adrenal gland, cortex	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X							X			X		X	X	X	X			X			X	X
Capsule, mesothelioma malignant, metastatic				X																					
Adrenal gland, medulla	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X								X		X		X	X	X				X			X	X
Pheochromocytoma malignant																									
Pheochromocytoma benign											X						X				X		X	X	
Bilateral, pheochromocytoma benign															X							X			
Islets, pancreatic	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenoma																									
Parathyroid gland	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pituitary gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X							X							X							X	
Pars distalis, adenoma							X															X			
Pars distalis, carcinoma																			X						
Thyroid gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																								X	
C-cell, adenoma										X															
C-cell, carcinoma														X											X
GENERAL BODY SYSTEM																									
None																									

TABLE A2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE RATS: LOW DOSE (Continued)

WEEKS ON STUDY	096	097	098	099	101	102	102	103	104	104	104	104	105	105	105	105	105	105	105	105	105	105	105	105	105
CARCASS ID	226	264	245	174	234	192	233	141	191	221	254	263	173	183	201	202	212	232	243	244	262	161	172	181	182
ALIMENTARY SYSTEM																									
Esophagus	+	+	+	+	+	+	+	+	+	+	+	+													
Intestine large	+	+	+	+	+	+	+	+	+	+	+	+													
Intestine large, cecum	+	+	+	+	A	+	+	+	+	+	+	+													
Leukemia mononuclear																									
Colon, serosa, rectum, mesothelioma malignant, metastatic																									
Intestine large, colon	+	+	+	+	+	+	+	+	+	+	+	+													
Leukemia mononuclear						X					X														
Intestine large, rectum	+	+	+	+	+	+	+	+	+	+	+	+													
Leukemia mononuclear																									
Intestine small	+	+	+	+	+	+	+	+	+	+	+	+													
Intestine small, duodenum	+	+	+	+	+	+	+	+	+	+	+	+													
Leukemia mononuclear						X																			
Ileum, mesothelioma malignant, metastatic																									
Serosa, mesothelioma malignant, metastatic																									
Intestine small, ileum	+	+	+	+	A	+	+	+	+	+	+	+													
Leukemia mononuclear												X													
Intestine small, jejunum	A	+	+	+	A	+	+	+	+	+	+	+													
Leiomyosarcoma																									
Leukemia mononuclear																									
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Histiocytic sarcoma, metastatic																									
Leukemia mononuclear			X	X		X	X			X	X	X					X			X	X	X		X	X
Mesothelioma malignant																									
Mesothelioma malignant, metastatic																									
Neoplastic nodule														X										X	
Bile duct, leiomyosarcoma, extension, metastatic, intestine small																									
Mesentery	+	+				+	+		+				+												
Leiomyosarcoma, extension, metastatic, intestine small																									
Leukemia mononuclear						X	X																		
Mesothelioma malignant																									
Mesothelioma malignant, metastatic																									
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+													
Leukemia mononuclear							X																		
Mesothelioma malignant, metastatic																									
Salivary glands	+	+	+	+	+	+	+	+	+	+	+	+													
Leukemia mononuclear							X																		
Stomach	+	+	+	+	+	+	+	+	+	+	+	+													
Stomach, forestomach	+	+	+	+	+	+	+	+	+	+	+	+													
Leukemia mononuclear												X													
Serosa, glandular, mesothelioma malignant, metastatic																									
Stomach, glandular	+	+	+	+	+	+	+	+	+	+	+	+													
Leukemia mononuclear						X																			
Tooth			+			+	+				+														
Pulp, leukemia mononuclear			X			X	X				X														
CARDIOVASCULAR SYSTEM																									
Heart	+	+	+	+	+	+	+	+	+	+	+	+													
Leukemia mononuclear			X	X		X	X				X	X													
Atrium, histiocytic sarcoma, metastatic																									
Atrium right, liposarcoma, metastatic, skin																									
ENDOCRINE SYSTEM																									
Adrenal gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+			+	+		+	+	+	
Adrenal gland, cortex	+	+		+	+	+	+	+	+	+	+	+							+						
Leukemia mononuclear						X	X				X														
Capsule, mesothelioma malignant, metastatic																									
Adrenal gland, medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+			+	+		+	+	+	
Leukemia mononuclear						X	X				X														
Pheochromocytoma malignant								X						X											
Pheochromocytoma benign				X	X		X					X										X		X	
Bilateral, pheochromocytoma benign																			X						
Islets, pancreatic	+	+	+	+	+	+	+	+	+	+	+	+													
Adenoma									X																
Parathyroid gland	+	+	+	+	+	+	+	+	+	+	+	+												M	
Pituitary gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X	X			X															X		X	
Pars distalis, adenoma		X								X	X	X									X		X		
Pars distalis, carcinoma																									
Thyroid gland	+	+	+	+	+	+	+	+	+	+	+	+				+									
Leukemia mononuclear							X					X													
C-cell, adenoma																X									
C-cell, carcinoma																									
GENERAL BODY SYSTEM																									
None																									

TABLE A2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE RATS: LOW DOSE (Continued)

WEEKS ON STUDY	105	105	105	105	105	TOTAL: TISSUES TUMORS
CARCASS ID	2121	2125	2125	2123	2261	
ALIMENTARY SYSTEM						
Esophagus						37
Intestine large						37
Intestine large, cecum						34
Leukemia mononuclear						2
Colon, serosa, rectum, mesothelioma malignant, metastatic						1
Intestine large, colon						35
Leukemia mononuclear						4
Intestine large, rectum						32
Leukemia mononuclear						1
Intestine small						36
Intestine small, duodenum						35
Leukemia mononuclear						2
Ileum, mesothelioma malignant, metastatic						1
Serosa, mesothelioma malignant, metastatic						1
Intestine small, ileum						33
Leukemia mononuclear						2
Intestine small, jejunum						30
Leiomyosarcoma						1
Leukemia mononuclear						1
Liver	+	+	+	+	+	55
Histiocytic sarcoma, metastatic						1
Leukemia mononuclear					X	26
Mesothelioma malignant			X			1
Mesothelioma malignant, metastatic						2
Neoplastic nodule						2
Bile duct, leiomyosarcoma, extension, metastatic, intestine small						1
Mesentery	+		+			16
Leiomyosarcoma, extension, metastatic, intestine small						1
Leukemia mononuclear						4
Mesothelioma malignant			X			1
Mesothelioma malignant, metastatic						2
Pancreas						36
Leukemia mononuclear						4
Mesothelioma malignant, metastatic						2
Salivary glands						37
Leukemia mononuclear						1
Stomach						36
Stomach, forestomach						36
Leukemia mononuclear						2
Serosa, glandular, mesothelioma malignant, metastatic						2
Stomach, glandular						34
Leukemia mononuclear						5
Tooth						9
Pulp, leukemia mononuclear						9
CARDIOVASCULAR SYSTEM						
Heart					+	38
Leukemia mononuclear					X	17
Atrium, histiocytic sarcoma, metastatic						1
Atrium right, liposarcoma, metastatic, skin						1
ENDOCRINE SYSTEM						
Adrenal gland	+	+	+		+	49
Adrenal gland, cortex					+	37
Leukemia mononuclear					X	14
Capsule, mesothelioma malignant, metastatic						1
Adrenal gland, medulla	+	+	+		+	48
Leukemia mononuclear					X	13
Pheochromocytoma malignant						2
Pheochromocytoma benign	X	X	X			14
Bilateral, pheochromocytoma benign						3
Islets, pancreatic						36
Adenoma						1
Parathyroid gland						36
Pituitary gland	+	+	+	+	M	54
Leukemia mononuclear						9
Pars distalis, adenoma		X				9
Pars distalis, carcinoma						1
Thyroid gland						38
Leukemia mononuclear						3
C-cell, adenoma						2
C-cell, carcinoma						2
GENERAL BODY SYSTEM						
None						

TABLE A2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE RATS: LOW DOSE (Continued)

WEEKS ON STUDY	013	030	038	056	062	062	067	070	077	078	083	084	086	088	088	089	090	091	092	093	094	094	094	095	095
CARCASS ID	171	241	155	231	242	175	195	194	164	144	193	143	163	153	255	152	151	162	213	142	224	204	223	235	203
GENITAL SYSTEM																									
Coagulating gland																									
Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear													X												
Mesothelioma malignant, metastatic																							X		
Penis																									
Leukemia mononuclear																									
Preputial gland	M	M	M	M	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	M	+	+
Adenoma									X	X												X		X	
Carcinoma																									X
Leukemia mononuclear													X				X								
Prostate	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenoma																									
Leukemia mononuclear																X		X						X	
Serosa, mesothelioma malignant, metastatic				X																					
Seminal vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+
Leukemia mononuclear																	X	X						X	
Serosa, mesothelioma malignant, metastatic				X																					
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear										X			X					X			X		X	X	
Bilateral, interstitial cell, adenoma									X	X		X		X	X	X		X		X	X		X		X
Interstitial cell, adenoma				X	X		X	X					X				X		X			X		X	
Tunic, mesothelioma malignant				X																			X		
HEMATOPOIETIC SYSTEM																									
Blood			+	+					+	+	+		+		+	+	+	+			+		+	+	+
Leukemia mononuclear			X							X	X		X		X	X	X				X		X	X	X
Bone marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X							X			X			X	X	X			X		X	X	X
Lymph node	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Bronchial, leukemia mononuclear																							X		
Deep cervical, leukemia mononuclear																									X
Iliac, leukemia mononuclear																								X	
Inguinal, leukemia mononuclear																		X							X
Lumbar, leukemia mononuclear																									
Mediastinal, histiocytic sarcoma, metastatic														X											
Mediastinal, leukemia mononuclear															X			X						X	X
Pancreatic, leukemia mononuclear													X				X								
Lymph node, mandibular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+
Leukemia mononuclear										X			X		X		X				X			X	X
Lymph node, mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+
Leukemia mononuclear			X							X			X			X	X	X						X	X
Mesothelioma malignant, metastatic				X																			X		
Spleen	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leiomyosarcoma, metastatic, intestine small																						X			
Leukemia mononuclear			X							X	X		X		X	X	X	X			X		X	X	X
Capsule, mesothelioma malignant																									
Capsule, mesothelioma malignant, metastatic				X																			X		
Thymus	+	+	+	+	+	M	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+
Leukemia mononuclear			X							X			X			X	X	X			X			X	X
INTEGUMENTARY SYSTEM																									
Mammary gland	M	M	+	+	M	M	+	M	+		M	+	+	+	+	+	+	+	+	M	+	+	+	+	+
Skin	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Basosquamous tumor malignant																									
Subcutaneous tissue, fibroma																	X								
Subcutaneous tissue, fibrosarcoma																									
Subcutaneous tissue, histiocytic sarcoma														X											
Subcutaneous tissue, leukemia mononuclear																	X								
Subcutaneous tissue, lipoma												X													
Subcutaneous tissue, liposarcoma		X																							
MUSCULOSKELETAL SYSTEM																									
Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Skeletal muscle														+									+		
Leiomyosarcoma, metastatic, intestine small																						X			
NERVOUS SYSTEM																									
Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X													X		X						X	
Meninges, leukemia mononuclear																									
Meninges, cerebrum, histiocytic sarcoma, metastatic														X											
Peripheral nerve														+											
Spinal cord	+	+	+	+	+	+	+		+		+						+	+					+		
Leukemia mononuclear			X																						
Meninges, leukemia mononuclear																	X	X					X		

TABLE A2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE RATS: LOW DOSE (Continued)

WEEKS ON STUDY	096	097	098	099	101	102	102	103	104	104	104	104	105	105	105	105	105	105	105	105	105	105	105	105	105
CARCASS ID	222	264	245	174	234	192	233	141	191	221	254	263	173	183	201	202	212	232	243	244	262	161	172	181	182
GENITAL SYSTEM																									
Coagulating gland										+															
Epididymis	+	+	+	+	+	+	+	+	+	+	+	+													
Leukemia mononuclear																									
Mesothelioma malignant, metastatic																									
Penis							+																		
Leukemia mononuclear							X																		
Preputial gland	+	+	+	+	+	+	+	+	+	+	+	+				+						+			
Adenoma							X		X							X									
Carcinoma																									
Leukemia mononuclear				X		X	X				X	X													
Prostate	+	+	+	+	+	+	+	+	+	+	+	+			+	+							+		
Adenoma							X																		
Leukemia mononuclear							X																		
Serosa, mesothelioma malignant, metastatic																									
Seminal vesicle	+	+	+	+	+	+	+	+	+	+	+	+													
Leukemia mononuclear						X	X					X													
Serosa, mesothelioma malignant, metastatic																									
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+
Leukemia mononuclear							X																	X	X
Bilateral, interstitial cell, adenoma	X	X	X	X	X	X		X	X		X		X	X	X	X	X	X	X		X		X	X	X
Interstitial cell, adenoma							X			X		X										X			
Tunic, mesothelioma malignant																									
HEMATOPOIETIC SYSTEM																									
Blood			+	+		+	+	+		+	+	+										+		+	
Leukemia mononuclear			X	X		X	X				X	X										X		X	
Bone marrow	+	+	+	+	+	+	+	+	+	+	+	+													
Leukemia mononuclear			X			X	X					X													
Lymph node	+	+	+	+	+	+	+	+	+	+	+	+						+	+			+			
Bronchial, leukemia mononuclear																									
Deep cervical, leukemia mononuclear						X																			
Iliac, leukemia mononuclear																									
Inguinal, leukemia mononuclear																						X			
Lumbar, leukemia mononuclear				X																					
Mediastinal, histiocytic sarcoma, metastatic																									
Mediastinal, leukemia mononuclear							X				X	X													
Pancreatic, leukemia mononuclear						X																			
Lymph node, mandibular	+	+	+	+	+	+	+	+	+	+	+	+										+			
Leukemia mononuclear				X		X	X				X	X										X			
Lymph node, mesenteric	+	+	+	+	+	+	+	+	+	+	+	+						+				+			
Leukemia mononuclear			X	X		X	X				X	X										X			
Mesothelioma malignant, metastatic																									
Spleen	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+		+	+	+	+	+	+
Leiomyosarcoma, metastatic, intestine small																									
Leukemia mononuclear			X	X		X	X			X	X	X					X			X	X	X		X	X
Capsule, mesothelioma malignant																									
Capsule, mesothelioma malignant, metastatic																									
Thymus	+	+	+	+	+	+	+	M	+	+	+	+							M		M	M			
Leukemia mononuclear				X		X	X				X	X													
INTEGUMENTARY SYSTEM																									
Mammary gland	+	+	+	+	+	+	+	+	+	+	+	+													
Skin	+	+	+	+	+	+	+	+	+	+	+	+											+		
Basosquamous tumor malignant											X														
Subcutaneous tissue, fibroma																									
Subcutaneous tissue, fibrosarcoma																							X		
Subcutaneous tissue, histiocytic sarcoma																									
Subcutaneous tissue, leukemia mononuclear				X			X				X														
Subcutaneous tissue, lipoma																									
Subcutaneous tissue, liposarcoma																									
MUSCULOSKELETAL SYSTEM																									
Bone	+	+	+	+	+	+	+	+	+	+	+	+													
Skeletal muscle								+																	
Leiomyosarcoma, metastatic, intestine small																									
NERVOUS SYSTEM																									
Brain	+	+	+	+	+	+	+	+	+	+	+	+													
Leukemia mononuclear						X																			
Meninges, leukemia mononuclear							X																		
Meninges, cerebrum, histiocytic sarcoma, metastatic																									
Peripheral nerve											+														
Spinal cord																									
Leukemia mononuclear											X														
Meninges, leukemia mononuclear																									

TABLE A2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE RATS: LOW DOSE (Continued)

WEEKS ON STUDY	105	105	105	105	105	TOTAL: TISSUES TUMORS
CARCASS ID	251	251	252	253	261	
GENITAL SYSTEM						
Coagulating gland						1
Epididymis						37
Leukemia mononuclear						1
Mesothelioma malignant, metastatic						1
Penis						1
Leukemia mononuclear						1
Preputial gland		+				34
Adenoma		X				8
Carcinoma						1
Leukemia mononuclear						7
Prostate					+	41
Adenoma						1
Leukemia mononuclear						4
Serosa, mesothelioma malignant, metastatic						1
Seminal vesicle						36
Leukemia mononuclear						6
Serosa, mesothelioma malignant, metastatic						1
Testes	+	+	+	+	+	54
Leukemia mononuclear						9
Bilateral, interstitial cell, adenoma	X	X	X	X	X	36
Interstitial cell, adenoma						13
Tunic, mesothelioma malignant			X			3
HEMATOPOIETIC SYSTEM						
Blood					+	25
Leukemia mononuclear					X	20
Bone marrow						37
Leukemia mononuclear						14
Lymph node					+	41
Bronchial, leukemia mononuclear						1
Deep cervical, leukemia mononuclear						1
Iliac, leukemia mononuclear						1
Inguinal, leukemia mononuclear						1
Lumbar, leukemia mononuclear						4
Mediastinal, histiocytic sarcoma, metastatic						1
Mediastinal, leukemia mononuclear						7
Pancreatic, leukemia mononuclear						3
Lymph node, mandibular					+	38
Leukemia mononuclear					X	14
Lymph node, mesenteric						38
Leukemia mononuclear						15
Mesothelioma malignant, metastatic						2
Spleen	+	+	+	+	+	52
Leiomyosarcoma, metastatic, intestine small						1
Leukemia mononuclear					X	26
Capsule, mesothelioma malignant			X			1
Capsule, mesothelioma malignant, metastatic						2
Thymus	+	M	M		+	35
Leukemia mononuclear					X	15
INTEGUMENTARY SYSTEM						
Mammary gland						29
Skin						37
Basosquamous tumor malignant						1
Subcutaneous tissue, fibroma						1
Subcutaneous tissue, fibrosarcoma						1
Subcutaneous tissue, histiocytic sarcoma						1
Subcutaneous tissue, leukemia mononuclear						4
Subcutaneous tissue, lipoma						1
Subcutaneous tissue, liposarcoma						1
MUSCULOSKELETAL SYSTEM						
Bone						37
Skeletal muscle						3
Leiomyosarcoma, metastatic, intestine small						1
NERVOUS SYSTEM						
Brain						37
Leukemia mononuclear						5
Meninges, leukemia mononuclear						1
Meninges, cerebrum, histiocytic sarcoma, metastatic						1
Peripheral nerve						1
Spinal cord						13
Leukemia mononuclear						1
Meninges, leukemia mononuclear						4

TABLE A2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE RATS: LOW DOSE (Continued)

WEEKS ON STUDY	013	030	038	056	062	062	067	070	077	078	083	084	086	088	088	089	090	091	092	093	094	094	094	095	095
CARCASS ID	171	241	155	231	242	175	195	194	164	144	193	143	163	153	255	152	151	162	213	142	224	204	223	235	203
RESPIRATORY SYSTEM																									
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Carcinoma, metastatic, Zymbal gland														X											
Histiocytic sarcoma, metastatic																									
Leukemia mononuclear			X							X	X		X		X	X	X	X			X		X	X	X
Liposarcoma, metastatic, skin		X																							
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear													X		X		X	X			X		X	X	X
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
SPECIAL SENSES SYSTEM																									
Ear																					+				
Eye																+									
Harderian gland																+									
Zymbal gland																					+				
Adenoma																									
Carcinoma																					X				
URINARY SYSTEM																									
Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X							X	X		X			X	X				X		X	X	X
Capsule, mesothelioma malignant, metastatic				X																					
Renal tubule, adenoma				X												X									
Urinary bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																	X								
Serosa, mesothelioma malignant, metastatic				X																			X		
Transitional epithelium, carcinoma, papillary							X																		

TABLE A2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE RATS: LOW DOSE (Continued)

WEEKS ON STUDY	096	097	098	099	101	102	102	103	104	104	104	104	105	105	105	105	105	105	105	105	105	105	105	105	105
CARCASS ID	222	264	245	174	234	192	233	141	191	221	254	263	173	183	201	202	212	232	243	244	262	161	172	181	182
RESPIRATORY SYSTEM																									
Lung	+	+	+	+	+	+	+	+	+	+	+	+							+						
Carcinoma, metastatic, Zymbal gland								X																	
Histiocytic sarcoma, metastatic			X	X		X	X				X														
Leukemia mononuclear																									
Liposarcoma, metastatic, skin																									
Nose	+	+	+	+	+	+	+	+	+	+	+	+													
Leukemia mononuclear						X	X				X														
Trachea	+	+	+	+	+	+	+	+	+	+	+	+													
SPECIAL SENSES SYSTEM																									
Ear										+															
Eye	+																								+
Harderian gland	+																								
Zymbal gland								+		+						+									
Adenoma										X															
Carcinoma								X								X									
URINARY SYSTEM																									
Kidney	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X	X		X	X				X	X								X	X	X		X	X
Capsule, mesothelioma malignant, metastatic																									
Renal tubule, adenoma													X										X		
Urinary bladder	+	+	+	+	+	+	+	+	+	+	+	+													
Leukemia mononuclear				X		X	X																		
Serosa, mesothelioma malignant, metastatic																									
Transitional epithelium, carcinoma, papillary																									

TABLE A2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE RATS: LOW DOSE (Continued)

WEEKS ON STUDY	105	105	105	105	105	TOTAL: TISSUES TUMORS
CARCASS ID	211	255	252	253	261	
RESPIRATORY SYSTEM						38
Lung						1
Carcinoma, metastatic, Zymbal gland						1
Histiocytic sarcoma, metastatic						17
Leukemia mononuclear						1
Liposarcoma, metastatic, skin						37
Nose						11
Leukemia mononuclear						37
Trachea						
SPECIAL SENSES SYSTEM						2
Ear						3
Eye						2
Harderian gland						4
Zymbal gland						1
Adenoma						3
Carcinoma						
URINARY SYSTEM						55
Kidney	+	+	+	+	+	22
Leukemia mononuclear					X	
Capsule, mesothelioma malignant, metastatic						1
Renal tubule, adenoma						4
Urinary bladder						37
Leukemia mononuclear						4
Serosa, mesothelioma malignant, metastatic						2
Transitional epithelium, carcinoma, papillary						1

TABLE A2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE: HIGH DOSE

WEEKS ON STUDY	046	068	072	075	080	080	081	083	086	086	087	087	088	088	091	091	092	093	093	095	096	096	096	096	097
CARCASS ID	275	374	365	285	305	394	304	354	353	384	294	345	293	303	284	344	383	315	393	364	323	272	283	373	382
ALIMENTARY SYSTEM																									
Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+		+	+	+
Intestine large, cecum	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large, colon	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+		+	+	+
Intestine large, rectum	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine small	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine small, duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear	+	+	+	+	+	+	+	+	A	+	+	A	+	+	+	+	+	+	A	+	+		+	+	+
Intestine small, ileum																									
Leukemia mononuclear	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	A	+	+		+	+	A
Intestine small, jejunum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Liver																									
Hepatocellular adenoma					X																				
Histiocytic sarcoma				X	X	X	X	X	X		X		X	X		X	X	X	X	X	X		X		
Leukemia mononuclear																									
Neoplastic nodule			+	+	+						+														
Mesentery				X	X						X														
Leukemia mononuclear																									
Mesothelioma malignant	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pancreas					X															X					
Leukemia mononuclear																									
Mesothelioma malignant	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Salivary glands					X															X					
Leukemia mononuclear																									
Stomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Mesothelioma malignant																									
Stomach, glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Tooth					+			+									+								
Pulp, leukemia mononuclear					X			X									X								
CARDIOVASCULAR SYSTEM																									
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X	X	X	X			X			X					X	X	X		X		
Schwannoma, NOS																									
ENDOCRINE SYSTEM																									
Adrenal gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adrenal gland, cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
Leukemia mononuclear						X	X	X	X		X			X				X		X	X		X		
Adrenal gland, medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear				X	X	X	X	X	X		X			X				X		X	X		X		
Pheochromocytoma malignant																									X
Pheochromocytoma benign										X			X								X	X			
Bilateral, pheochromocytoma benign																	X			X					
Islets, pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Parathyroid gland	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X																				
Pituitary gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X		X	X						X						X			X		
Pars distalis, adenoma										X															
Thyroid gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
C-cell, adenoma								X																	
C-cell, carcinoma																									
Follicular cell, adenoma																									X
GENERAL BODY SYSTEM																									
None																									
GENITAL SYSTEM																									
Coagulating gland											+														
Leukemia mononuclear											X														
Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X						X														
Mesothelioma malignant																									
Preputial gland	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenoma												X												X	
Carcinoma			X			X																			X
Leukemia mononuclear																	X								
Prostate	+	+	+	+	X	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X															X	X				
Seminal vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X		X				X										X				
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear							X														X				
Bilateral, interstitial cell, adenoma					X		X	X	X		X	X			X	X		X		X	X	X	X	X	X
Interstitial cell, adenoma				X		X							X	X					X						
Tunic, mesothelioma malignant																									X

TABLE A2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE RATS: HIGH DOSE
(Continued)

WEEKS ON STUDY	098	098	099	100	100	101	101	102	102	103	103	103	105	105	105	105	105	105	105	105	105	105	105	105	105
CARCASS ID	302	282	281	301	343	371	314	342	352	271	392	292	291	312	313	322	341	351	361	362	363	372	311	321	331
ALIMENTARY SYSTEM																									
Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large, cecum	+	+	+	+	+	+	+	A	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large, colon	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large, rectum	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine small	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine small, duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear														X											
Intestine small, ileum	+	+	+	+		+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear														X											
Intestine small, jejunum	M	+	+	+	+	+	+	A	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hepatocellular adenoma																	X								
Histiocytic sarcoma																									
Leukemia mononuclear		X				X			X				X	X		X			X	X		X		X	
Neoplastic nodule											X														
Mesentery					+									+								+		+	
Leukemia mononuclear														X								X			
Mesothelioma malignant																								X	
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear														X					X						
Mesothelioma malignant																								X	
Salivary glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear						X								X											
Stomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Mesothelioma malignant																								X	
Stomach, glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																			X						
Tooth		+												+					+					+	
Pulp, leukemia mononuclear														X					X					X	
CARDIOVASCULAR SYSTEM																									
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear		X				X			X					X		X						X		X	
Schwannoma, NOS																		X							
ENDOCRINE SYSTEM																									
Adrenal gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adrenal gland, cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear		X				X							X	X								X		X	
Adrenal gland, medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear		X							X					X										X	
Pheochromocytoma malignant																							X		
Pheochromocytoma benign									X		X				X	X				X	X	X	X		
Bilateral, pheochromocytoma benign						X						X		X											
Islets, pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Parathyroid gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Pituitary gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear														X											
Pars distalis, adenoma		X						X			X														
Thyroid gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear						X								X		X									
C-cell, adenoma	X																	X							
C-cell, carcinoma					X										X										
Follicular cell, adenoma																									
GENERAL BODY SYSTEM																									
None																									
GENITAL SYSTEM																									
Coagulating gland																						+			
Leukemia mononuclear																									
Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																			X						
Mesothelioma malignant																								X	
Preputial gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenoma						X							X			X	X								
Carcinoma																						X			
Leukemia mononuclear									X					X					X						
Prostate	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear									X																
Seminal vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear									X																
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear														X					X						
Bilateral, interstitial cell, adenoma	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
Interstitial cell, adenoma																								X	
Tunic, mesothelioma malignant																									

TABLE A2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE RATS: HIGH DOSE (Continued)

WEEKS ON STUDY	105	105	105	105	105	TOTAL: TISSUES TUMORS
CARCASS ID	332	333	334	381	391	
ALIMENTARY SYSTEM						
Esophagus	+	+	+	+	+	55
Intestine large	+	+	+	+	+	54
Intestine large, cecum	+	+	+	+	+	50
Intestine large, colon	+	+	+	+	+	53
Intestine large, rectum	+	+	+	+	+	52
Intestine small	+	+	+	+	+	55
Intestine small, duodenum	+	+	+	+	+	55
Leukemia mononuclear	X					1
Intestine small, ileum	+	+	+	+	+	49
Leukemia mononuclear						1
Intestine small, jejunum	+	+	+	+	+	48
Liver	+	+	+	+	+	55
Hepatocellular adenoma						1
Histiocytic sarcoma						1
Leukemia mononuclear	X	X	X	X		30
Neoplastic nodule						1
Mesentery	+					9
Leukemia mononuclear	X					6
Mesothelioma malignant						1
Pancreas	+	+	+	+	+	54
Leukemia mononuclear	X					5
Mesothelioma malignant						1
Salivary glands	+	+	+	+	+	55
Leukemia mononuclear	X					5
Stomach	+	+	+	+	+	55
Stomach, forestomach	+	+	+	+	+	55
Mesothelioma malignant						1
Stomach, glandular	+	+	+	+	+	55
Leukemia mononuclear						1
Tooth	+	+	+			10
Pulp, leukemia mononuclear	X	X				8
CARDIOVASCULAR SYSTEM						
Heart	+	+	+	+	+	55
Leukemia mononuclear	X	X	X			20
Schwannoma, NOS						1
ENDOCRINE SYSTEM						
Adrenal gland	+	+	+	+	+	55
Adrenal gland, cortex	+	+	+	+	+	54
Leukemia mononuclear	X	X	X			19
Adrenal gland, medulla	+	+	+	+	+	55
Leukemia mononuclear	X	X				18
Pheochromocytoma malignant			X			3
Pheochromocytoma benign	X					13
Bilateral, pheochromocytoma benign				X		6
Islets, pancreatic	+	M	+	+	+	54
Parathyroid gland	+	+	+	+	+	54
Leukemia mononuclear						1
Pituitary gland	+	+	+	+	+	54
Leukemia mononuclear		X				8
Pars distalis, adenoma				X		5
Thyroid gland	+	+	+	+	+	55
Leukemia mononuclear						3
C-cell, adenoma						3
C-cell, carcinoma		X				3
Follicular cell, adenoma						1
GENERAL BODY SYSTEM						
None						
GENITAL SYSTEM						
Coagulating gland						2
Leukemia mononuclear						1
Epididymis	+	+	+	+	+	55
Leukemia mononuclear						3
Mesothelioma malignant						1
Preputial gland	+	+	+	+	+	54
Adenoma						7
Carcinoma						3
Leukemia mononuclear	X					7
Prostate	+	+	+	+	+	55
Leukemia mononuclear	X					5
Seminal vesicle	+	+	+	+	+	55
Leukemia mononuclear	X					6
Testes	+	+	+	+	+	55
Leukemia mononuclear	X					6
Bilateral, interstitial cell, adenoma	X	X	X	X	X	43
Interstitial cell, adenoma						6
Tunic, mesothelioma malignant						1

TABLE A2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE RATS: HIGH DOSE
(Continued)

WEEKS ON STUDY	046	068	072	075	080	080	081	083	086	086	087	087	088	088	091	091	092	093	093	095	096	096	096	096	097
CARCASS ID	275	374	365	285	305	394	304	354	353	384	294	345	293	303	284	344	383	315	393	364	323	272	283	373	382
HEMATOPOIETIC SYSTEM																									
Blood			+	+	+	+	+		+		+		+	+		+			+	+	+		+		
Leukemia mononuclear				X	X	X	X		X		X		X	X		X			X	X	X		X		
Bone marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X	X	X	X	X		X			X		X			X	X			X		
Lymph node	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Inguinal, leukemia mononuclear					X																				
Lumbar, leukemia mononuclear																									
Mediastinal, leukemia mononuclear									X		X			X											
Pancreatic, leukemia mononuclear											X		X	X											
Renal, leukemia mononuclear																									
Lymph node, mandibular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear				X	X		X	X	X		X		X	X					X				X		
Lymph node, mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear				X	X	X	X	X	X		X		X	X					X	X			X		
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear				X	X	X	X	X	X		X		X	X		X	X	X	X	X	X		X		
Thymus	+	+	+	+	+	M	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear				X	X		X	X			X								X	X			X		
INTEGUMENTARY SYSTEM																									
Mammary gland	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Basal cell adenoma																									
Keratoacanthoma											X														
Subcutaneous tissue, leukemia mononuclear					X																				
MUSCULOSKELETAL SYSTEM																									
Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Rib, osteosarcoma												X													
Skeletal muscle					+							+			+		+				+				
Leukemia mononuclear					X																X				
Osteosarcoma, extension, metastatic, bone												X													
NERVOUS SYSTEM																									
Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X			X			X														
Meninges, leukemia mononuclear				X	X		X													X					
Spinal cord		+	+		+											+			+						
Meninges, leukemia mononuclear					X											X			X						
RESPIRATORY SYSTEM																									
Larynx																									
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Histiocytic sarcoma					X																				
Leukemia mononuclear				X	X	X	X	X	X		X		X	X		X			X	X	X		X		
Osteosarcoma, metastatic, bone												X													
Pheochromocytoma malignant, metastatic, adrenal gland																									
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X	X	X	X	X										X	X	X		X		
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
SPECIAL SENSES SYSTEM																									
Eye						+							+				+								
Harderian gland																									
Zymbal gland		+																							
Carcinoma		X																							
URINARY SYSTEM																									
Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Histiocytic sarcoma					X																				
Leukemia mononuclear				X	X	X	X	X	X		X		X	X		X		X	X	X	X		X		
Renal tubule, adenoma										X															
Urinary bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear							X				X									X					

TABLE A2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE RATS: HIGH DOSE (Continued)

WEEKS ON STUDY	098	098	099	100	100	101	101	102	102	103	103	103	105	105	105	105	105	105	105	105	105	105	105	105	105	105
CARCASS ID	302	282	281	301	343	371	314	342	352	271	392	292	291	312	313	322	341	351	361	362	363	372	311	321	331
HEMATOPOIETIC SYSTEM																									
Blood		+				+			+					+	+	+	+	+	+	+		+		+	
Leukemia mononuclear		X				X			X					X		X								X	
Bone marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear		X				X			X					X		X								X	
Lymph node	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Inguinal, leukemia mononuclear																				X					
Lumbar, leukemia mononuclear						X								X		X						X		X	
Mediastinal, leukemia mononuclear														X											
Pancreatic, leukemia mononuclear														X											
Renal, leukemia mononuclear																									
Lymph node, mandibular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+
Leukemia mononuclear		X				X			X					X		X									
Lymph node, mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+
Leukemia mononuclear						X			X					X		X								X	
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear		X				X			X				X	X		X			X	X	X	X		X	
Thymus	+	+	+	+	M	+	+	+	+	+	M	+	+	+	+	M	+	+	+	+	+	+	+	M	M
Leukemia mononuclear														X											
INTEGUMENTARY SYSTEM																									
Mammary gland	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Skin	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Basal cell adenoma										X															
Keratoacanthoma													X												
Subcutaneous tissue, leukemia mononuclear																									
MUSCULOSKELETAL SYSTEM																									
Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Rib, osteosarcoma																					+				
Skeletal muscle																									
Leukemia mononuclear																									
Osteosarcoma, extension, metastatic, bone																									
NERVOUS SYSTEM																									
Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Meninges, leukemia mononuclear																									
Spinal cord																			+					+	
Meninges, leukemia mononuclear																			X					X	
RESPIRATORY SYSTEM																									
Larynx	+																								
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Histiocytic sarcoma																									
Leukemia mononuclear		X				X			X					X		X			X	X		X		X	
Osteosarcoma, metastatic, bone																									
Pheochromocytoma malignant, metastatic, adrenal gland																									
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear														X		X									
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
SPECIAL SENSES SYSTEM																									
Eye													+												
Harderian gland								+	+			+													
Zymbal gland																									
Carcinoma																									
URINARY SYSTEM																									
Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Histiocytic sarcoma																									
Leukemia mononuclear		X				X			X					X		X			X	X		X		X	
Renal tubule, adenoma		X								X				X							X	X	X		
Urinary bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear		X							X																

TABLE A2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE RATS: HIGH DOSE (Continued)

WEEKS ON STUDY	105	105	105	105	105	TOTAL: TISSUES TUMORS
CARCASS ID	332	333	334	381	391	
HEMATOPOIETIC SYSTEM						
Blood	+	+	+			29
Leukemia mononuclear	X	X				21
Bone marrow	+	+	+	+	+	55
Leukemia mononuclear	X					18
Lymph node	+	+	+	+	+	55
Inguinal, leukemia mononuclear						1
Lumbar, leukemia mononuclear			X			2
Mediastinal, leukemia mononuclear	X					9
Pancreatic, leukemia mononuclear						4
Renal, leukemia mononuclear	X					1
Lymph node, mandibular	+	+	+	+	+	54
Leukemia mononuclear	X					16
Lymph node, mesenteric	+	+	+	+	+	54
Leukemia mononuclear	X	X	X			20
Spleen	+	+	+	+	+	55
Leukemia mononuclear	X	X	X	X		31
Thymus	+	M	M	+	+	46
Leukemia mononuclear	X					10
INTEGUMENTARY SYSTEM						
Mammary gland	+	+	+	+	+	53
Skin	+	+	+	+	+	54
Basal cell adenoma						2
Keratoacanthoma					X	2
Subcutaneous tissue, leukemia mononuclear	X					2
MUSCULOSKELETAL SYSTEM						
Bone	+	+	+	+	+	55
Rib, osteosarcoma						1
Skeletal muscle						6
Leukemia mononuclear						2
Osteosarcoma, extension, metastatic, bone						1
NERVOUS SYSTEM						
Brain	+	+	+	+	+	55
Leukemia mononuclear						3
Meninges, leukemia mononuclear		X				5
Spinal cord		+	+			9
Meninges, leukemia mononuclear		X	X			7
RESPIRATORY SYSTEM						
Larynx						1
Lung	+	+	+	+	+	55
Histiocytic sarcoma						1
Leukemia mononuclear	X	X	X			26
Osteosarcoma, metastatic, bone						1
Pheochromocytoma malignant, metastatic, adrenal gland			X			1
Nose	+	+	+	+	+	55
Leukemia mononuclear	X					12
Trachea	+	+	+	+	+	55
SPECIAL SENSES SYSTEM						
Eye						4
Harderian gland						3
Zymbal gland						1
Carcinoma						1
URINARY SYSTEM						
Kidney	+	+	+	+	+	55
Histiocytic sarcoma						1
Leukemia mononuclear	X	X				25
Renal tubule, adenoma			X			8
Urinary bladder	+	+	+	+	+	55
Leukemia mononuclear	X					6

TABLE A3. ANALYSIS OF PRIMARY TUMORS IN MALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE

	Vehicle Control	25 mg/kg	50 mg/kg
Adrenal Medulla: Pheochromocytoma			
Overall Rates (a)	13/55 (24%)	17/48 (35%)	19/55 (35%)
Adjusted Rates (b)	39.4%	65.2%	64.7%
Terminal Rates (c)	8/27 (30%)	6/12 (50%)	9/18 (50%)
Day of First Observation	616	576	598
Life Table Tests (d)	P=0.022	P=0.021	P=0.024
Logistic Regression Tests (d)	P=0.086	P=0.050	P=0.088
Cochran-Armitage Trend Test (d)	P=0.128		
Fisher Exact Test (d)		P=0.137	P=0.147
Adrenal Medulla: Malignant Pheochromocytoma			
Overall Rates (a)	1/55 (2%)	2/48 (4%)	3/55 (5%)
Adjusted Rates (b)	3.7%	12.3%	14.0%
Terminal Rates (c)	1/27 (4%)	1/12 (8%)	2/18 (11%)
Day of First Observation	731	718	676
Life Table Tests (d)	P=0.131	P=0.290	P=0.191
Logistic Regression Tests (d)	P=0.163	P=0.306	P=0.241
Cochran-Armitage Trend Test (d)	P=0.227		
Fisher Exact Test (d)		P=0.449	P=0.309
Adrenal Medulla: Pheochromocytoma or Malignant Pheochromocytoma			
Overall Rates (a)	14/55 (25%)	19/48 (40%)	21/55 (38%)
Adjusted Rates (b)	42.5%	72.3%	69.7%
Terminal Rates (c)	9/27 (33%)	7/12 (58%)	10/18 (56%)
Day of First Observation	616	576	598
Life Table Tests (d)	P=0.012	P=0.009	P=0.014
Logistic Regression Tests (d)	P=0.055	P=0.024	P=0.057
Cochran-Armitage Trend Test (d)	P=0.096		
Fisher Exact Test (d)		P=0.093	P=0.110
Preputial Gland: Adenoma			
Overall Rates (a)	11/53 (21%)	(e) 8/34 (24%)	7/54 (13%)
Adjusted Rates (b)	38.5%		26.5%
Terminal Rates (c)	10/27 (37%)		3/18 (17%)
Day of First Observation	616		606
Life Table Test (d)			P=0.485N
Logistic Regression Test (d)			P=0.289N
Fisher Exact Test (d)			P=0.207N
Preputial Gland: Carcinoma			
Overall Rates (a)	1/53 (2%)	(e) 1/34 (3%)	3/54 (6%)
Adjusted Rates (b)	3.7%		9.2%
Terminal Rates (c)	1/27 (4%)		1/18 (6%)
Day of First Observation	731		501
Life Table Test (d)			P=0.246
Logistic Regression Test (d)			P=0.306
Fisher Exact Test (d)			P=0.316
Preputial Gland: Adenoma or Carcinoma			
Overall Rates (a)	11/53 (21%)	(e) 9/34 (26%)	10/54 (19%)
Adjusted Rates (b)	38.5%		34.1%
Terminal Rates (c)	10/27 (37%)		4/18 (22%)
Day of First Observation	616		501
Life Table Test (d)			P=0.402
Logistic Regression Test (d)			P=0.524N
Fisher Exact Test (d)			P=0.481N

TABLE A3. ANALYSIS OF PRIMARY TUMORS IN MALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	25 mg/kg	50 mg/kg
Kidney: Renal Tubule Adenoma			
Overall Rates (a)	0/55 (0%)	4/55 (7%)	8/55 (15%)
Adjusted Rates (b)	0.0%	15.0%	35.0%
Terminal Rates (c)	0/27 (0%)	2/18 (11%)	5/18 (28%)
Day of First Observation		392	598
Life Table Tests (d)	P<0.001	P=0.042	P=0.001
Logistic Regression Tests (d)	P=0.003	P=0.069	P=0.003
Cochran-Armitage Trend Test (d)	P=0.003		
Fisher Exact Test (d)		P=0.059	P=0.003
Liver: Hepatocellular Adenoma			
Overall Rates (a)	3/55 (5%)	2/55 (4%)	2/55 (4%)
Adjusted Rates (b)	10.2%	11.1%	10.1%
Terminal Rates (c)	2/27 (7%)	2/18 (11%)	1/18 (6%)
Day of First Observation	710	731	718
Life Table Tests (d)	P=0.585N	P=0.673N	P=0.670N
Logistic Regression Tests (d)	P=0.548N	P=0.626N	P=0.624N
Cochran-Armitage Trend Test (d)	P=0.407N		
Fisher Exact Test (d)		P=0.500N	P=0.500N
Mammary Gland: Fibroadenoma			
Overall Rates (a)	3/55 (5%)	0/55 (0%)	0/55 (0%)
Adjusted Rates (b)	11.1%	0.0%	0.0%
Terminal Rates (c)	3/27 (11%)	0/18 (0%)	0/18 (0%)
Day of First Observation	731		
Life Table Tests (d)	P=0.072N	P=0.199N	P=0.199N
Logistic Regression Tests (d)	P=0.072N	P=0.199N	P=0.199N
Cochran-Armitage Trend Test (d)	P=0.037N		
Fisher Exact Test (d)		P=0.122N	P=0.122N
Mammary Gland: Adenoma or Fibroadenoma			
Overall Rates (a)	4/55 (7%)	0/55 (0%)	0/55 (0%)
Adjusted Rates (b)	14.8%	0.0%	0.0%
Terminal Rates (c)	4/27 (15%)	0/18 (0%)	0/18 (0%)
Day of First Observation	731		
Life Table Tests (d)	P=0.036N	P=0.122N	P=0.122N
Logistic Regression Tests (d)	P=0.036N	P=0.122N	P=0.122N
Cochran-Armitage Trend Test (d)	P=0.015N		
Fisher Exact Test (d)		P=0.059N	P=0.059N
Mammary Gland: Adenoma, Fibroadenoma, or Adenocarcinoma			
Overall Rates (a)	5/55 (9%)	0/55 (0%)	0/55 (0%)
Adjusted Rates (b)	18.5%	0.0%	0.0%
Terminal Rates (c)	5/27 (19%)	0/18 (0%)	0/18 (0%)
Day of First Observation	731		
Life Table Tests (d)	P=0.018N	P=0.075N	P=0.075N
Logistic Regression Tests (d)	P=0.018N	P=0.075N	P=0.075N
Cochran-Armitage Trend Test (d)	P=0.006N		
Fisher Exact Test (d)		P=0.028N	P=0.028N
Pituitary Gland/Pars Distalis: Adenoma			
Overall Rates (a)	13/54 (24%)	9/54 (17%)	5/54 (9%)
Adjusted Rates (b)	35.5%	35.2%	18.7%
Terminal Rates (c)	6/27 (22%)	3/17 (18%)	1/18 (6%)
Day of First Observation	459	466	598
Life Table Tests (d)	P=0.125N	P=0.538N	P=0.127N
Logistic Regression Tests (d)	P=0.031N	P=0.303N	P=0.038N
Cochran-Armitage Trend Test (d)	P=0.026N		
Fisher Exact Test (d)		P=0.237N	P=0.034N

TABLE A3. ANALYSIS OF PRIMARY TUMORS IN MALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	25 mg/kg	50 mg/kg
Pituitary Gland/Pars Distalis: Adenoma or Carcinoma			
Overall Rates (a)	13/54 (24%)	10/54 (19%)	5/54 (9%)
Adjusted Rates (b)	35.5%	37.0%	18.7%
Terminal Rates (c)	6/27 (22%)	3/17 (18%)	1/18 (6%)
Day of First Observation	459	466	598
Life Table Tests (d)	P=0.130N	P=0.548	P=0.127N
Logistic Regression Tests (d)	P=0.033N	P=0.392N	P=0.038N
Cochran-Armitage Trend Test (d)	P=0.028N		
Fisher Exact Test (d)		P=0.319N	P=0.034N
Testis: Interstitial Cell Adenoma			
Overall Rates (a)	46/54 (85%)	49/54 (91%)	49/55 (89%)
Adjusted Rates (b)	97.8%	100.0%	100.0%
Terminal Rates (c)	26/27 (96%)	17/17 (100%)	18/18 (100%)
Day of First Observation	483	392	522
Life Table Tests (d)	P=0.025	P=0.015	P=0.028
Logistic Regression Tests (d)	P=0.422	P=0.061	P=0.489
Cochran-Armitage Trend Test (d)	P=0.315		
Fisher Exact Test (d)		P=0.278	P=0.374
Thyroid Gland: C-Cell Adenoma			
Overall Rates (a)	5/55 (9%)	(e) 2/38 (5%)	3/55 (5%)
Adjusted Rates (b)	16.9%		10.6%
Terminal Rates (c)	4/27 (15%)		1/18 (6%)
Day of First Observation	637		581
Life Table Test (d)			P=0.510N
Logistic Regression Test (d)			P=0.377N
Fisher Exact Test (d)			P=0.358N
Thyroid Gland: C-Cell Carcinoma			
Overall Rates (a)	2/55 (4%)	(e) 2/38 (5%)	3/55 (5%)
Adjusted Rates (b)	6.3%		14.4%
Terminal Rates (c)	1/27 (4%)		2/18 (11%)
Day of First Observation	676		700
Life Table Test (d)			P=0.356
Logistic Regression Test (d)			P=0.434
Fisher Exact Test (d)			P=0.500
Thyroid Gland: C-Cell Adenoma or Carcinoma			
Overall Rates (a)	7/55 (13%)	(e) 4/38 (11%)	6/55 (11%)
Adjusted Rates (b)	22.7%		24.0%
Terminal Rates (c)	5/27 (19%)		3/18 (17%)
Day of First Observation	637		581
Life Table Test (d)			P=0.515
Logistic Regression Test (d)			P=0.550N
Fisher Exact Test (d)			P=0.500N
Thyroid Gland: Follicular Cell Adenoma or Adenocarcinoma			
Overall Rates (a)	3/55 (5%)	(e) 0/38 (0%)	1/55 (2%)
Adjusted Rates (b)	10.4%		3.2%
Terminal Rates (c)	2/27 (7%)		0/18 (0%)
Day of First Observation	715		676
Life Table Test (d)			P=0.435N
Logistic Regression Test (d)			P=0.353N
Fisher Exact Test (d)			P=0.309N

TABLE A3. ANALYSIS OF PRIMARY TUMORS IN MALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	25 mg/kg	50 mg/kg
Zymbal Gland: Carcinoma			
Overall Rates (a)	1/55 (2%)	3/55 (5%)	1/55 (2%)
Adjusted Rates (b)	2.6%	12.2%	1.9%
Terminal Rates (c)	0/27 (0%)	1/18 (6%)	0/18 (0%)
Day of First Observation	654	653	473
Life Table Tests (d)	P=0.543	P=0.232	P=0.758
Logistic Regression Tests (d)	P=0.610	P=0.276	P=0.736
Cochran-Armitage Trend Test (d)	P=0.610		
Fisher Exact Test (d)		P=0.309	P=0.752N
Zymbal Gland: Adenoma or Carcinoma			
Overall Rates (a)	1/55 (2%)	4/55 (7%)	1/55 (2%)
Adjusted Rates (b)	2.6%	16.4%	1.9%
Terminal Rates (c)	0/27 (0%)	1/18 (6%)	0/18 (0%)
Day of First Observation	654	653	473
Life Table Tests (d)	P=0.505	P=0.117	P=0.758
Logistic Regression Tests (d)	P=0.600	P=0.149	P=0.736
Cochran-Armitage Trend Test (d)	P=0.601		
Fisher Exact Test (d)		P=0.182	P=0.752N
Hematopoietic System: Mononuclear Leukemia			
Overall Rates (a)	28/55 (51%)	26/55 (47%)	31/55 (56%)
Adjusted Rates (b)	71.6%	67.3%	79.9%
Terminal Rates (c)	17/27 (63%)	7/18 (39%)	12/18 (67%)
Day of First Observation	367	263	522
Life Table Tests (d)	P=0.083	P=0.263	P=0.086
Logistic Regression Tests (d)	P=0.314	P=0.488N	P=0.350
Cochran-Armitage Trend Test (d)	P=0.317		
Fisher Exact Test (d)		P=0.424N	P=0.351
All Sites: Malignant Mesothelioma			
Overall Rates (a)	1/55 (2%)	3/55 (5%)	1/55 (2%)
Adjusted Rates (b)	3.7%	10.2%	5.6%
Terminal Rates (c)	1/27 (4%)	1/18 (6%)	1/18 (6%)
Day of First Observation	731	392	731
Life Table Tests (d)	P=0.514	P=0.227	P=0.669
Logistic Regression Tests (d)	P=0.610	P=0.319	P=0.669
Cochran-Armitage Trend Test (d)	P=0.610		
Fisher Exact Test (d)		P=0.309	P=0.752N

(a) Number of tumor-bearing animals/number of animals examined at the site
(b) Kaplan-Meier estimated tumor incidences at the end of the study after adjusting for intercurrent mortality
(c) Observed tumor incidence at terminal kill
(d) Beneath the vehicle control incidence are the P values associated with the trend test. Beneath the dosed group incidence are the P values corresponding to pairwise comparisons between that dosed group and the vehicle controls. The life table analysis regards tumors in animals dying prior to terminal kill as being (directly or indirectly) the cause of death. The logistic regression test regards these lesions as nonfatal. The Cochran-Armitage and Fisher exact tests compare directly the overall incidence rates. A negative trend or lower incidence in a dosed group is indicated by (N).
(e) Incomplete sampling of tissues

TABLE A4a. HISTORICAL INCIDENCE OF KIDNEY TUBULAR CELL TUMORS IN MALE F344/N RATS (a)

Study	Incidence of Adenomas or Adenocarcinomas in Controls
Historical Incidence for All Water Gavage Vehicle Controls	
Iodinated glycerol (b)	0/50
Malonaldehyde, sodium salt (c)	0/50
Chlorpheniramine maleate (c)	0/50
Tetrakis(hydroxymethyl)phosphonium chloride (c)	0/50
Tetrakis(hydroxymethyl)phosphonium sulfate (c)	0/48
Methyl carbamate (d)	(e) 1/50
TOTAL	1/298 (0.3%)
SD (f)	0.82%
Range (g)	
High	1/50
Low	0/50
Overall Historical Incidence for Untreated Controls	
TOTAL	(h) 9/1,928 (0.5%)
SD (f)	1.17%
Range (g)	
High	3/50
Low	0/50

(a) Data as of April 29, 1987, for studies of at least 104 weeks
(b) Study performed at EG&G Mason Research Institute
(c) Study performed at Battelle Columbus Laboratories
(d) Study performed at Microbiological Associates
(e) Tubular cell adenocarcinoma
(f) Standard deviation
(g) Range and SD are presented for groups of 35 or more animals.
(h) Includes one adenoma, NOS, six tubular cell adenomas, one tubular cell adenocarcinoma, and one tubular adenocarcinoma

TABLE A4b. HISTORICAL INCIDENCE OF ADRENAL GLAND MEDULLARY TUMORS IN MALE F344/N RATS (a)

Study	Incidence in Controls		
	Pheochromocytoma	Malignant Pheochromocytoma	Pheochromocytoma or Malignant Pheochromocytoma
Historical Incidence for All Water Gavage Vehicle Controls			
Iodinated glycerol (b)	23/50	5/50	28/50
Malonaldehyde, sodium salt (c)	5/50	0/50	5/50
Chlorpheniramine maleate (c)	21/49	0/49	21/49
Tetrakis(hydroxymethyl)phosphonium chloride (c)	19/50	0/50	19/50
Tetrakis(hydroxymethyl)phosphonium sulfate (c)	22/50	1/50	23/50
Methyl carbamate (d)	23/50	4/50	25/50
TOTAL	113/299 (37.8%)	10/299 (3.3%)	121/299 (40.5%)
SD (e)	13.94%	4.50%	16.14%
Range (f)			
High	23/50	5/50	28/50
Low	5/50	0/50	5/50
Overall Historical Incidence for Untreated Controls			
TOTAL	459/1,915 (24.0%)	37/1,915 (1.9%)	489/1,915 (25.5%)
SD (e)	13.30%	2.70%	13.65%
Range (f)			
High	31/49	6/50	32/49
Low	2/50	0/50	3/50

(a) Data as of April 29, 1987, for studies of at least 104 weeks
(b) Study performed at EG&G Mason Research Institute
(c) Study performed at Battelle Columbus Laboratories
(d) Study performed at Microbiological Associates
(e) Standard deviation
(f) Range and SD are presented for groups of 35 or more animals.

TABLE A4c. HISTORICAL INCIDENCE OF ANTERIOR PITUITARY GLAND TUMORS IN MALE F344/N RATS (a)

Study	Incidence in Controls		
	Adenoma	Carcinoma	Adenoma or Carcinoma
Historical Incidence for All Water Gavage Vehicle Controls			
Iodinated glycerol (b)	25/48	1/48	26/48
Malonaldehyde, sodium salt (c)	20/47	0/47	20/47
Chlorpheniramine maleate (c)	12/50	0/50	12/50
Tetrakis(hydroxymethyl)phosphonium chloride (c)	17/50	1/50	18/50
Tetrakis(hydroxymethyl)phosphonium sulfate (c)	21/50	0/50	21/50
Methyl carbamate (d)	26/50	3/50	29/50
TOTAL	121/295 (41.0%)	5/295 (1.7%)	126/295 (42.7%)
SD (e)	10.82%	2.34%	12.33%
Range (f)			
High	25/48	3/50	29/50
Low	12/50	0/50	12/50
Overall Historical Incidence for Untreated Controls			
TOTAL	(g) 417/1,830 (22.8%)	(h) 42/1,830 (2.3%)	(g,h) 459/1,830 (25.1%)
SD (e)	10.75%	2.85%	10.32%
Range (f)			
High	24/46	5/45	25/46
Low	2/39	0/50	2/39

(a) Data as of April 29, 1987, for studies of at least 104 weeks
(b) Study performed at EG&G Mason Research Institute
(c) Study performed at Battelle Columbus Laboratories
(d) Study performed at Microbiological Associates
(e) Standard deviation
(f) Range and SD are presented for groups of 35 or more animals.
(g) Includes 32 chromophobe adenomas and 1 acidophil adenoma
(h) Includes seven chromophobe carcinomas and one adenocarcinoma, NOS

TABLE A5. SUMMARY OF THE INCIDENCE OF NONNEOPLASTIC LESIONS IN MALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE

	Vehicle Control	Low Dose	High Dose
Animals initially in study	65	65	65
Animals removed	65	65	65
Animals examined histopathologically	55	55	55
ALIMENTARY SYSTEM			
Intestine large, cecum	(50)	(34)	(50)
Ulcer		1 (3%)	
Venule, thrombus		1 (3%)	
Intestine large, colon	(51)	(35)	(53)
Mineralization			1 (2%)
Muscularis, inflammation, chronic			1 (2%)
Muscularis, mineralization			2 (4%)
Serosa, inflammation, chronic		1 (3%)	
Intestine large, rectum	(53)	(32)	(52)
Edema		1 (3%)	
Hemorrhage		1 (3%)	
Muscularis, mineralization			1 (2%)
Intestine small	(52)	(36)	(55)
Capillary, degeneration, hyaline			1 (2%)
Intestine small, duodenum	(52)	(35)	(55)
Muscularis, inflammation, chronic			1 (2%)
Intestine small, ileum	(48)	(33)	(49)
Capillary, degeneration, hyaline			1 (2%)
Muscularis, inflammation, chronic			1 (2%)
Muscularis, mineralization			1 (2%)
Liver	(55)	(55)	(55)
Basophilic focus	11 (20%)	11 (20%)	6 (11%)
Clear cell focus	1 (2%)	7 (13%)	4 (7%)
Concretion	1 (2%)		
Cytomegaly	2 (4%)	1 (2%)	3 (5%)
Degeneration, cystic	26 (47%)	23 (42%)	18 (33%)
Eosinophilic focus	4 (7%)	2 (4%)	1 (2%)
Fatty change	5 (9%)	4 (7%)	4 (7%)
Focal cellular change		1 (2%)	
Hematocyst		1 (2%)	
Hematopoietic cell proliferation	2 (4%)	3 (5%)	1 (2%)
Hepatodiaphragmatic nodule	6 (11%)	10 (18%)	9 (16%)
Hyperplasia, focal	1 (2%)		1 (2%)
Hyperplasia, multifocal		1 (2%)	1 (2%)
Inflammation, chronic	18 (33%)	19 (35%)	19 (35%)
Mixed cell focus	6 (11%)	2 (4%)	
Necrosis, coagulative	7 (13%)	4 (7%)	7 (13%)
Necrosis, coagulative, multifocal			1 (2%)
Arteriole, inflammation, proliferative			3 (5%)
Arteriole, thrombus			2 (4%)
Bile duct, dilatation	1 (2%)		
Bile duct, hyperplasia	54 (98%)	52 (95%)	54 (98%)
Centrilobular, atrophy	5 (9%)	8 (15%)	10 (18%)
Serosa, fibrosis, focal	1 (2%)		
Serosa, inflammation, chronic		1 (2%)	
Sinusoid, dilatation	2 (4%)	7 (13%)	4 (7%)
Vein, dilatation		1 (2%)	
Mesentery	(12)	(16)	(9)
Accessory spleen		3 (19%)	
Fat, inflammation, chronic	4 (33%)	3 (19%)	
Fat, inflammation, granulomatous	1 (8%)		
Fat, mineralization	1 (8%)		
Fat, necrosis	3 (25%)	1 (6%)	2 (22%)
Lymphatic, ectasia	1 (8%)		

TABLE A5. SUMMARY OF THE INCIDENCE OF NONNEOPLASTIC LESIONS IN MALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	Low Dose	High Dose
ALIMENTARY SYSTEM (Continued)			
Pancreas	(53)	(36)	(54)
Atrophy	6 (11%)	6 (17%)	5 (9%)
Hyperplasia, nodular	1 (2%)	1 (3%)	
Inflammation, chronic	1 (2%)		
Acinus, hyperplasia	1 (2%)		
Arteriole, inflammation, chronic	1 (2%)		
Duct, inflammation, chronic	1 (2%)		1 (2%)
Pharynx	(1)		
Abscess	1 (100%)		
Salivary glands	(54)	(37)	(55)
Atrophy, focal			1 (2%)
Cytoplasmic alteration	2 (4%)	1 (3%)	
Hyperplasia		1 (3%)	
Duct, hyperplasia	1 (2%)		
Duct, inflammation, chronic	15 (28%)	3 (8%)	5 (9%)
Duct, metaplasia, squamous	12 (22%)	2 (5%)	6 (11%)
Stomach, forestomach	(55)	(36)	(55)
Abscess		1 (3%)	
Acanthosis	3 (5%)		2 (4%)
Edema	1 (2%)		
Hemorrhage		1 (3%)	
Hyperkeratosis	2 (4%)		2 (4%)
Hyperplasia, papillary	3 (5%)	2 (6%)	1 (2%)
Inflammation, chronic	4 (7%)	1 (3%)	1 (2%)
Ulcer	1 (2%)	3 (8%)	1 (2%)
Ulcer, chronic		1 (3%)	
Epithelium, degeneration, ballooning	1 (2%)		
Muscularis, mineralization			4 (7%)
Stomach, glandular	(54)	(34)	(55)
Erosion		1 (3%)	
Inflammation, acute		1 (3%)	
Inflammation, chronic		1 (3%)	1 (2%)
Mineralization			5 (9%)
Ulcer		1 (3%)	1 (2%)
Tooth	(8)	(9)	(10)
Pulp, proliferation connective tissue, focal			1 (10%)
CARDIOVASCULAR SYSTEM			
Heart	(55)	(38)	(55)
Cardiomyopathy	46 (84%)	28 (74%)	47 (85%)
Mineralization	1 (2%)		7 (13%)
Thrombus		1 (3%)	
Atrium, dilatation			1 (2%)
Atrium, thrombus	4 (7%)	5 (13%)	4 (7%)
ENDOCRINE SYSTEM			
Adrenal gland, cortex	(54)	(37)	(54)
Accessory adrenal cortical nodule			1 (2%)
Angiectasis	1 (2%)		1 (2%)
Cyst	1 (2%)		
Degeneration, fatty, focal	6 (11%)	4 (11%)	6 (11%)
Hyperplasia	7 (13%)	4 (11%)	11 (20%)
Necrosis, coagulative		1 (3%)	
Vacuolization cytoplasmic	5 (9%)	7 (19%)	7 (13%)
Capsule, hyperplasia		1 (3%)	1 (2%)
Adrenal gland, medulla	(55)	(48)	(55)
Atrophy		1 (2%)	
Fibrosis		1 (2%)	
Hematopoietic cell proliferation	1 (2%)		
Hyperplasia	19 (35%)	19 (40%)	22 (40%)

TABLE A5. SUMMARY OF THE INCIDENCE OF NONNEOPLASTIC LESIONS IN MALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	Low Dose	High Dose
ENDOCRINE SYSTEM			
Adrenal gland, medulla (Continued)	(55)	(48)	(55)
Mineralization		1 (2%)	
Islets, pancreatic	(54)	(36)	(54)
Hyperplasia	3 (6%)	2 (6%)	
Parathyroid gland	(54)	(36)	(54)
Cyst			1 (2%)
Hyperplasia	13 (24%)	6 (17%)	19 (35%)
Pituitary gland	(54)	(54)	(54)
Pars distalis, cyst	7 (13%)	8 (15%)	7 (13%)
Pars distalis, fibrosis	1 (2%)		
Pars distalis, hemorrhage		1 (2%)	
Pars distalis, hyperplasia	12 (22%)	14 (26%)	11 (20%)
Pars distalis, necrosis	1 (2%)	1 (2%)	
Pars intermedia, cyst	1 (2%)		
Thyroid gland	(55)	(38)	(55)
Ultimobranchial cyst	2 (4%)		1 (2%)
C-cell, hyperplasia	4 (7%)	5 (13%)	7 (13%)
Follicle, cyst		1 (3%)	
Follicular cell, hyperplasia	1 (2%)		
GENERAL BODY SYSTEM			
None			
GENITAL SYSTEM			
Coagulating gland		(1)	(2)
Inflammation, chronic			1 (50%)
Inflammation, suppurative		1 (100%)	
Epididymis	(53)	(37)	(55)
Degeneration, mucoid	1 (2%)		4 (7%)
Inflammation, chronic	1 (2%)		
Preputial gland	(53)	(34)	(54)
Abscess	1 (2%)	1 (3%)	1 (2%)
Cyst	5 (9%)	2 (6%)	7 (13%)
Hyperplasia	2 (4%)	1 (3%)	1 (2%)
Inflammation, chronic	12 (23%)	13 (38%)	13 (24%)
Inflammation, suppurative	5 (9%)	2 (6%)	1 (2%)
Necrosis, coagulative			1 (2%)
Pigmentation, hemosiderin			2 (4%)
Prostate	(53)	(41)	(55)
Abscess		1 (2%)	1 (2%)
Hemorrhage		1 (2%)	
Hyperplasia	3 (6%)	4 (10%)	4 (7%)
Hyperplasia, focal		1 (2%)	
Inflammation, chronic	7 (13%)	1 (2%)	5 (9%)
Inflammation, suppurative	9 (17%)	8 (20%)	13 (24%)
Seminal vesicle	(53)	(36)	(55)
Inflammation, chronic	1 (2%)		
Mineralization			1 (2%)
Testes	(54)	(54)	(55)
Atrophy	39 (72%)	31 (57%)	35 (64%)
Cyst		1 (2%)	1 (2%)
Bilateral, interstitial cell, hyperplasia		1 (2%)	
Interstitial cell, hyperplasia	11 (20%)	7 (13%)	7 (13%)
Seminiferous tubule, degeneration, cystic			1 (2%)

TABLE A5. SUMMARY OF THE INCIDENCE OF NONNEOPLASTIC LESIONS IN MALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	Low Dose	High Dose
HEMATOPOIETIC SYSTEM			
Blood	(22)	(25)	(29)
Anemia		2 (8%)	
Hypersegmentation		1 (4%)	
Left shift	1 (5%)		
Neutrophilia	2 (9%)	3 (12%)	1 (3%)
Thrombocytopenia	1 (5%)	2 (8%)	
Bone marrow	(55)	(37)	(55)
Depletion		1 (3%)	
Myelofibrosis		2 (5%)	3 (5%)
Erythroid cell, hyperplasia			2 (4%)
Myeloid cell, hyperplasia	1 (2%)	3 (8%)	3 (5%)
Lymph node	(55)	(41)	(55)
Bronchial, pigmentation, hemosiderin		1 (2%)	
Bronchial, sinus, ectasia	1 (2%)	1 (2%)	
Cortex, mediastinal, atrophy			1 (2%)
Iliac, hyperplasia, plasma cell			1 (2%)
Iliac, sinus, ectasia		1 (2%)	1 (2%)
Inguinal, hyperplasia, lymphoid			1 (2%)
Inguinal, hyperplasia, plasma cell	1 (2%)	1 (2%)	2 (4%)
Inguinal, sinus, ectasia	1 (2%)		1 (2%)
Lumbar, hyperplasia, macrophage		1 (2%)	
Lumbar, hyperplasia, plasma cell		1 (2%)	1 (2%)
Lumbar, pigmentation, hemosiderin		1 (2%)	
Lumbar, sinus, ectasia		2 (5%)	
Mediastinal, hyperplasia, macrophage	2 (4%)	1 (2%)	1 (2%)
Mediastinal, hyperplasia, plasma cell		1 (2%)	1 (2%)
Mediastinal, pigmentation, hemosiderin	1 (2%)		1 (2%)
Mediastinal, sinus, ectasia	1 (2%)	2 (5%)	3 (5%)
Pancreatic, hyperplasia, macrophage	1 (2%)		
Pancreatic, sinus, ectasia	2 (4%)	1 (2%)	
Renal, pigmentation, hemosiderin			1 (2%)
Renal, sinus, ectasia	1 (2%)	1 (2%)	
Lymph node, mandibular	(52)	(38)	(54)
Congestion	1 (2%)		
Hyperplasia, lymphoid		1 (3%)	
Hyperplasia, plasma cell	2 (4%)	4 (11%)	3 (6%)
Sinus, ectasia	7 (13%)	3 (8%)	4 (7%)
Lymph node, mesenteric	(53)	(38)	(54)
Congestion	1 (2%)		
Depletion lymphoid		2 (5%)	1 (2%)
Hyperplasia, macrophage	2 (4%)	3 (8%)	1 (2%)
Hyperplasia, plasma cell	3 (6%)		1 (2%)
Pigmentation, hemosiderin	1 (2%)		
Sinus, ectasia	9 (17%)	5 (13%)	3 (6%)
Spleen	(55)	(52)	(55)
Fibrosis	7 (13%)	5 (10%)	8 (15%)
Hematopoietic cell proliferation	3 (5%)	5 (10%)	3 (5%)
Hemorrhage	1 (2%)		
Hyperplasia, macrophage	1 (2%)		1 (2%)
Capsule, infarct		1 (2%)	
Capsule, inflammation, chronic		1 (2%)	
Red pulp, depletion			1 (2%)
Thymus	(46)	(35)	(46)
Congestion			1 (2%)
Cyst	1 (2%)	1 (3%)	2 (4%)
Inflammation		1 (3%)	
Epithelial cell, hyperplasia	1 (2%)		

TABLE A5. SUMMARY OF THE INCIDENCE OF NONNEOPLASTIC LESIONS IN MALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	Low Dose	High Dose
INTEGUMENTARY SYSTEM			
Mammary gland	(49)	(29)	(53)
Cyst			1 (2%)
Hyperplasia	14 (29%)	8 (28%)	10 (19%)
Mineralization			1 (2%)
Skin	(55)	(37)	(54)
Abscess			1 (2%)
Cyst epithelial inclusion		1 (3%)	
Inflammation, chronic	4 (7%)	2 (5%)	5 (9%)
Inflammation, granulomatous		1 (3%)	
Inflammation, suppurative			1 (2%)
Inflammation, proliferative	1 (2%)		
Ulcer	1 (2%)	6 (16%)	4 (7%)
Right, hindlimb, subcutaneous tissue, inflammation, acute		1 (3%)	
Right, hindlimb, epidermis, abscess, multiple		1 (3%)	
Right, hindlimb, epidermis, degeneration, ballooning		1 (3%)	
Scrotal, inflammation, suppurative			1 (2%)
Sebaceous gland, hyperplasia		1 (3%)	
Subcutaneous tissue, abscess			2 (4%)
Subcutaneous tissue, cyst		1 (3%)	
Subcutaneous tissue, edema			1 (2%)
Subcutaneous tissue, hemorrhage			1 (2%)
Subcutaneous tissue, inflammation, chronic	2 (4%)	1 (3%)	
Subcutaneous tissue, inflammation, suppurative			1 (2%)
MUSCULOSKELETAL SYSTEM			
Bone	(55)	(37)	(55)
Fibrous osteodystrophy			1 (2%)
Inflammation, chronic active		1 (3%)	
Skeletal muscle	(4)	(3)	(6)
Degeneration			1 (17%)
Inflammation, chronic	1 (25%)		
Mineralization			1 (17%)
NERVOUS SYSTEM			
Brain	(55)	(37)	(55)
Compression	4 (7%)	2 (5%)	3 (5%)
Cerebellum, embolus tumor		1 (3%)	
Cerebellum, infarct		1 (3%)	
Choroid plexus, inflammation, chronic		1 (3%)	
Ventricle, dilatation		1 (3%)	
RESPIRATORY SYSTEM			
Larynx	(1)		(1)
Hemorrhage			1 (100%)
Inflammation, chronic	1 (100%)		
Lung	(55)	(38)	(55)
Atelectasis			1 (2%)
Congestion	2 (4%)	1 (3%)	
Crystals			1 (2%)
Hemorrhage		1 (3%)	3 (5%)
Hyperplasia, macrophage	7 (13%)	2 (5%)	6 (11%)
Hyperplasia, adenomatous	3 (5%)	2 (5%)	1 (2%)
Inflammation, acute	1 (2%)		
Inflammation, granulomatous	1 (2%)		
Inflammation, suppurative			1 (2%)
Mineralization			2 (4%)

TABLE A5. SUMMARY OF THE INCIDENCE OF NONNEOPLASTIC LESIONS IN MALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	Low Dose	High Dose
RESPIRATORY SYSTEM			
Lung (Continued)	(55)	(38)	(55)
Necrosis, coagulative	1 (2%)		
Necrosis, liquifactive			1 (2%)
Proliferation connective tissue			1 (2%)
Arteriole, thrombus			2 (4%)
Arteriole, media, hyperplasia		1 (3%)	
Bronchiole, foreign body	1 (2%)		
Interstitium, fibrosis			1 (2%)
Interstitium, inflammation, chronic	4 (7%)	2 (5%)	1 (2%)
Pleura, inflammation, chronic	4 (7%)		2 (4%)
Nose	(55)	(37)	(55)
Inflammation, chronic	8 (15%)	7 (19%)	6 (11%)
Inflammation, suppurative	1 (2%)		2 (4%)
Metaplasia, squamous		1 (3%)	
Nasolacrimal duct, inflammation, chronic	27 (49%)	21 (57%)	34 (62%)
Nasolacrimal duct, inflammation, suppurative	3 (5%)	2 (5%)	2 (4%)
Nasolacrimal duct, metaplasia, squamous	45 (82%)	24 (65%)	47 (85%)
Respiratory epithelium, cyst		1 (3%)	
Trachea	(53)	(37)	(55)
Exudate	1 (2%)		
Inflammation, chronic	3 (6%)	1 (3%)	1 (2%)
Glands, cyst	4 (8%)		2 (4%)
SPECIAL SENSES SYSTEM			
Ear	(2)	(2)	
Exudate		1 (50%)	
Middle ear, inflammation, suppurative	1 (50%)		
Eye	(2)	(3)	(4)
Hemorrhage		1 (33%)	
Synechia		2 (67%)	
Cornea, inflammation, subacute			1 (25%)
Cornea, necrosis			1 (25%)
Cornea, proliferation		1 (33%)	
Retina, atrophy		3 (100%)	2 (50%)
URINARY SYSTEM			
Kidney	(55)	(55)	(55)
Cyst		2 (4%)	6 (11%)
Hemorrhage			1 (2%)
Infarct	1 (2%)	1 (2%)	
Inflammation, chronic	27 (49%)	30 (55%)	27 (49%)
Mineralization	1 (2%)		
Necrosis, coagulative	1 (2%)		
Nephropathy	53 (96%)	52 (95%)	55 (100%)
Pelvis, hematopoietic cell proliferation		1 (2%)	
Pelvis, inflammation, suppurative			1 (2%)
Renal tubule, hyperplasia			1 (2%)
Renal tubule, hyperplasia, focal			1 (2%)
Renal tubule, inflammation, suppurative	4 (7%)	7 (13%)	
Transitional epithelium, hyperplasia, papillary	1 (2%)	6 (11%)	5 (9%)
Urinary bladder	(51)	(37)	(55)
Hyperplasia, papillary		1 (3%)	
Inflammation, chronic	7 (14%)	1 (3%)	3 (5%)
Inflammation, chronic active			1 (2%)
Submucosa, edema			1 (2%)

APPENDIX B

SUMMARY OF LESIONS IN FEMALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE

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TABLE B1. SUMMARY OF THE INCIDENCE OF NEOPLASMS IN FEMALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE

	Vehicle Control	Low Dose	High Dose
Animals initially in study	65	65	65
Animals removed	65	65	65
Animals examined histopathologically	55	55	55
ALIMENTARY SYSTEM			
Intestine large, cecum	(53)	*(55)	(53)
Leukemia mononuclear	1 (2%)		2 (4%)
Intestine large, colon	(55)	*(55)	(54)
Leukemia mononuclear	1 (2%)		2 (4%)
Intestine large, rectum	(55)	*(55)	(51)
Leukemia mononuclear	1 (2%)	1 (2%)	1 (2%)
Intestine small, duodenum	(55)	*(55)	(55)
Leukemia mononuclear			3 (5%)
Intestine small, ileum	(54)	*(55)	(53)
Leukemia mononuclear	1 (2%)		3 (6%)
Sarcoma			1 (2%)
Intestine small, jejunum	(54)	*(55)	(51)
Cystadenocarcinoma			1 (2%)
Leukemia mononuclear	1 (2%)		1 (2%)
Sarcoma			1 (2%)
Liver	(55)	(55)	(55)
Leukemia mononuclear	9 (16%)	15 (27%)	22 (40%)
Mesentery	*(55)	*(55)	*(55)
Leukemia mononuclear	3 (5%)	5 (9%)	8 (15%)
Pheochromocytoma malignant, extension, metastatic, adrenal gland			1 (2%)
Pancreas	(55)	*(55)	(55)
Leukemia mononuclear	1 (2%)		4 (7%)
Salivary glands	(55)	*(55)	(55)
Leukemia mononuclear	2 (4%)	1 (2%)	4 (7%)
Stomach, forestomach	(55)	*(55)	(54)
Leukemia mononuclear	1 (2%)	1 (2%)	4 (7%)
Stomach, glandular	(55)	*(55)	(54)
Leukemia mononuclear		1 (2%)	4 (7%)
Tongue	*(55)	*(55)	*(55)
Papilloma squamous		1 (2%)	
Tooth	*(55)	*(55)	*(55)
Pulp, leukemia mononuclear	3 (5%)	2 (4%)	5 (9%)
CARDIOVASCULAR SYSTEM			
Heart	(55)	*(55)	(55)
Leukemia mononuclear	5 (9%)	7 (13%)	13 (24%)
ENDOCRINE SYSTEM			
Adrenal gland, cortex	(55)	(55)	(55)
Adenoma			1 (2%)
Leukemia mononuclear	6 (11%)	9 (16%)	14 (25%)
Adrenal gland, medulla	(54)	(55)	(54)
Leukemia mononuclear	6 (11%)	8 (15%)	12 (22%)
Pheochromocytoma malignant	1 (2%)	1 (2%)	1 (2%)
Pheochromocytoma complex		1 (2%)	
Pheochromocytoma benign	2 (4%)		4 (7%)
Bilateral, pheochromocytoma benign		1 (2%)	
Islets, pancreatic	(53)	*(55)	(55)
Leukemia mononuclear			1 (2%)
Parathyroid gland	(54)	*(55)	(54)
Leukemia mononuclear			1 (2%)

TABLE B1. SUMMARY OF THE INCIDENCE OF NEOPLASMS IN FEMALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	Low Dose	High Dose
ENDOCRINE SYSTEM (Continued)			
Pituitary gland	(54)	(54)	(54)
Leukemia mononuclear	4 (7%)	1 (2%)	8 (15%)
Meningioma malignant, metastatic			1 (2%)
Pars distalis, adenoma	23 (43%)	21 (39%)	16 (30%)
Pars distalis, carcinoma	1 (2%)	1 (2%)	
Pars distalis, leukemia mononuclear		2 (4%)	1 (2%)
Thyroid gland	(55)	(54)	(55)
Leukemia mononuclear	1 (2%)		1 (2%)
Bilateral, C-cell, adenoma	1 (2%)		
C-cell, adenoma	8 (15%)	3 (6%)	5 (9%)
C-cell, carcinoma	4 (7%)	1 (2%)	3 (5%)
Follicular cell, adenocarcinoma	1 (2%)	1 (2%)	
Follicular cell, adenoma		1 (2%)	
GENERAL BODY SYSTEM			
None			
GENITAL SYSTEM			
Clitoral gland	(51)	*(55)	(52)
Adenoma	4 (8%)	3 (5%)	9 (17%)
Leukemia mononuclear	1 (2%)	2 (4%)	2 (4%)
Ovary	(55)	*(55)	(55)
Granulosa cell tumor malignant	1 (2%)	1 (2%)	
Leukemia mononuclear	2 (4%)	3 (5%)	8 (15%)
Luteoma		1 (2%)	
Oviduct	*(55)	*(55)	*(55)
Leukemia mononuclear			1 (2%)
Uterus	(55)	(55)	(55)
Leiomyosarcoma		1 (2%)	
Leukemia mononuclear	3 (5%)	2 (4%)	4 (7%)
Polyp stromal	12 (22%)	5 (9%)	9 (16%)
Bilateral, polyp stromal		1 (2%)	
Endometrium, adenocarcinoma		1 (2%)	
Endometrium, sarcoma stromal	1 (2%)	1 (2%)	
Vagina	*(55)	*(55)	*(55)
Squamous cell carcinoma			1 (2%)
HEMATOPOIETIC SYSTEM			
Blood	*(55)	*(55)	*(55)
Leukemia mononuclear	7 (13%)	8 (15%)	15 (27%)
Bone marrow	(55)	*(55)	(55)
Leukemia mononuclear	5 (9%)	7 (13%)	11 (20%)
Lymph node	(55)	*(55)	(55)
Axillary, leukemia mononuclear			1 (2%)
Deep cervical, leukemia mononuclear			1 (2%)
Inguinal, leukemia mononuclear	2 (4%)		3 (5%)
Lumbar, leukemia mononuclear			2 (4%)
Mediastinal, leukemia mononuclear	3 (5%)	3 (5%)	6 (11%)
Pancreatic, leukemia mononuclear	3 (5%)	2 (4%)	4 (7%)
Lymph node, mandibular	(55)	*(55)	(52)
Leukemia mononuclear	5 (9%)	5 (9%)	13 (25%)
Lymph node, mesenteric	(53)	*(55)	(54)
Leukemia mononuclear	7 (13%)	8 (15%)	16 (30%)
Spleen	(55)	(55)	(55)
Leukemia mononuclear	9 (16%)	15 (27%)	22 (40%)
Thymus	(52)	*(55)	(51)
Leukemia mononuclear	6 (12%)	6 (11%)	9 (18%)

TABLE B1. SUMMARY OF THE INCIDENCE OF NEOPLASMS IN FEMALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	Low Dose	High Dose
INTEGUMENTARY SYSTEM			
Mammary gland	(55)	(55)	(54)
Adenocarcinoma	2 (4%)		1 (2%)
Adenocarcinoma, multiple	1 (2%)		
Adenoma		2 (4%)	
Fibroadenoma	28 (51%)	22 (40%)	21 (39%)
Fibroadenoma, multiple	1 (2%)		1 (2%)
Leukemia mononuclear	3 (5%)		3 (6%)
Skin	(55)	*(55)	(55)
Basal cell adenoma		1 (2%)	
Keratoacanthoma		1 (2%)	2 (4%)
Papilloma squamous			1 (2%)
Subcutaneous tissue, leukemia mononuclear	3 (5%)	3 (5%)	4 (7%)
Subcutaneous tissue, sarcoma			1 (2%)
MUSCULOSKELETAL SYSTEM			
Bone	(54)	*(55)	(55)
Cartilage, adenocarcinoma, extension, metastatic, thyroid gland		1 (2%)	
Skeletal muscle	*(55)	*(55)	*(55)
Leukemia mononuclear	1 (2%)	1 (2%)	1 (2%)
Pheochromocytoma malignant, extension, metastatic, adrenal gland			1 (2%)
NERVOUS SYSTEM			
Brain	(55)	*(55)	(55)
Astrocytoma malignant		1 (2%)	
Leukemia mononuclear	2 (4%)	3 (5%)	3 (5%)
Meninges, leukemia mononuclear	3 (5%)	1 (2%)	4 (7%)
Meninges, meningioma malignant			1 (2%)
Pons, carcinoma, metastatic	1 (2%)		
Spinal cord	*(55)	*(55)	*(55)
Leukemia mononuclear	1 (2%)	1 (2%)	
Meninges, leukemia mononuclear	2 (4%)	1 (2%)	8 (15%)
RESPIRATORY SYSTEM			
Lung	(55)	*(55)	(55)
Alveolar/bronchiolar carcinoma		1 (2%)	1 (2%)
Carcinoma, metastatic, thyroid gland			1 (2%)
Leukemia mononuclear	6 (11%)	6 (11%)	15 (27%)
Pheochromocytoma malignant, metastatic, adrenal gland			1 (2%)
Nose	(55)	*(55)	(55)
Leukemia mononuclear	5 (9%)	3 (5%)	6 (11%)
Trachea	(55)	*(55)	(55)
Leukemia mononuclear			2 (4%)
SPECIAL SENSES SYSTEM			
Zymbal gland	*(55)	*(55)	*(55)
Carcinoma			1 (2%)
URINARY SYSTEM			
Kidney	(55)	(55)	(55)
Leukemia mononuclear	6 (11%)	10 (18%)	16 (29%)
Urinary bladder	(55)	*(55)	(51)
Leukemia mononuclear	4 (7%)		8 (16%)

TABLE B1. SUMMARY OF THE INCIDENCE OF NEOPLASMS IN FEMALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	Low Dose	High Dose
SYSTEMIC LESIONS			
Multiple organs	*(55)	*(55)	*(55)
Leukemia mononuclear	9 (16%)	15 (27%)	22 (40%)
ANIMAL DISPOSITION SUMMARY			
Animals initially in study	65	65	65
Terminal sacrifice	39	27	31
Moribund	14	19	14
Interval sacrifice	10	10	10
Dead	2	6	6
Gavage death		3	3
Accident			1
TUMOR SUMMARY			
Total animals with primary neoplasms **	47	49	50
Total primary neoplasms	100	89	104
Total animals with benign neoplasms	44	41	42
Total benign neoplasms	79	63	69
Total animals with malignant neoplasms	18	24	32
Total malignant neoplasms	21	26	35
Total animals with secondary neoplasms ***	1	1	3
Total secondary neoplasms	1	1	5

* Number of animals receiving complete necropsy examination; all gross lesions including masses examined microscopically.
** Primary tumors: all tumors except secondary tumors
*** Secondary tumors: metastatic tumors or tumors invasive into an adjacent organ

TABLE B2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF FEMALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE: VEHICLE CONTROL

WEEKS ON STUDY	054	068	072	072	079	083	093	093	094	097	098	098	101	102	104	105	105	105	105	105	105	105	105	105	105
CARCASS ID	425	524	405	404	454	424	435	484	434	494	523	505	414	504	403	402	423	444	451	452	453	463	482	483	493
ALIMENTARY SYSTEM																									
Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large, cecum	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear						X																			
Intestine large, colon	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear															X										
Intestine large, rectum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear								X																	
Intestine small	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine small, duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine small, ileum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear								X																	
Intestine small, jejunum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X	X		X						X	X		X							X	
Mesentery		+						+							+										
Leukemia mononuclear								X							X										
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear								X																	
Salivary glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear								X							X										
Stomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear															X										
Stomach, glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Tooth						+		+																	
Pulp, leukemia mononuclear						X		X																	
CARDIOVASCULAR SYSTEM																									
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X	X		X						X	X										
ENDOCRINE SYSTEM																									
Adrenal gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adrenal gland, cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X	X		X						X	X										
Adrenal gland, medulla	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X			X						X	X									X	
Pheochromocytoma malignant																									
Pheochromocytoma benign															X										
Islets, pancreatic	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Parathyroid gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pituitary gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear						X		X							X										
Pars distalis, adenoma		X	X				X			X			X	X					X	X	X	X			X
Pars distalis, carcinoma																									
Thyroid gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear								X																	
Bilateral, C-cell, adenoma																									
C-cell, adenoma										X				X			X				X				
C-cell, carcinoma								X								X									
Follicular cell, adenocarcinoma											X														
GENERAL BODY SYSTEM																									
None																									
GENITAL SYSTEM																									
Clitoral gland	M	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenoma														X		X	X								
Leukemia mononuclear																								X	
Ovary	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Granulosa cell tumor malignant																						X			
Leukemia mononuclear						X																			
Uterus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear								X																X	
Polyp stromal								X	X		X					X			X				X		
Endometrium, sarcoma stromal				X																					
Vagina									+																

+: Tissue examined microscopically
: Not examined
−: Present but not examined microscopically
I: Insufficient tissue

M: Missing
A: Autolysis precludes examination
X: Incidence of listed morphology

TABLE B2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF FEMALE RATS: VEHICLE CONTROL (Continued)

WEEKS ON STUDY	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
CARCASS ID	503	515	522	412	413	431	432	433	442	443	462	502	512	513	514	401	411	421	422	441	461	471	472	473	481
ALIMENTARY SYSTEM																									
Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large, cecum	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Intestine large, colon	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Intestine large, rectum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Intestine small	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine small, duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine small, ileum	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Intestine small, jejunum	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																					X				
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear	X																				X				
Mesentery		+																			+			+	
Leukemia mononuclear																					X				
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Salivary glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Stomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Stomach, glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Tooth																					+				
Pulp, leukemia mononuclear																					X				
CARDIOVASCULAR SYSTEM																									
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
ENDOCRINE SYSTEM																									
Adrenal gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adrenal gland, cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																					X				
Adrenal gland, medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																					X				
Pheochromocytoma malignant																	X								
Pheochromocytoma benign													X												
Islets, pancreatic	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Parathyroid gland	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+
Pituitary gland	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																					X				
Pars distalis, adenoma			X	X						X	X	X	X	X								X	X	X	
Pars distalis, carcinoma									X																
Thyroid gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Bilateral, C-cell, adenoma			X																						
C-cell, adenoma											X			X					X						
C-cell, carcinoma									X				X												
Follicular cell, adenocarcinoma																									
GENERAL BODY SYSTEM																									
None																									
GENITAL SYSTEM																									
Clitoral gland	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+
Adenoma							X																		
Leukemia mononuclear																									
Ovary	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Granulosa cell tumor malignant																									
Leukemia mononuclear																					X				
Uterus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																					X				
Polyp stromal	X								X				X									X			
Endometrium, sarcoma stromal																									
Vagina																+									

TABLE B2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF FEMALE RATS: VEHICLE CONTROL (Continued)

WEEKS ON STUDY	105	105	105	105	105	TOTAL: TISSUES TUMORS
CARCASS ID	491	492	501	511	521	
ALIMENTARY SYSTEM						
Esophagus	+	+	+	+	+	55
Intestine large	+	+	+	+	+	55
Intestine large, cecum	+	+	+	+	+	53
Leukemia mononuclear						1
Intestine large, colon	+	+	+	+	+	55
Leukemia mononuclear						1
Intestine large, rectum	+	+	+	+	+	55
Leukemia mononuclear						1
Intestine small	+	+	+	+	+	55
Intestine small, duodenum	+	+	+	+	+	55
Intestine small, ileum	+	+	+	+	+	54
Leukemia mononuclear						1
Intestine small, jejunum	+	+	+	+	+	54
Leukemia mononuclear						1
Liver	+	+	+	+	+	55
Leukemia mononuclear						9
Mesentery			+			7
Leukemia mononuclear						3
Pancreas	+	+	+	+	+	55
Leukemia mononuclear						1
Salivary glands	+	+	+	+	+	55
Leukemia mononuclear						2
Stomach	+	+	+	+	+	55
Stomach, forestomach	+	+	+	+	+	55
Leukemia mononuclear						1
Stomach, glandular	+	+	+	+	+	55
Tooth						3
Pulp, leukemia mononuclear						3
CARDIOVASCULAR SYSTEM						
Heart	+	+	+	+	+	55
Leukemia mononuclear						5
ENDOCRINE SYSTEM						
Adrenal gland	+	+	+	+	+	55
Adrenal gland, cortex	+	+	+	+	+	55
Leukemia mononuclear						6
Adrenal gland, medulla	+	+	+	+	+	54
Leukemia mononuclear						6
Pheochromocytoma malignant						1
Pheochromocytoma benign						2
Islets, pancreatic	+	+	+	+	+	53
Parathyroid gland	+	+	+	+	+	54
Pituitary gland	+	+	+	+	+	54
Leukemia mononuclear						4
Pars distalis, adenoma	X			X		23
Pars distalis, carcinoma						1
Thyroid gland	+	+	+	+	+	55
Leukemia mononuclear						1
Bilateral, C-cell, adenoma						1
C-cell, adenoma			X			8
C-cell, carcinoma						4
Follicular cell, adenocarcinoma						1
GENERAL BODY SYSTEM						
None						
GENITAL SYSTEM						
Clitoral gland	+	+	+	+	+	51
Adenoma						4
Leukemia mononuclear						1
Ovary	+	+	+	+	+	55
Granulosa cell tumor malignant						1
Leukemia mononuclear						2
Uterus	+	+	+	+	+	55
Leukemia mononuclear						3
Polyp stromal			X	X		12
Endometrium, sarcoma stromal						1
Vagina						2

TABLE B2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF FEMALE RATS: VEHICLE CONTROL (Continued)

WEEKS ON STUDY	054	068	072	072	079	083	093	093	094	097	098	098	101	102	104	105	105	105	105	105	105	105	105	105	105
CARCASS ID	425	524	405	404	454	424	435	484	434	494	523	505	414	504	403	402	423	444	451	452	453	463	482	483	493
HEMATOPOIETIC SYSTEM																									
Blood					+	+		+						+	+									+	
Leukemia mononuclear					X	X		X						X	X									X	
Bone marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X	X		X						X	X										
Lymph node	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Inguinal, leukemia mononuclear					X																				
Mediastinal, leukemia mononuclear														X	X										
Pancreatic, leukemia mononuclear						X								X	X										
Lymph node, mandibular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X	X		X							X										
Lymph node, mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X	X		X						X	X										
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X	X		X						X	X		X							X	
Thymus	M	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	M	+
Leukemia mononuclear					X	X		X						X	X										
INTEGUMENTARY SYSTEM																									
Mammary gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenocarcinoma							X							X											
Adenocarcinoma, multiple																			X						
Fibroadenoma			X	X		X	X			X		X	X			X			X		X				X
Fibroadenoma, multiple																									
Leukemia mononuclear						X								X										X	
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Subcutaneous tissue, leukemia mononuclear						X		X							X										
MUSCULOSKELETAL SYSTEM																									
Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Skeletal muscle						+																			
Leukemia mononuclear						X																			
NERVOUS SYSTEM																									
Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X										X										
Meninges, leukemia mononuclear								X							X										
Pons, carcinoma, metastatic																									
Spinal cord	+	+	+	+	+			+						+	+										
Leukemia mononuclear								X																	
Meninges, leukemia mononuclear														X	X										
RESPIRATORY SYSTEM																									
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X	X		X						X	X										
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X	X		X							X										
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
SPECIAL SENSES SYSTEM																									
Eye																									
Harderian gland																									
URINARY SYSTEM																									
Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X	X		X							X									X	
Urinary bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear						X		X							X										

TABLE B2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF FEMALE RATS: VEHICLE CONTROL (Continued)

WEEKS ON STUDY	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
CARCASS ID	503	515	522	412	413	431	432	433	442	443	462	502	512	513	514	401	411	421	422	441	461	471	472	473	481
HEMATOPOIETIC SYSTEM																									
Blood		+																			+				
Leukemia mononuclear																					X				
Bone marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Lymph node	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Inguinal, leukemia mononuclear	X																								
Mediastinal, leukemia mononuclear																					X				
Pancreatic, leukemia mononuclear																									
Lymph node, mandibular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear	X																								
Lymph node, mesenteric	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M
Leukemia mononuclear	X																				X				
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear	X																				X				
Thymus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																					X				
INTEGUMENTARY SYSTEM																									
Mammary gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenocarcinoma																									
Adenocarcinoma, multiple			X	X	X			X	X			X	X	X				X	X		X		X	X	
Fibroadenoma										X															
Fibroadenoma, multiple																									
Leukemia mononuclear																									
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Subcutaneous tissue, leukemia mononuclear																									
MUSCULOSKELETAL SYSTEM																									
Bone	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Skeletal muscle																									
Leukemia mononuclear																									
NERVOUS SYSTEM																									
Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																					X				
Meninges, leukemia mononuclear																									
Pons, carcinoma, metastatic									X																
Spinal cord																									
Leukemia mononuclear																									
Meninges, leukemia mononuclear																									
RESPIRATORY SYSTEM																									
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																					X				
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																					X				
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
SPECIAL SENSES SYSTEM																									
Eye																+									+
Harderian gland																+									+
URINARY SYSTEM																									
Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																					X				
Urinary bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																					X				

TABLE B2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF FEMALE RATS: VEHICLE CONTROL (Continued)

WEEKS ON STUDY	105	105	105	105	105	TOTAL: TISSUES TUMORS
CARCASS ID	491	492	501	511	521	
HEMATOPOIETIC SYSTEM						
Blood						8
Leukemia mononuclear						7
Bone marrow	+	+	+	+	+	55
Leukemia mononuclear						5
Lymph node	+	+	+	+	+	55
Inguinal, leukemia mononuclear						2
Mediastinal, leukemia mononuclear						3
Pancreatic, leukemia mononuclear						3
Lymph node, mandibular	+	+	+	+	+	55
Leukemia mononuclear						5
Lymph node, mesenteric	+	+	+	+	+	53
Leukemia mononuclear						7
Spleen	+	+	+	+	+	55
Leukemia mononuclear						9
Thymus	+	+	+	+	+	52
Leukemia mononuclear						6
INTEGUMENTARY SYSTEM						
Mammary gland	+	+	+	+	+	55
Adenocarcinoma						2
Adenocarcinoma, multiple						1
Fibroadenoma	X	X	X		X	28
Fibroadenoma, multiple						1
Leukemia mononuclear						3
Skin	+	+	+	+	+	55
Subcutaneous tissue, leukemia mononuclear						3
MUSCULOSKELETAL SYSTEM						
Bone	+	+	+	+	+	54
Skeletal muscle						1
Leukemia mononuclear						1
NERVOUS SYSTEM						
Brain	+	+	+	+	+	55
Leukemia mononuclear						2
Meninges, leukemia mononuclear						3
Pons, carcinoma, metastatic						1
Spinal cord						8
Leukemia mononuclear						1
Meninges, leukemia mononuclear						2
RESPIRATORY SYSTEM						
Lung	+	+	+	+	+	55
Leukemia mononuclear						6
Nose	+	+	+	+	+	55
Leukemia mononuclear						5
Trachea	+	+	+	+	+	55
SPECIAL SENSES SYSTEM						
Eye						2
Harderian gland						2
URINARY SYSTEM						
Kidney	+	+	+	+	+	55
Leukemia mononuclear						6
Urinary bladder	+	+	+	+	+	55
Leukemia mononuclear						4

TABLE B2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF FEMALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE: LOW DOSE

WEEKS ON STUDY	054	064	070	071	080	083	085	090	090	090	091	094	094	094	095	096	096	096	096	100	100	100	102	102	102
CARCASS ID	535	605	545	644	585	585	544	584	575	583	615	625	574	614	655	573	633	532	654	594	622	623	613	643	604
ALIMENTARY SYSTEM																									
Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large, cecum	+	+	+	+	+	A	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large, colon	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A
Intestine large, rectum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear										X															
Intestine small	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine small, duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine small, ileum	+	+	+	+	+	A	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A
Intestine small, jejunum	+	+	+	+	+	A	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear						X		X		X			X	X	X							X	X	X	
Mesentery		+	+			+		+				+	+		+		+				+	+			
Leukemia mononuclear						X		X					X		X							X			
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pharynx																						+			
Salivary glands	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear						X																			
Stomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear													X												
Stomach, glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear													X												
Tongue																									
Papilloma squamous																									
Tooth	+					+		+																	
Pulp, leukemia mononuclear						X		X																	
CARDIOVASCULAR SYSTEM																									
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear						X		X		X			X		X							X	X		
ENDOCRINE SYSTEM																									
Adrenal gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adrenal gland, cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear						X		X		X			X		X								X		
Adrenal gland, medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear						X		X		X			X		X								X		
Pheochromocytoma malignant																									
Pheochromocytoma complex																									
Bilateral, pheochromocytoma benign									X																
Islets, pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Parathyroid gland	+	+	+	+	+	M	M	+	+	+	+	+	+	+	+	+	M	+	M	+	+	+	M	+	+
Pituitary gland	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																								X	
Pars distalis, adenoma				X							X	X	X	X		X			X						X
Pars distalis, carcinoma																									
Pars distalis, leukemia mononuclear						X		X																	
Thyroid gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
C-cell, adenoma																					X				
C-cell, carcinoma																								X	
Follicular cell, adenocarcinoma																	X								
Follicular cell, adenoma																									
GENERAL BODY SYSTEM																									
None																									
GENITAL SYSTEM																									
Clitoral gland	+	M	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+
Adenoma																		X							
Leukemia mononuclear						X									X										
Ovary	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Granulosa cell tumor malignant																									
Leukemia mononuclear						X		X		X															
Luteoma								X																	
Uterus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leiomyosarcoma		X																							
Leukemia mononuclear								X					X												
Polyp stromal									X				X							X					
Bilateral, polyp stromal											X														
Endometrium, adenocarcinoma																									
Endometrium, sarcoma stromal			X																						
Vagina									+																

TABLE B2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF FEMALE RATS: LOW DOSE (Continued)

WEEKS ON STUDY	103	103	104	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
CARCASS ID	593	531	552	572	603	611	612	621	632	651	652	653	542	543	564	571	602	631	641	642	541	551	561	562	563
ALIMENTARY SYSTEM																									
Esophagus	+	+	+								M														
Intestine large	+	+	+																						
Intestine large, cecum	A	+	+																						
Intestine large, colon	+	+	+																						
Intestine large, rectum	+	+	+																						
Leukemia mononuclear																									
Intestine small	+	+	+																						
Intestine small, duodenum	+	+	+																						
Intestine small, ileum	+	+	+																						
Intestine small, jejunum	A	+	+																						
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X			X								X		X							
Mesentery	+																	+						+	
Leukemia mononuclear																									
Pancreas	+	+	+																						
Pharynx	M																								
Salivary glands	M	+	+																						
Leukemia mononuclear																									
Stomach	+	+	+																						
Stomach, forestomach	+	+	+																						
Leukemia mononuclear																									
Stomach, glandular	+	+	+																						
Leukemia mononuclear																									
Tongue															+										
Papilloma squamous															X										
Tooth																									
Pulp, leukemia mononuclear																									
CARDIOVASCULAR SYSTEM																									
Heart	+	+	+																						
Leukemia mononuclear																									
ENDOCRINE SYSTEM																									
Adrenal gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adrenal gland, cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear								X								X		X							
Adrenal gland, medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear								X										X							
Pheochromocytoma malignant																						X			
Pheochromocytoma complex																		X							
Bilateral, pheochromocytoma benign																									
Islets, pancreatic	+	+	+																						
Parathyroid gland	M	+	+					M			M									M					
Pituitary gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Pars distalis, adenoma		X	X	X			X			X	X					X	X	X	X		X	X	X		
Pars distalis, carcinoma	X																								
Pars distalis, leukemia mononuclear																									
Thyroid gland	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
C-cell, adenoma						X								X											
C-cell, carcinoma																									
Follicular cell, adenocarcinoma																									
Follicular cell, adenoma																									
GENERAL BODY SYSTEM																									
None																									
GENITAL SYSTEM																									
Clitoral gland	M	M	+								+											M			
Adenoma			X								X														
Leukemia mononuclear																									
Ovary	+	+	+																	+					
Granulosa cell tumor malignant																				X					
Leukemia mononuclear																									
Luteoma																									
Uterus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leiomyosarcoma																									
Leukemia mononuclear																									
Polyp stromal																									
Bilateral, polyp stromal																									
Endometrium, adenocarcinoma														X											
Endometrium, sarcoma stromal																									
Vagina																									

TABLE B2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF FEMALE RATS: LOW DOSE (Continued)

WEEKS ON STUDY	105	105	105	105	105	TOTAL: TISSUES TUMORS
CARCASS ID	581	582	591	592	601	
ALIMENTARY SYSTEM						
Esophagus						28
Intestine large						28
Intestine large, cecum						24
Intestine large, colon						26
Intestine large, rectum						28
Leukemia mononuclear						1
Intestine small						28
Intestine small, duodenum						28
Intestine small, ileum						24
Intestine small, jejunum						23
Liver	+	+	+	+	+	55
Leukemia mononuclear		X		X		15
Mesentery						13
Leukemia mononuclear						5
Pancreas						28
Pharynx						1
Salivary glands						26
Leukemia mononuclear						1
Stomach						28
Stomach, forestomach						28
Leukemia mononuclear						1
Stomach, glandular						28
Leukemia mononuclear						1
Tongue						1
Papilloma squamous						1
Tooth						3
Pulp, leukemia mononuclear						2
CARDIOVASCULAR SYSTEM						
Heart						28
Leukemia mononuclear						7
ENDOCRINE SYSTEM						
Adrenal gland	+	+	+	+	+	55
Adrenal gland, cortex	+	+	+	+	+	55
Leukemia mononuclear						9
Adrenal gland, medulla	+	+	+	+	+	55
Leukemia mononuclear						8
Pheochromocytoma malignant						1
Pheochromocytoma complex						1
Bilateral, pheochromocytoma benign						1
Islets, pancreatic						28
Parathyroid gland					M	22
Pituitary gland	+	+	+	+	+	54
Leukemia mononuclear						1
Pars distalis, adenoma						21
Pars distalis, carcinoma						1
Pars distalis, leukemia mononuclear						2
Thyroid gland	+	+	+	+	+	54
C-cell, adenoma						3
C-cell, carcinoma						1
Follicular cell, adenocarcinoma						1
Follicular cell, adenoma					X	1
GENERAL BODY SYSTEM						
None						
GENITAL SYSTEM						
Clitoral gland			M		M	24
Adenoma						3
Leukemia mononuclear						2
Ovary						29
Granulosa cell tumor malignant						1
Leukemia mononuclear						3
Luteoma						1
Uterus	+	+	+	+	+	55
Leiomyosarcoma						1
Leukemia mononuclear						2
Polyp stromal				X	X	5
Bilateral, polyp stromal						1
Endometrium, adenocarcinoma						1
Endometrium, sarcoma stromal						1
Vagina						1

TABLE B2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF FEMALE RATS: LOW DOSE (Continued)

WEEKS ON STUDY	054	064	070	071	080	083	085	090	090	090	091	094	094	094	095	096	096	096	096	096	100	100	100	102	102	102
CARCASS ID	535	605	545	644	585	565	544	584	575	583	615	625	574	614	655	573	633	532	654	594	622	623	613	643	604
HEMATOPOIETIC SYSTEM																									
Blood					+			+		+			+	+	+				+			+	+	+	
Leukemia mononuclear								X		X			X	X	X							X	X	X	
Bone marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear						X		X		X			X		X								X	X	
Lymph node	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Mediastinal, leukemia mononuclear								X															X	X	
Pancreatic, leukemia mononuclear															X									X	
Lymph node, mandibular	M	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear						X		X		X													X	X	
Lymph node, mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear						X		X		X			X		X							X	X	X	
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear						X		X		X			X	X	X							X	X	X	
Thymus	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear								X		X			X									X	X	X	
INTEGUMENTARY SYSTEM																									
Mammary gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenoma																									
Fibroadenoma							X		X			X			X			X	X	X	X		X		X
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Basal cell adenoma	X																								
Keratoacanthoma																									
Subcutaneous tissue, leukemia mononuclear						X		X					X												
MUSCULOSKELETAL SYSTEM																									
Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cartilage, adenocarcinoma, extension, metastatic, thyroid gland																	X								
Skeletal muscle								+																+	
Leukemia mononuclear								X																	
NERVOUS SYSTEM																									
Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Astrocytoma malignant																									X
Leukemia mononuclear						X		X					X												
Meninges, leukemia mononuclear								X																	
Spinal cord	+	+	+	+	+			+					+												
Leukemia mononuclear								X																	
Meninges, leukemia mononuclear													X												
RESPIRATORY SYSTEM																									
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Alveolar/bronchiolar carcinoma																									
Leukemia mononuclear						X		X		X			X										X	X	
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear						X		X					X												
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
SPECIAL SENSES SYSTEM																									
Eye					+																				
Harderian gland					+																				
Zymbal gland																									
URINARY SYSTEM																									
Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear						X		X		X			X		X								X	X	
Urinary bladder	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

TABLE B2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF FEMALE RATS: LOW DOSE (Continued)

WEEKS ON STUDY	103	103	104	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
CARCASS ID	593	531	552	572	603	611	612	621	632	651	652	653	542	543	564	571	602	631	641	642	541	551	561	562	563
HEMATOPOIETIC SYSTEM																									
Blood																									
Leukemia mononuclear																									
Bone marrow	+	+	+																						
Leukemia mononuclear																									
Lymph node	+	+	+																						
Mediastinal, leukemia mononuclear																									
Pancreatic, leukemia mononuclear																									
Lymph node, mandibular	+	+	+																						
Leukemia mononuclear																									
Lymph node, mesenteric	+	+	+																						
Leukemia mononuclear																									
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X			X								X		X							
Thymus	+	+	+		M					M	M	M					M						M		
Leukemia mononuclear																									
INTEGUMENTARY SYSTEM																									
Mammary gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenoma					X																		X		
Fibroadenoma	X	X						X			X		X		X	X				X		X	X		
Skin	+	+	+							+															
Basal cell adenoma																									
Keratoacanthoma										X															
Subcutaneous tissue, leukemia mononuclear																									
MUSCULOSKELETAL SYSTEM																									
Bone	+	+	+																						
Cartilage, adenocarcinoma, extension, metastatic, thyroid gland																									
Skeletal muscle																									
Leukemia mononuclear																									
NERVOUS SYSTEM																									
Brain	+	+	+																						
Astrocytoma malignant																									
Leukemia mononuclear																									
Meninges, leukemia mononuclear																									
Spinal cord																									
Leukemia mononuclear																									
Meninges, leukemia mononuclear																									
RESPIRATORY SYSTEM																									
Lung	+	+	+																						
Alveolar/bronchiolar carcinoma																									
Leukemia mononuclear																									
Nose	+	+	+																						
Leukemia mononuclear																									
Trachea	+	+	+																						
SPECIAL SENSES SYSTEM																									
Eye																									
Harderian gland																					M				
Zymbal gland																									
URINARY SYSTEM																									
Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear								X										X							
Urinary bladder	+	+	+																						

TABLE B2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF FEMALE RATS: LOW DOSE (Continued)

WEEKS ON STUDY	105	105	105	105	105	TOTAL: TISSUES TUMORS
CARCASS ID	581	582	591	592	601	
HEMATOPOIETIC SYSTEM						
Blood						10
Leukemia mononuclear						8
Bone marrow						28
Leukemia mononuclear						7
Lymph node						28
Mediastinal, leukemia mononuclear						3
Pancreatic, leukemia mononuclear						2
Lymph node, mandibular						26
Leukemia mononuclear						5
Lymph node, mesenteric						28
Leukemia mononuclear						8
Spleen	+	+	+	+	+	55
Leukemia mononuclear		X		X		15
Thymus						27
Leukemia mononuclear						6
INTEGUMENTARY SYSTEM						
Mammary gland	+	+	+	+	+	55
Adenoma						2
Fibroadenoma			X		X	22
Skin		+				30
Basal cell adenoma						1
Keratoacanthoma						1
Subcutaneous tissue, leukemia mononuclear						3
MUSCULOSKELETAL SYSTEM						
Bone						28
Cartilage, adenocarcinoma, extension, metastatic, thyroid gland						1
Skeletal muscle						2
Leukemia mononuclear						1
NERVOUS SYSTEM						
Brain						28
Astrocytoma malignant						1
Leukemia mononuclear						3
Meninges, leukemia mononuclear						1
Spinal cord						7
Leukemia mononuclear						1
Meninges, leukemia mononuclear						1
RESPIRATORY SYSTEM						
Lung			+			29
Alveolar/bronchiolar carcinoma			X			1
Leukemia mononuclear						6
Nose						28
Leukemia mononuclear						3
Trachea						28
SPECIAL SENSES SYSTEM						
Eye						1
Harderian gland						1
Zymbal gland						
URINARY SYSTEM						
Kidney	+	+	+	+	+	55
Leukemia mononuclear		X				10
Urinary bladder						27

TABLE B2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF FEMALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE: HIGH DOSE

WEEKS ON STUDY	049	066	071	084	085	086	086	091	092	094	094	094	094	096	097	099	100	100	101	101	102	102	103	105	105
CARCASS ID	685	704	785	753	775	735	695	715	683	694	674	682	745	752	764	664	714	663	751	722	713	712	681	661	662
ALIMENTARY SYSTEM																									
Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large, cecum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	A	+	+	+	+
Leukemia mononuclear										X				X											
Intestine large, colon	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+
Leukemia mononuclear										X				X											
Intestine large, rectum	+	+	+	+	+	+	+	+	+	+	M	M	+	+	+	M	+	+	+	+	+	+	A	+	+
Leukemia mononuclear										X															
Intestine small	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine small, duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X							X				X											
Intestine small, ileum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	A	+	+
Leukemia mononuclear										X				X											
Sarcoma																									
Intestine small, jejunum	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	A	+	+	A	+	A	+	+
Cystadenocarcinoma								X																	
Leukemia mononuclear										X															
Sarcoma																									
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X			X			X	X		X		X	X		X	X		X		X		X	
Mesentery			+			+			+	+		+		+				+		+		+			
Leukemia mononuclear						X			X	X		X		X				X		X					
Pheochromocytoma malignant, extension, metastatic, adrenal gland																						X			
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear										X				X											
Salivary glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear										X				X											
Stomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+
Stomach, forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+
Leukemia mononuclear			X							X				X	X										
Stomach, glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+
Leukemia mononuclear						X				X				X											
Tooth																				+					
Pulp, leukemia mononuclear																				X					
CARDIOVASCULAR SYSTEM																									
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X			X			X	X				X	X			X		X					
ENDOCRINE SYSTEM																									
Adrenal gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adrenal gland, cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenoma																							X		
Leukemia mononuclear			X			X				X				X	X		X	X		X				X	
Adrenal gland, medulla	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X			X				X				X	X			X		X					
Pheochromocytoma malignant																						X			
Pheochromocytoma benign										X														X	
Islets, pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear														X											
Parathyroid gland	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Pituitary gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	I	+	+	+	+
Leukemia mononuclear			X			X								X											
Meningioma malignant, metastatic		X																							
Pars distalis, adenoma			X										X				X								
Pars distalis, leukemia mononuclear										X															
Thyroid gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear														X											
C-cell, adenoma															X		X								
C-cell, carcinoma																									X
GENERAL BODY SYSTEM																									
None																									
GENITAL SYSTEM																									
Clitoral gland	M	+	+	+	+	+	+	+	+	M	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenoma														X											X
Leukemia mononuclear						X																			
Ovary	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear														X				X							
Oviduct	+									+															
Leukemia mononuclear										X															
Uterus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear						X				X				X											
Polyp stromal						X	X											X	X						
Vagina																									
Squamous cell carcinoma																									

TABLE B2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF FEMALE RATS: HIGH DOSE (Continued)

WEEKS ON STUDY	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
CARCASS ID	693	703	711	721	743	744	763	772	773	774	673	691	692	702	732	733	734	741	742	762	771	783	784	671	672
ALIMENTARY SYSTEM																									
Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large, cecum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Intestine large, colon	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Intestine large, rectum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Intestine small	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine small, duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Intestine small, ileum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear										X															
Sarcoma																						X			
Intestine small, jejunum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cystadenocarcinoma																									
Leukemia mononuclear																									
Sarcoma																						X			
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear	X			X	X	X				X							X						X	X	
Mesentery			M			+	+	+			+				+		+								
Leukemia mononuclear																	X								
Pheochromocytoma malignant, extension, metastatic, adrenal gland																									
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear				X																				X	
Salivary glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X												X								
Stomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Stomach, glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																								X	
Tooth				+	+					+							+								
Pulp, leukemia mononuclear				X	X					X							X								
CARDIOVASCULAR SYSTEM																									
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X					X							X						X	X	
ENDOCRINE SYSTEM																									
Adrenal gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adrenal gland, cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenoma																									
Leukemia mononuclear					X					X							X						X	X	
Adrenal gland, medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X					X							X						X	X	
Pheochromocytoma malignant																									
Pheochromocytoma benign																									X
Islets, pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Parathyroid gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear										X															
Pituitary gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X					X							X						X	X	
Meningioma malignant, metastatic																									
Pars distalis, adenoma			X			X		X				X		X	X			X			X		X		X
Pars distalis, leukemia mononuclear																									
Thyroid gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
C-cell, adenoma																									X
C-cell, carcinoma																				X				X	
GENERAL BODY SYSTEM																									
None																									
GENITAL SYSTEM																									
Clitoral gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenoma			X								X		X	X			X				X				
Leukemia mononuclear																	X								
Ovary	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear				X	X					X							X						X	X	
Oviduct																									
Leukemia mononuclear																									
Uterus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X																				
Polyp stromal					X					X															
Vagina																									
Squamous cell carcinoma																									

TABLE B2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF FEMALE RATS: HIGH DOSE (Continued)

WEEKS ON STUDY	105	105	105	105	105	TOTAL: TISSUES TUMORS
CARCASS ID	701	731	761	781	782	
ALIMENTARY SYSTEM						
Esophagus	+	+	+	+	+	55
Intestine large	+	+	+	+	+	55
Intestine large, cecum	+	+	+	+	+	53
Leukemia mononuclear						2
Intestine large, colon	+	+	+	+	+	54
Leukemia mononuclear						2
Intestine large, rectum	+	+	+	+	+	51
Leukemia mononuclear						1
Intestine small	+	+	+	+	+	55
Intestine small, duodenum	+	+	+	+	+	55
Leukemia mononuclear						3
Intestine small, ileum	+	+	+	+	+	53
Leukemia mononuclear						3
Sarcoma						1
Intestine small, jejunum	+	+	+	+	+	51
Cystadenocarcinoma						1
Leukemia mononuclear						1
Sarcoma						1
Liver	+	+	+	+	+	55
Leukemia mononuclear	X			X		22
Mesentery				+		16
Leukemia mononuclear						8
Pheochromocytoma malignant, extension, metastatic, adrenal gland						1
Pancreas	+	+	+	+	+	55
Leukemia mononuclear						4
Salivary glands	+	+	+	+	+	55
Leukemia mononuclear						4
Stomach	+	+	+	+	+	54
Stomach, forestomach	+	+	+	+	+	54
Leukemia mononuclear						4
Stomach, glandular	+	+	+	+	+	54
Leukemia mononuclear						4
Tooth						5
Pulp, leukemia mononuclear						5
CARDIOVASCULAR SYSTEM						
Heart	+	+	+	+	+	55
Leukemia mononuclear						13
ENDOCRINE SYSTEM						
Adrenal gland	+	+	+	+	+	55
Adrenal gland, cortex	+	+	+	+	+	55
Adenoma						1
Leukemia mononuclear						14
Adrenal gland, medulla	+	+	+	+	+	54
Leukemia mononuclear						12
Pheochromocytoma malignant						1
Pheochromocytoma benign	X					4
Islets, pancreatic	+	+	+	+	+	55
Leukemia mononuclear						1
Parathyroid gland	+	+	+	+	+	54
Leukemia mononuclear						1
Pituitary gland	+	+	+	+	+	54
Leukemia mononuclear						8
Meningioma malignant, metastatic						1
Pars distalis, adenoma	X			X	X	16
Pars distalis, leukemia mononuclear						1
Thyroid gland	+	+	+	+	+	55
Leukemia mononuclear						1
C-cell, adenoma				X	X	5
C-cell, carcinoma						3
GENERAL BODY SYSTEM						
None						
GENITAL SYSTEM						
Clitoral gland	+	+	+	+	+	52
Adenoma	X					9
Leukemia mononuclear						2
Ovary	+	+	+	+	+	55
Leukemia mononuclear						8
Oviduct						2
Leukemia mononuclear						1
Uterus	+	+	+	+	+	55
Leukemia mononuclear						4
Polyp stromal	X	X			X	9
Vagina					+	1
Squamous cell carcinoma					X	1

TABLE B2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF FEMALE RATS: HIGH DOSE (Continued)

WEEKS ON STUDY	049	066	071	084	085	086	086	091	092	094	094	094	094	096	097	099	100	100	101	101	102	102	103	105	105
CARCASS ID	685	704	785	753	775	735	695	715	683	694	674	682	745	752	764	664	714	663	751	722	713	712	681	661	662
HEMATOPOIETIC SYSTEM																									
Blood			+		+	+			+	+				+	+		+	+		+					
Leukemia mononuclear			X			X			X	X				X	X		X	X		X					
Bone marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X			X			X					X	X		X			X					
Lymph node	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Axillary, leukemia mononuclear						X																			
Deep cervical, leukemia mononuclear						X																			
Inguinal, leukemia mononuclear						X								X											
Lumbar, leukemia mononuclear						X				X															
Mediastinal, leukemia mononuclear						X								X				X							
Pancreatic, leukemia mononuclear						X			X	X															
Lymph node, mandibular	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X			X			X	X				X	X		X	X							
Lymph node, mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X			X			X	X				X	X		X	X		X					
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X			X			X	X		X		X	X		X	X		X		X		X	
Thymus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+
Leukemia mononuclear			X			X				X				X	X										
INTEGUMENTARY SYSTEM																									
Mammary gland	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenocarcinoma																									
Fibroadenoma				X			X	X				X	X								X				
Fibroadenoma, multiple																							X		
Leukemia mononuclear						X				X				X											
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Keratoacanthoma																									
Papilloma squamous																									
Subcutaneous tissue, leukemia mononuclear						X				X				X	X										
Subcutaneous tissue, sarcoma																					X				
MUSCULOSKELETAL SYSTEM																									
Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Skeletal muscle														+								+			
Leukemia mononuclear														X											
Pheochromocytoma malignant, extension, metastatic, adrenal gland																						X			
NERVOUS SYSTEM																									
Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear										X				X				X							
Meninges, leukemia mononuclear										X															
Meninges, meningioma malignant		X																							
Spinal cord	+	+	+							+				+	+					+					
Meninges, leukemia mononuclear										X				X	X					X					
RESPIRATORY SYSTEM																									
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Alveolar/bronchiolar carcinoma																									
Carcinoma, metastatic, thyroid gland																									
Leukemia mononuclear			X			X			X	X		X		X	X		X	X		X					
Pheochromocytoma malignant, metastatic, adrenal gland																						X			
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear														X				X		X					
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear														X				X							
SPECIAL SENSES SYSTEM																									
Eye		+		+	+												+								
Harderian gland		+																							
Zymbal gland					+																				
Carcinoma					X																				
URINARY SYSTEM																									
Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear			X			X			X	X		X		X	X		X	X		X					
Urinary bladder	+	+	M	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear						X				X				X	X		X								

TABLE B2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF FEMALE RATS: HIGH DOSE (Continued)

WEEKS ON STUDY	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
CARCASS ID	693	703	711	721	743	744	763	772	773	774	673	691	692	702	732	733	734	741	742	762	771	783	784	671	672
HEMATOPOIETIC SYSTEM																									
Blood		+		+	+					+							+				+		+	+	
Leukemia mononuclear				X	X					X							X						X	X	
Bone marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear				X	X												X							X	
Lymph node	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Axillary, leukemia mononuclear																									
Deep cervical, leukemia mononuclear																								X	
Inguinal, leukemia mononuclear																									
Lumbar, leukemia mononuclear																							X		
Mediastinal, leukemia mononuclear					X												X								
Pancreatic, leukemia mononuclear					X																				
Lymph node, mandibular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					+					X							X						X	X	
Lymph node, mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear				X	X	X				X							X						X	X	
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear				X	X	X				X							X						X	X	
Thymus	X			X	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear	+	M	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	X	X	
					X					X															
INTEGUMENTARY SYSTEM																									
Mammary gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenocarcinoma												X													
Fibroadenoma	X							X	X	X		X	X	X		X		X	X		X		X	X	
Fibroadenoma, multiple																									
Leukemia mononuclear	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Skin																								X	X
Keratoacanthoma																									X
Papilloma squamous																									
Subcutaneous tissue, leukemia mononuclear																									
Subcutaneous tissue, sarcoma																									
MUSCULOSKELETAL SYSTEM																									
Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Skeletal muscle																									
Leukemia mononuclear																									
Pheochromocytoma malignant, extension, metastatic, adrenal gland																									
NERVOUS SYSTEM																									
Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
Meninges, leukemia mononuclear				X						X							X								
Meninges, meningioma malignant																									
Spinal cord				+						+							+							+	
Meninges, leukemia mononuclear				X						X							X							X	
RESPIRATORY SYSTEM																									
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Alveolar/bronchiolar carcinoma															X										
Carcinoma, metastatic, thyroid gland																								X	
Leukemia mononuclear					X					X							X						X	X	
Pheochromocytoma malignant, metastatic, adrenal gland																									
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear				X	X												X								
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear																									
SPECIAL SENSES SYSTEM																									
Eye															+										
Harderian gland																									
Zymbal gland																									
Carcinoma																									
URINARY SYSTEM																									
Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear	X				X					X							X						X	X	
Urinary bladder	+	+	M	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Leukemia mononuclear					X												X							X	

TABLE B2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF FEMALE RATS: HIGH DOSE (Continued)

WEEKS ON STUDY	105	105	105	105	105	TOTAL: TISSUES TUMORS
CARCASS ID	701	731	761	781	782	
HEMATOPOIETIC SYSTEM						
Blood						18
Leukemia mononuclear						15
Bone marrow	+	+	+	+	+	55
Leukemia mononuclear						11
Lymph node	+	+	+	+	+	55
Axillary, leukemia mononuclear						1
Deep cervical, leukemia mononuclear						1
Inguinal, leukemia mononuclear						3
Lumbar, leukemia mononuclear						2
Mediastinal, leukemia mononuclear						6
Pancreatic, leukemia mononuclear						4
Lymph node, mandibular	+		+	+	+	52
Leukemia mononuclear						13
Lymph node, mesenteric	+		+	+	+	54
Leukemia mononuclear						16
Spleen	+	+	+	+	+	55
Leukemia mononuclear	X			X		22
Thymus	+	+	+	M	+	51
Leukemia mononuclear						9
INTEGUMENTARY SYSTEM						
Mammary gland	+	+	+	+	+	54
Adenocarcinoma						1
Fibroadenoma			X		X	21
Fibroadenoma, multiple						1
Leukemia mononuclear						3
Skin	+	+	+	+	+	55
Keratoacanthoma						2
Papilloma squamous						1
Subcutaneous tissue, leukemia mononuclear						4
Subcutaneous tissue, sarcoma						1
MUSCULOSKELETAL SYSTEM						
Bone	+	+	+	+	+	55
Skeletal muscle						2
Leukemia mononuclear						1
Pheochromocytoma malignant, extension, metastatic, adrenal gland						1
NERVOUS SYSTEM						
Brain	+	+	+	+	+	55
Leukemia mononuclear						3
Meninges, leukemia mononuclear						4
Meninges, meningioma malignant						1
Spinal cord		+				12
Meninges, leukemia mononuclear						8
RESPIRATORY SYSTEM						
Lung	+	+	+	+	+	55
Alveolar/bronchiolar carcinoma						1
Carcinoma, metastatic, thyroid gland						1
Leukemia mononuclear						15
Pheochromocytoma malignant, metastatic, adrenal gland						1
Nose	+	+	+	+	+	55
Leukemia mononuclear						6
Trachea	+	+	+	+	+	55
Leukemia mononuclear						2
SPECIAL SENSES SYSTEM						
Eye				+		6
Harderian gland						1
Zymbal gland						1
Carcinoma						1
URINARY SYSTEM						
Kidney	+	+	+	+	+	55
Leukemia mononuclear						16
Urinary bladder	+	+	+	+	+	51
Leukemia mononuclear						8

TABLE B3. ANALYSIS OF PRIMARY TUMORS IN FEMALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE

	Vehicle Control	25 mg/kg	50 mg/kg
Adrenal Medulla: Pheochromocytoma			
Overall Rates (a)	2/54 (4%)	1/55 (2%)	4/54 (7%)
Adjusted Rates (b)	4.9%	2.1%	11.3%
Terminal Rates (c)	1/40 (3%)	0/27 (0%)	3/32 (9%)
Day of First Observation	722	625	652
Life Table Tests (d)	P=0.191	P=0.593N	P=0.256
Logistic Regression Tests (d)	P=0.230	P=0.496N	P=0.310
Cochran-Armitage Trend Test (d)	P=0.238		
Fisher Exact Test (d)		P=0.493N	P=0.339
Adrenal Medulla: Pheochromocytoma--Benign, Complex, or Malignant			
Overall Rates (a)	3/54 (6%)	3/55 (5%)	5/54 (9%)
Adjusted Rates (b)	7.3%	9.4%	14.0%
Terminal Rates (c)	2/40 (5%)	2/27 (7%)	3/32 (9%)
Day of First Observation	722	625	652
Life Table Tests (d)	P=0.207	P=0.502	P=0.259
Logistic Regression Tests (d)	P=0.260	P=0.629	P=0.320
Cochran-Armitage Trend Test (d)	P=0.283		
Fisher Exact Test (d)		P=0.652N	P=0.358
Clitoral Gland: Adenoma			
Overall Rates (a)	4/51 (8%)	3/55 (5%)	9/52 (17%)
Adjusted Rates (b)	10.1%	9.6%	26.8%
Terminal Rates (c)	3/38 (8%)	1/27 (4%)	8/32 (25%)
Day of First Observation	710	672	669
Life Table Tests (d)	P=0.046	P=0.637	P=0.066
Logistic Regression Tests (d)	P=0.058	P=0.546N	P=0.089
Cochran-Armitage Trend Test (d)	P=0.075		
Fisher Exact Test (d)		P=0.458N	P=0.125
Mammary Gland: Fibroadenoma			
Overall Rates (a)	29/55 (53%)	22/55 (40%)	22/55 (40%)
Adjusted Rates (b)	61.2%	54.9%	55.0%
Terminal Rates (c)	22/40 (55%)	10/27 (37%)	15/32 (47%)
Day of First Observation	500	595	588
Life Table Tests (d)	P=0.377N	P=0.519	P=0.397N
Logistic Regression Tests (d)	P=0.121N	P=0.161N	P=0.138N
Cochran-Armitage Trend Test (d)	P=0.106N		
Fisher Exact Test (d)		P=0.126N	P=0.126N
Mammary Gland: Adenoma or Fibroadenoma			
Overall Rates (a)	29/55 (53%)	23/55 (42%)	22/55 (40%)
Adjusted Rates (b)	61.2%	57.5%	55.0%
Terminal Rates (c)	22/40 (55%)	11/27 (41%)	15/32 (47%)
Day of First Observation	500	595	588
Life Table Tests (d)	P=0.382N	P=0.439	P=0.397N
Logistic Regression Tests (d)	P=0.122N	P=0.217N	P=0.138N
Cochran-Armitage Trend Test (d)	P=0.106N		
Fisher Exact Test (d)		P=0.170N	P=0.126N
Mammary Gland: Adenocarcinoma			
Overall Rates (a)	3/55 (5%)	0/55 (0%)	1/55 (2%)
Adjusted Rates (b)	6.8%	0.0%	3.1%
Terminal Rates (c)	1/40 (3%)	0/27 (0%)	1/32 (3%)
Day of First Observation	646		729
Life Table Tests (d)	P=0.228N	P=0.175N	P=0.371N
Logistic Regression Tests (d)	P=0.183N	P=0.123N	P=0.312N
Cochran-Armitage Trend Test (d)	P=0.176N		
Fisher Exact Test (d)		P=0.122N	P=0.309N

TABLE B3. ANALYSIS OF PRIMARY TUMORS IN FEMALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	25 mg/kg	50 mg/kg
Mammary Gland: Adenoma, Fibroadenoma, or Adenocarcinoma			
Overall Rates (a)	30/55 (55%)	23/55 (42%)	22/55 (40%)
Adjusted Rates (b)	62.1%	57.5%	55.0%
Terminal Rates (c)	22/40 (55%)	11/27 (41%)	15/32 (47%)
Day of First Observation	500	595	588
Life Table Tests (d)	P=0.326N	P=0.496	P=0.339N
Logistic Regression Tests (d)	P=0.087N	P=0.165N	P=0.100N
Cochran-Armitage Trend Test (d)	P=0.075N		
Fisher Exact Test (d)		P=0.126N	P=0.091N
Pituitary Gland/Pars Distalis: Adenoma			
Overall Rates (a)	23/54 (43%)	21/54 (39%)	16/54 (30%)
Adjusted Rates (b)	50.4%	54.7%	44.5%
Terminal Rates (c)	17/39 (44%)	11/27 (41%)	13/32 (41%)
Day of First Observation	476	492	492
Life Table Tests (d)	P=0.295N	P=0.272	P=0.300N
Logistic Regression Tests (d)	P=0.108N	P=0.456N	P=0.126N
Cochran-Armitage Trend Test (d)	P=0.098N		
Fisher Exact Test (d)		P=0.422N	P=0.115N
Pituitary Gland/Pars Distalis: Adenoma or Carcinoma			
Overall Rates (a)	24/54 (44%)	22/54 (41%)	16/54 (30%)
Adjusted Rates (b)	50.4%	54.7%	44.5%
Terminal Rates (c)	18/39 (46%)	11/27 (41%)	13/32 (41%)
Day of First Observation	476	492	492
Life Table Tests (d)	P=0.295N	P=0.272	P=0.300N
Logistic Regression Tests (d)	P=0.077N	P=0.463N	P=0.090N
Cochran-Armitage Trend Test (d)	P=0.069N		
Fisher Exact Test (d)		P=0.423N	P=0.081N
Thyroid Gland: C-Cell Adenoma			
Overall Rates (a)	9/55 (16%)	3/54 (6%)	5/55 (9%)
Adjusted Rates (b)	21.2%	10.0%	13.9%
Terminal Rates (c)	7/40 (18%)	2/27 (7%)	3/32 (9%)
Day of First Observation	674	700	676
Life Table Tests (d)	P=0.245N	P=0.187N	P=0.322N
Logistic Regression Tests (d)	P=0.172N	P=0.110N	P=0.230N
Cochran-Armitage Trend Test (d)	P=0.137N		
Fisher Exact Test (d)		P=0.066N	P=0.196N
Thyroid Gland: C-Cell Carcinoma			
Overall Rates (a)	4/55 (7%)	1/54 (2%)	3/55 (5%)
Adjusted Rates (b)	9.4%	3.1%	9.4%
Terminal Rates (c)	3/40 (8%)	0/27 (0%)	3/32 (9%)
Day of First Observation	647	709	729
Life Table Tests (d)	P=0.511N	P=0.285N	P=0.606N
Logistic Regression Tests (d)	P=0.448N	P=0.207N	P=0.536N
Cochran-Armitage Trend Test (d)	P=0.412N		
Fisher Exact Test (d)		P=0.187N	P=0.500N
Thyroid Gland: C-Cell Adenoma or Carcinoma			
Overall Rates (a)	13/55 (24%)	4/54 (7%)	8/55 (15%)
Adjusted Rates (b)	29.9%	12.8%	22.8%
Terminal Rates (c)	10/40 (25%)	2/27 (7%)	6/32 (19%)
Day of First Observation	647	700	676
Life Table Tests (d)	P=0.244N	P=0.089N	P=0.320N
Logistic Regression Tests (d)	P=0.153N	P=0.034N	P=0.205N
Cochran-Armitage Trend Test (d)	P=0.116N		
Fisher Exact Test (d)		P=0.018N	P=0.166N

TABLE B3. ANALYSIS OF PRIMARY TUMORS IN FEMALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	25 mg/kg	50 mg/kg
Uterus: Stromal Polyp			
Overall Rates (a)	12/55 (22%)	6/55 (11%)	9/55 (16%)
Adjusted Rates (b)	27.4%	15.9%	23.3%
Terminal Rates (c)	9/40 (23%)	2/27 (7%)	5/32 (16%)
Day of First Observation	647	625	597
Life Table Tests (d)	P=0.407N	P=0.270N	P=0.479N
Logistic Regression Tests (d)	P=0.271N	P=0.114N	P=0.331N
Cochran-Armitage Trend Test (d)	P=0.260N		
Fisher Exact Test (d)		P=0.098N	P=0.314N
Hematopoietic System: Mononuclear Leukemia			
Overall Rates (a)	9/55 (16%)	15/55 (27%)	22/55 (40%)
Adjusted Rates (b)	19.4%	37.9%	49.6%
Terminal Rates (c)	4/40 (10%)	6/27 (22%)	11/32 (34%)
Day of First Observation	553	576	492
Life Table Tests (d)	P=0.003	P=0.048	P=0.003
Logistic Regression Tests (d)	P=0.004	P=0.129	P=0.006
Cochran-Armitage Trend Test (d)	P=0.004		
Fisher Exact Test (d)		P=0.124	P=0.005

(a) Number of tumor-bearing animals/number of animals examined at the site
(b) Kaplan-Meier estimated tumor incidences at the end of the study after adjusting for intercurrent mortality
(c) Observed tumor incidence at terminal kill
(d) Beneath the vehicle control incidence are the P values associated with the trend test. Beneath the dosed group incidence are the P values corresponding to pairwise comparisons between that dosed group and the vehicle controls. The life table analysis regards tumors in animals dying prior to terminal kill as being (directly or indirectly) the cause of death. The logistic regression test regards these lesions as nonfatal. The Cochran-Armitage and Fisher exact tests compare directly the overall incidence rates. A negative trend or lower incidence in a dosed group is indicated by (N).

TABLE B4a. HISTORICAL INCIDENCE OF LEUKEMIA IN FEMALE F344/N RATS (a)

Study	Incidence in Controls
Historical Incidence for All Water Gavage Vehicle Controls	
Iodinated glycerol (b)	15/50
Malonaldehyde, sodium salt (c)	5/50
Chlorpheniramine maleate (c)	11/50
Tetrakis(hydroxymethyl)phosphonium chloride (c)	4/50
Tetrakis(hydroxymethyl)phosphonium sulfate (c)	23/49
Methyl carbamate (d)	17/50
TOTAL	75/299 (25.1%)
SD (e)	14.90%
Range (f)	
High	23/49
Low	4/50
Overall Historical Incidence for Untreated Controls	
TOTAL	383/1,983 (19.3%)
SD (e)	6.66%
Range (f)	
High	15/49
Low	3/50

(a) Data as of April 29, 1987, for studies of at least 104 weeks
(b) Study performed at EG&G Mason Research Institute
(c) Study performed at Battelle Columbus Laboratories
(d) Study performed at Microbiological Associates
(e) Standard deviation
(f) Range and SD are presented for groups of 35 or more animals.

TABLE B4b. HISTORICAL INCIDENCE OF THYROID GLAND C-CELL TUMORS IN FEMALE F344/N RATS (a)

Study	Incidence in Controls		
	Adenoma	Carcinoma	Adenoma or Carcinoma
Historical Incidence for All Water Gavage Vehicle Controls			
Iodinated glycerol (b)	0/46	2/46	2/46
Malonaldehyde, sodium salt (c)	9/50	0/50	9/50
Chlorpheniramine maleate (c)	4/47	0/47	4/47
Tetrakis(hydroxymethyl)phosphonium chloride (c)	6/50	1/50	7/50
Tetrakis(hydroxymethyl)phosphonium sulfate (c)	2/49	3/49	5/49
Methyl carbamate (d)	2/50	0/50	2/50
TOTAL	23/292 (7.9%)	6/292 (2.1%)	29/292 (9.9%)
SD (e)	6.50%	2.63%	5.48%
Range (f)			
High	9/50	3/49	9/50
Low	0/46	0/50	2/50
Overall Historical Incidence for Untreated Controls			
TOTAL	155/1,938 (8.0%)	66/1,938 (3.4%)	218/1,938 (11.2%)
SD (e)	7.21%	2.75%	7.20%
Range (f)			
High	17/50	5/50	19/50
Low	0/50	0/50	0/50

(a) Data as of April 29, 1987, for studies of at least 104 weeks
(b) Study performed at EG&G Mason Research Institute
(c) Study performed at Battelle Columbus Laboratories
(d) Study performed at Microbiological Associates
(e) Standard deviation
(f) Range and SD are presented for groups of 35 or more animals.

TABLE B5. SUMMARY OF THE INCIDENCE OF NONNEOPLASTIC LESIONS IN FEMALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE

	Vehicle Control	Low Dose	High Dose
Animals initially in study	65	65	65
Animals removed	65	65	65
Animals examined histopathologically	55	55	55
ALIMENTARY SYSTEM			
Intestine small, duodenum	(55)	(28)	(55)
Erosion			1 (2%)
Inflammation, suppurative			1 (2%)
Liver	(55)	(55)	(55)
Basophilic focus	30 (55%)	38 (69%)	30 (55%)
Clear cell focus	5 (9%)	6 (11%)	5 (9%)
Congestion	1 (2%)	1 (2%)	1 (2%)
Cytomegaly	1 (2%)	2 (4%)	2 (4%)
Degeneration, cystic	1 (2%)	1 (2%)	
Eosinophilic focus	1 (2%)	2 (4%)	
Fatty change	9 (16%)	10 (18%)	9 (16%)
Fibrosis, focal			2 (4%)
Focal cellular change		1 (2%)	1 (2%)
Hematopoietic cell proliferation	2 (4%)	2 (4%)	1 (2%)
Hemorrhage		1 (2%)	
Hepatodiaphragmatic nodule	9 (16%)	10 (18%)	11 (20%)
Hyperplasia, focal			1 (2%)
Inflammation, chronic	39 (71%)	30 (55%)	31 (56%)
Inflammation, granulomatous	1 (2%)		1 (2%)
Mineralization		3 (5%)	1 (2%)
Mixed cell focus	4 (7%)	1 (2%)	2 (4%)
Necrosis, coagulative	4 (7%)	3 (5%)	4 (7%)
Arteriole, inflammation, proliferative			1 (2%)
Bile duct, hyperplasia	41 (75%)	36 (65%)	41 (75%)
Centrilobular, atrophy	4 (7%)	3 (5%)	10 (18%)
Sinusoid, dilatation	3 (5%)	1 (2%)	3 (5%)
Mesentery	(7)	(13)	(16)
Pigmentation, hemosiderin			1 (6%)
Arteriole, degeneration, hyaline		1 (8%)	
Arteriole, inflammation, chronic	1 (14%)	1 (8%)	
Fat, hemorrhage			2 (13%)
Fat, inflammation, acute			1 (6%)
Fat, inflammation, chronic		6 (46%)	5 (31%)
Fat, inflammation, granulomatous		1 (8%)	
Fat, mineralization		1 (8%)	
Fat, necrosis	3 (43%)	5 (38%)	7 (44%)
Fat, pigmentation, hemosiderin			1 (6%)
Pancreas	(55)	(28)	(55)
Atrophy	2 (4%)	1 (4%)	
Focal cellular change			1 (2%)
Inflammation, chronic	1 (2%)		
Duct, fibrosis	1 (2%)		
Duct, necrosis, coagulative		1 (4%)	
Pharynx		(1)	
Hyperkeratosis		1 (100%)	
Inflammation, chronic		1 (100%)	
Salivary glands	(55)	(26)	(55)
Atrophy, focal	1 (2%)	1 (4%)	3 (5%)
Cytoplasmic alteration	3 (5%)		2 (4%)
Arteriole, inflammation, proliferative			1 (2%)
Duct, ectasia		1 (4%)	
Duct, inflammation, chronic	13 (24%)	1 (4%)	6 (11%)
Duct, metaplasia, squamous	5 (9%)	3 (12%)	12 (22%)

TABLE B5. SUMMARY OF THE INCIDENCE OF NONNEOPLASTIC LESIONS IN FEMALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	Low Dose	High Dose
ALIMENTARY SYSTEM (Continued)			
Stomach, forestomach	(55)	(28)	(54)
Acanthosis	1 (2%)	2 (7%)	2 (4%)
Hyperkeratosis	1 (2%)	2 (7%)	2 (4%)
Hyperplasia, papillary	1 (2%)		
Inflammation, acute		1 (4%)	
Inflammation, chronic	1 (2%)		1 (2%)
Ulcer	3 (5%)	2 (7%)	
Stomach, glandular	(55)	(28)	(54)
Inflammation, acute		1 (4%)	
CARDIOVASCULAR SYSTEM			
Heart	(55)	(28)	(55)
Cardiomyopathy	46 (84%)	20 (71%)	42 (76%)
Atrium, inflammation, chronic			1 (2%)
Atrium, thrombus		1 (4%)	2 (4%)
ENDOCRINE SYSTEM			
Adrenal gland, cortex	(55)	(55)	(55)
Accessory adrenal cortical nodule	1 (2%)		2 (4%)
Angiectasis	5 (9%)	6 (11%)	4 (7%)
Atrophy			1 (2%)
Cyst		1 (2%)	3 (5%)
Degeneration, fatty, focal	8 (15%)	8 (15%)	8 (15%)
Degeneration, focal	1 (2%)		1 (2%)
Hematopoietic cell proliferation	2 (4%)	2 (4%)	2 (4%)
Hyperplasia	10 (18%)	11 (20%)	12 (22%)
Hypertrophy	1 (2%)	1 (2%)	
Hypertrophy, focal	1 (2%)		
Necrosis, coagulative		3 (5%)	
Pigmentation, hemosiderin	1 (2%)		
Vacuolization cytoplasmic	3 (5%)	1 (2%)	7 (13%)
Capsule, hyperplasia		3 (5%)	1 (2%)
Adrenal gland, medulla	(54)	(55)	(54)
Hyperplasia	13 (24%)	8 (15%)	11 (20%)
Islets, pancreatic	(53)	(28)	(55)
Hyperplasia	1 (2%)		
Parathyroid gland	(54)	(22)	(54)
Hyperplasia	3 (6%)	2 (9%)	2 (4%)
Pituitary gland	(54)	(54)	(54)
Cyst		1 (2%)	
Hyperplasia			1 (2%)
Pars distalis, angiectasis	1 (2%)	2 (4%)	
Pars distalis, cyst	23 (43%)	18 (33%)	20 (37%)
Pars distalis, hemorrhage	1 (2%)		
Pars distalis, hyperplasia	28 (52%)	22 (41%)	26 (48%)
Pars intermedia, cyst	1 (2%)		
Rathke's cleft, crystals			1 (2%)
Thyroid gland	(55)	(54)	(55)
Ultimobranchial cyst	1 (2%)	1 (2%)	
C-cell, hyperplasia	19 (35%)	15 (28%)	14 (25%)
Follicle, cyst		1 (2%)	
GENERAL BODY SYSTEM			
None			

TABLE B5. SUMMARY OF THE INCIDENCE OF NONNEOPLASTIC LESIONS IN FEMALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	Low Dose	High Dose
GENITAL SYSTEM			
Clitoral gland	(51)	(24)	(52)
Abscess	1 (2%)		
Cyst	4 (8%)	1 (4%)	9 (17%)
Hyperplasia	2 (4%)	2 (8%)	
Inflammation, chronic	7 (14%)	2 (8%)	5 (10%)
Inflammation, granulomatous		1 (4%)	1 (2%)
Inflammation, suppurative	5 (10%)	1 (4%)	2 (4%)
Pigmentation, hemosiderin		1 (4%)	
Ovary	(55)	(29)	(55)
Atrophy	2 (4%)	1 (3%)	
Corpus luteum, cyst		1 (3%)	1 (2%)
Follicle, cyst	2 (4%)	1 (3%)	
Periovarian tissue, cyst	1 (2%)	1 (3%)	2 (4%)
Oviduct			(2)
Inflammation, chronic			1 (50%)
Uterus	(55)	(55)	(55)
Inflammation, suppurative		1 (2%)	2 (4%)
Cervix, abscess	2 (4%)	6 (11%)	4 (7%)
Cervix, inflammation, proliferative		1 (2%)	1 (2%)
Cervix, prolapse	2 (4%)		
Cervix, epithelium, degeneration, mucoid			1 (2%)
Endometrium, hyperplasia, cystic	17 (31%)	16 (29%)	15 (27%)
Vagina	(2)	(1)	(1)
Dilatation	1 (50%)		
HEMATOPOIETIC SYSTEM			
Blood	(8)	(10)	(18)
Neutrophilia		2 (20%)	2 (11%)
Thrombocytopenia		1 (10%)	
Erythrocyte, poikilocytosis		1 (10%)	
Bone marrow	(55)	(28)	(55)
Myelofibrosis	1 (2%)	1 (4%)	
Erythroid cell, hyperplasia	1 (2%)		1 (2%)
Myeloid cell, hyperplasia	1 (2%)		
Lymph node	(55)	(28)	(55)
Mediastinal, hyperplasia, macrophage			1 (2%)
Mediastinal, hyperplasia, plasma cell		1 (4%)	
Mediastinal, pigmentation, hemosiderin			1 (2%)
Mediastinal, sinus, ectasia		1 (4%)	
Pancreatic, hematopoietic cell proliferation	1 (2%)		
Pancreatic, sinus, ectasia		1 (4%)	
Lymph node, mandibular	(55)	(26)	(52)
Hyperplasia, lymphoid			1 (2%)
Hyperplasia, macrophage		1 (4%)	
Hyperplasia, plasma cell	4 (7%)	1 (4%)	2 (4%)
Sinus, ectasia	3 (5%)		2 (4%)
Lymph node, mesenteric	(53)	(28)	(54)
Congestion	1 (2%)		1 (2%)
Hemorrhage		1 (4%)	
Hyperplasia, macrophage	2 (4%)		
Hyperplasia, plasma cell			1 (2%)
Sinus, ectasia	6 (11%)	2 (7%)	3 (6%)
Spleen	(55)	(55)	(55)
Fibrosis		1 (2%)	2 (4%)
Hematopoietic cell proliferation	2 (4%)	5 (9%)	2 (4%)
Infarct		1 (2%)	1 (2%)
Inflammation, chronic		1 (2%)	
Pigmentation, hemosiderin	1 (2%)	2 (4%)	

TABLE B5. SUMMARY OF THE INCIDENCE OF NONNEOPLASTIC LESIONS IN FEMALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	Low Dose	High Dose
HEMATOPOIETIC SYSTEM (Continued)			
Thymus	(52)	(27)	(51)
Cyst	4 (8%)	1 (4%)	5 (10%)
Arteriole, mediastinum, inflammation, chronic	1 (2%)		
INTEGUMENTARY SYSTEM			
Mammary gland	(55)	(55)	(54)
Abscess			1 (2%)
Cyst	16 (29%)	12 (22%)	14 (26%)
Hyperplasia	36 (65%)	45 (82%)	30 (56%)
Mineralization		1 (2%)	
Duct, fibrosis	1 (2%)		
Skin	(55)	(30)	(55)
Abscess		1 (3%)	
Cyst epithelial inclusion	1 (2%)	1 (3%)	1 (2%)
Inflammation, chronic		2 (7%)	
Ulcer	2 (4%)	2 (7%)	2 (4%)
Subcutaneous tissue, cyst			1 (2%)
Subcutaneous tissue, inflammation, chronic	2 (4%)		
MUSCULOSKELETAL SYSTEM			
None			
NERVOUS SYSTEM			
Brain	(55)	(28)	(55)
Compression	7 (13%)	6 (21%)	2 (4%)
Cerebrum, mineralization			1 (2%)
Meninges, hemorrhage	1 (2%)		
Pons, hematocyst	1 (2%)		
Ventricle, dilatation	2 (4%)		1 (2%)
RESPIRATORY SYSTEM			
Lung	(55)	(29)	(55)
Congestion		2 (7%)	
Edema			1 (2%)
Hemorrhage	1 (2%)		
Hyperplasia, macrophage	1 (2%)	1 (3%)	1 (2%)
Hyperplasia, adenomatous	1 (2%)	1 (3%)	2 (4%)
Pigmentation, hemosiderin	1 (2%)		
Interstitium, inflammation, chronic	3 (5%)	2 (7%)	1 (2%)
Interstitium, inflammation, granulomatous			1 (2%)
Pleura, inflammation, chronic	1 (2%)		3 (5%)
Nose	(55)	(28)	(55)
Exudate		1 (4%)	
Hemorrhage			1 (2%)
Inflammation, chronic	7 (13%)	4 (14%)	4 (7%)
Inflammation, suppurative	1 (2%)		
Lumen, foreign body	1 (2%)		
Nasolacrimal duct, cyst			1 (2%)
Nasolacrimal duct, inflammation, chronic	39 (71%)	17 (61%)	28 (51%)
Nasolacrimal duct, inflammation, suppurative	1 (2%)		
Nasolacrimal duct, metaplasia, squamous	52 (95%)	20 (71%)	40 (73%)
Trachea	(55)	(28)	(55)
Inflammation, chronic	3 (5%)	2 (7%)	
Glands, cyst	1 (2%)	1 (4%)	6 (11%)

TABLE B5. SUMMARY OF THE INCIDENCE OF NONNEOPLASTIC LESIONS IN FEMALE RATS IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	Low Dose	High Dose
SPECIAL SENSES SYSTEM			
Eye	(2)	(1)	(6)
Hemorrhage			3 (50%)
Cornea, proliferation			1 (17%)
Retina, atrophy	2 (100%)		2 (33%)
Harderian gland	(2)	(1)	(1)
Inflammation, chronic	2 (100%)	1 (100%)	
URINARY SYSTEM			
Kidney	(55)	(55)	(55)
Cyst		1 (2%)	1 (2%)
Inflammation, chronic	17 (31%)	14 (25%)	18 (33%)
Mineralization	3 (5%)	1 (2%)	4 (7%)
Necrosis, coagulative			1 (2%)
Nephropathy	47 (85%)	47 (85%)	46 (84%)
Pelvis, dilatation	1 (2%)	1 (2%)	
Renal tubule, inflammation, suppurative	2 (4%)		
Transitional epithelium, hyperplasia, papillary		1 (2%)	
Urinary bladder	(55)	(27)	(51)
Inflammation, chronic	5 (9%)	4 (15%)	3 (6%)
Transitional epithelium, hyperplasia, papillary			1 (2%)

APPENDIX C

SUMMARY OF LESIONS IN MALE MICE IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE

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TABLE C1. SUMMARY OF THE INCIDENCE OF NEOPLASMS IN MALE MICE IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE

	Vehicle Control	Low Dose	High Dose
Animals initially in study	65	65	65
Animals removed	65	65	65
Animals examined histopathologically	55	54	55
ALIMENTARY SYSTEM			
Gallbladder	(44)	*(54)	(48)
Lymphoma malignant lymphocytic	1 (2%)		
Lymphoma malignant mixed			1 (2%)
Intestine large, cecum	(49)	*(54)	(49)
Lymphoma malignant histiocytic			1 (2%)
Intestine large, colon	(49)	*(54)	(48)
Lymphoma malignant lymphocytic		1 (2%)	
Intestine large, rectum	(50)	*(54)	(52)
Serosa, carcinoid tumor benign			1 (2%)
Intestine small, ileum	(48)	*(54)	(47)
Adenocarcinoma	1 (2%)		
Lymphoma malignant lymphocytic	1 (2%)	2 (4%)	1 (2%)
Jejunum, lymphoma malignant lymphocytic			1 (2%)
Intestine small, jejunum	(50)	*(54)	(45)
Lymphoma malignant lymphocytic		3 (6%)	
Liver	(55)	(54)	(55)
Fibrosarcoma, metastatic, skin	1 (2%)		
Hemangioma			1 (2%)
Hemangioma, marked	1 (2%)		
Hemangiosarcoma	1 (2%)	1 (2%)	2 (4%)
Hepatocellular carcinoma	12 (22%)	11 (20%)	7 (13%)
Hepatocellular carcinoma, multiple	1 (2%)		
Hepatocellular adenoma	9 (16%)	15 (28%)	15 (27%)
Hepatocellular adenoma, multiple		6 (11%)	5 (9%)
Lymphoma malignant histiocytic	2 (4%)		2 (4%)
Lymphoma malignant lymphocytic	2 (4%)	1 (2%)	
Lymphoma malignant mixed			1 (2%)
Sinusoid, sarcoma		1 (2%)	
Mesentery	*(55)	*(54)	*(55)
Alveolar/bronchiolar carcinoma, metastatic, lung	1 (2%)		
Lymphoma malignant histiocytic			1 (2%)
Lymphoma malignant lymphocytic		1 (2%)	
Pancreas	(54)	*(54)	(53)
Lymphoma malignant lymphocytic	1 (2%)	1 (2%)	
Lymphoma malignant mixed			1 (2%)
Salivary glands	(55)	*(54)	(55)
Lymphoma malignant histiocytic			1 (2%)
Lymphoma malignant lymphocytic	2 (4%)	1 (2%)	1 (2%)
Stomach, forestomach	(55)	*(54)	(53)
Papilloma squamous	2 (4%)		
CARDIOVASCULAR SYSTEM			
Heart	(55)	*(54)	(55)
Alveolar/bronchiolar carcinoma, metastatic, lung	1 (2%)		
Lymphoma malignant lymphocytic	1 (2%)		
Pericardium, lymphoma malignant histiocytic			1 (2%)

TABLE C1. SUMMARY OF THE INCIDENCE OF NEOPLASMS IN MALE MICE IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	Low Dose	High Dose
ENDOCRINE SYSTEM			
Adrenal gland	(55)	(53)	(54)
Capsule, lymphoma malignant lymphocytic		2 (4%)	
Adrenal gland, cortex	(55)	(52)	(54)
Adenoma	2 (4%)	2 (4%)	
Adrenal gland, medulla	(54)	(52)	(54)
Pheochromocytoma benign	1 (2%)	3 (6%)	
Pituitary gland	(50)	*(54)	(50)
Pars distalis, adenoma	3 (6%)		
Thyroid gland	(55)	(53)	(54)
Follicular cell, adenoma	2 (4%)	1 (2%)	2 (4%)
GENERAL BODY SYSTEM			
Tissue, NOS	*(55)	*(54)	*(55)
Carcinoma		1 (2%)	
GENITAL SYSTEM			
Epididymis	(54)	*(54)	(54)
Lymphoma malignant lymphocytic		1 (2%)	
Prostate	(55)	*(54)	(55)
Lymphoma malignant lymphocytic	1 (2%)	2 (4%)	
Lymphoma malignant mixed			1 (2%)
Seminal vesicle	(55)	*(54)	(55)
Lymphoma malignant lymphocytic		1 (2%)	
Testes	(55)	*(54)	(55)
Lymphoma malignant lymphocytic		1 (2%)	
Interstitial cell, adenoma	1 (2%)		3 (5%)
HEMATOPOIETIC SYSTEM			
Lymph node	(55)	*(54)	(55)
Alveolar/bronchiolar carcinoma, metastatic, lung			1 (2%)
Axillary, lymphoma malignant mixed		1 (2%)	
Bronchial, lymphoma malignant lymphocytic	1 (2%)		
Deep cervical, lymphoma malignant lymphocytic	1 (2%)		
Iliac, lymphoma malignant histiocytic	1 (2%)		
Iliac, lymphoma malignant lymphocytic	1 (2%)		
Iliac, lymphoma malignant mixed			1 (2%)
Inguinal, lymphoma malignant histiocytic	1 (2%)		
Inguinal, lymphoma malignant lymphocytic	1 (2%)		
Inguinal, lymphoma malignant mixed		1 (2%)	
Lumbar, lymphoma malignant lymphocytic		1 (2%)	
Mediastinal, lymphoma malignant lymphocytic		2 (4%)	
Mediastinal, lymphoma malignant mixed		1 (2%)	
Pancreatic, lymphoma malignant histiocytic	1 (2%)		
Pancreatic, lymphoma malignant lymphocytic	2 (4%)	2 (4%)	
Renal, lymphoma malignant histiocytic	1 (2%)		
Renal, lymphoma malignant lymphocytic	3 (5%)	1 (2%)	1 (2%)
Renal, lymphoma malignant mixed		1 (2%)	
Thoracic, lymphoma malignant histiocytic			1 (2%)
Thoracic, lymphoma malignant lymphocytic		1 (2%)	
Lymph node, mandibular	(52)	*(54)	(51)
Lymphoma malignant histiocytic			1 (2%)
Lymphoma malignant lymphocytic	2 (4%)	3 (6%)	1 (2%)
Lymphoma malignant mixed		1 (2%)	
Lymph node, mesenteric	(54)	*(54)	(50)
Lymphoma malignant histiocytic	2 (4%)		2 (4%)
Lymphoma malignant lymphocytic	3 (6%)	6 (11%)	3 (6%)
Lymphoma malignant mixed		1 (2%)	

TABLE C1. SUMMARY OF THE INCIDENCE OF NEOPLASMS IN MALE MICE IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	Low Dose	High Dose
HEMATOPOIETIC SYSTEM (Continued)			
Spleen	(55)	(52)	(54)
Lymphoma malignant histiocytic			1 (2%)
Lymphoma malignant lymphocytic	3 (5%)	4 (8%)	1 (2%)
Lymphoma malignant mixed		2 (4%)	
Thymus	(39)	*(54)	(42)
Lymphoma malignant lymphocytic	2 (5%)		1 (2%)
INTEGUMENTARY SYSTEM			
Skin	(55)	*(54)	(55)
Fibroma	1 (2%)	1 (2%)	
Fibrosarcoma	2 (4%)	1 (2%)	1 (2%)
Papilloma squamous	1 (2%)		
Subcutaneous tissue, fibroma	1 (2%)	1 (2%)	
Subcutaneous tissue, fibroma, multiple		1 (2%)	
Subcutaneous tissue, fibrosarcoma	5 (9%)	8 (15%)	2 (4%)
Subcutaneous tissue, hemangiosarcoma			1 (2%)
Subcutaneous tissue, lymphoma malignant lymphocytic	1 (2%)		2 (4%)
Subcutaneous tissue, neurofibroma	1 (2%)		
Subcutaneous tissue, sarcoma	1 (2%)	3 (6%)	
MUSCULOSKELETAL SYSTEM			
Bone	(54)	*(54)	(55)
Osteosarcoma	1 (2%)		
Skeletal muscle	*(55)	*(54)	*(55)
Intercostal, alveolar/bronchiolar carcinoma, metastatic, lung	1 (2%)		
NERVOUS SYSTEM			
Brain	(55)	*(54)	(55)
Lymphoma malignant lymphocytic		1 (2%)	
RESPIRATORY SYSTEM			
Lung	(55)	*(54)	(55)
Alveolar/bronchiolar adenoma	5 (9%)	9 (17%)	3 (5%)
Alveolar/bronchiolar adenoma, multiple	1 (2%)		1 (2%)
Alveolar/bronchiolar carcinoma	8 (15%)	4 (7%)	6 (11%)
Hepatocellular carcinoma, metastatic, liver	5 (9%)		3 (5%)
Lymphoma malignant histiocytic			1 (2%)
Lymphoma malignant lymphocytic	3 (5%)		1 (2%)
Lymphoma malignant mixed			1 (2%)
Nose	(55)	*(54)	(55)
Mucosa, lymphoma malignant lymphocytic		1 (2%)	
SPECIAL SENSES SYSTEM			
Ear	*(55)	*(54)	*(55)
Pinna, histiocytic sarcoma		1 (2%)	
Harderian gland	*(55)	*(54)	*(55)
Adenoma	5 (9%)	2 (4%)	6 (11%)

TABLE C1. SUMMARY OF THE INCIDENCE OF NEOPLASMS IN MALE MICE IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	Low Dose	High Dose
URINARY SYSTEM			
Kidney	(55)	*(54)	(55)
Lymphoma malignant histiocytic			1 (2%)
Lymphoma malignant lymphocytic	2 (4%)	1 (2%)	1 (2%)
Lymphoma malignant mixed			1 (2%)
Renal tubule, carcinoma			1 (2%)
Urinary bladder	(54)	*(54)	(55)
Lymphoma malignant lymphocytic	1 (2%)		
SYSTEMIC LESIONS			
Multiple organs	*(55)	*(54)	*(55)
Lymphoma malignant lymphocytic	4 (7%)	9 (17%)	4 (7%)
Lymphoma malignant histiocytic	2 (4%)		2 (4%)
Hemangiosarcoma	1 (2%)	1 (2%)	3 (5%)
Hemangioma	1 (2%)		1 (2%)
Lymphoma malignant mixed		2 (4%)	1 (2%)
ANIMAL DISPOSITION SUMMARY			
Animals initially in study	65	65	65
Terminal sacrifice	33	37	36
Moribund	12	10	5
Dead	10	7	14
Interval sacrifice	10	10	10
Wrong sex		1	
TUMOR SUMMARY			
Total animals with primary neoplasms **	39	46	44
Total primary neoplasms	79	84	69
Total animals with benign neoplasms	23	31	29
Total benign neoplasms	38	41	41
Total animals with malignant neoplasms	30	34	23
Total malignant neoplasms	41	43	28
Total animals with secondary neoplasms ***	7		4
Total secondary neoplasms	9		4

* Number of animals receiving complete necropsy examination; all gross lesions including masses examined microscopically.
** Primary tumors: all tumors except secondary tumors
*** Secondary tumors: metastatic tumors or tumors invasive into an adjacent organ

TABLE C2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE MICE IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE: VEHICLE CONTROL

WEEKS ON STUDY	048	050	058	061	077	080	087	087	090	091	093	093	095	098	098	098	099	100	100	101	102	105	105	105
CARCASS ID	135	025	055	015	125	045	134	035	064	094	114	113	124	104	044	014	073	013	034	033	093	112	012	023	042
ALIMENTARY SYSTEM																									
Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Gallbladder	A	A	+	A	M	+	A	A	A	+	+	A	+	M	+	+	A	+	+	+	+	+	+	+	+
Lymphoma malignant lymphocytic																								X	
Intestine large	+	A	+	+	+	+	+	A	A	+	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large, cecum	+		+	+	+	+	A	A		+			+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large, colon	+		+	+	+	+	+	A		+			+	+	+	+	+	+	+	+	+	+	+	+	M
Intestine large, rectum	+		+	+	+	+	+	A		+			+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine small	+	A	+	+	+	+	+	A	A	+	+	A	+	+	+	+	A	+	+	+	+	+	+	+	+
Intestine small, duodenum	+		+	+	+	+	+	A		+	+		+	+	+	+		+	+	+	+	+	+	+	+
Intestine small, ileum	+		+	+	+	+	A	A		+	A		+	+	+	+		+	+	+	+	+	+	+	+
Adenocarcinoma																									
Lymphoma malignant lymphocytic																								X	
Intestine small, jejunum	+		+	+	+	+	+	A		+	+		+	+	+	+		+	+	+	+	+	+	+	+
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Fibrosarcoma, metastatic, skin											X														
Hemangioma, marked							X																		
Hemangiosarcoma																									
Hepatocellular carcinoma					X		X	X		X			X					X		X				X	X
Hepatocellular carcinoma, multiple															X										
Hepatocellular adenoma																			X	X					
Lymphoma malignant histiocytic									X													X			
Lymphoma malignant lymphocytic																								X	
Mesentery		+												+					+	+		+			
Alveolar/bronchiolar carcinoma, metastatic, lung																				X					
Pancreas	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant lymphocytic																									
Salivary glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant lymphocytic																								X	
Stomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Papilloma squamous										X															
Stomach, glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Tooth																								+	
CARDIOVASCULAR SYSTEM																									
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Alveolar/bronchiolar carcinoma, metastatic, lung																				X					
Lymphoma malignant lymphocytic	X																								
ENDOCRINE SYSTEM																									
Adrenal gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adrenal gland, cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenoma																									
Adrenal gland, medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pheochromocytoma benign																		X							
Islets, pancreatic	+	+	+	+	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+
Parathyroid gland	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pituitary gland	M	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+
Pars distalis, adenoma																					X				
Thyroid gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Follicular cell, adenoma																			X						
GENERAL BODY SYSTEM																									
None																									
GENITAL SYSTEM																									
Coagulating gland																									
Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Penis																									
Preputial gland		+	+							+															
Prostate	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant lymphocytic																									
Seminal vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Interstitial cell, adenoma																		X							

+: Tissue examined microscopically
 : Not examined
−: Present but not examined microscopically
I: Insufficient tissue

M: Missing
A: Autolysis precludes examination
X: Incidence of listed morphology

TABLE C2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE MICE: VEHICLE CONTROL (Continued)

WEEKS ON STUDY	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
CARCASS ID	043	052	053	063	081	082	083	092	103	123	133	011	021	022	032	041	062	072	111	122	132	031	051	061	071
ALIMENTARY SYSTEM																									
Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Gallbladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant lymphocytic																									
Intestine large	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large, cecum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large, colon	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large, rectum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine small	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine small, duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine small, ileum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenocarcinoma													X												
Lymphoma malignant lymphocytic																									
Intestine small, jejunum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Fibrosarcoma, metastatic, skin																									
Hemangioma, marked																									
Hemangiosarcoma									X																
Hepatocellular carcinoma	X																	X	X						
Hepatocellular carcinoma, multiple																									
Hepatocellular adenoma				X						X			X			X			X						
Lymphoma malignant histiocytic																									
Lymphoma malignant lymphocytic									X																
Mesentery				+																					
Alveolar/bronchiolar carcinoma, metastatic, lung																									
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant lymphocytic									X																
Salivary glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant lymphocytic									X																
Stomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Papilloma squamous																									
Stomach, glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Tooth		+																+				+		+	
CARDIOVASCULAR SYSTEM																									
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Alveolar/bronchiolar carcinoma, metastatic, lung																									
Lymphoma malignant lymphocytic																									
ENDOCRINE SYSTEM																									
Adrenal gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adrenal gland, cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenoma							X	X																	
Adrenal gland, medulla	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pheochromocytoma benign																									
Islets, pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+
Parathyroid gland	M	M	+	+	+	+	+	+	+	M	+	M	+	M	+	+	+	+	+	+	M	M	+	+	+
Pituitary gland	+	+	+	+	+	+	+	M	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pars distalis, adenoma			X																						
Thyroid gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Follicular cell, adenoma															X										
GENERAL BODY SYSTEM																									
None																									
GENITAL SYSTEM																									
Coagulating gland																									
Epididymis	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Penis																									
Preputial gland		+		+		+	+				+	+	+					+							
Prostate	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant lymphocytic									X																
Seminal vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Interstitial cell, adenoma																									

TABLE C2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE MICE: VEHICLE CONTROL (Continued)

WEEKS ON STUDY	105	105	105	105	105	TOTAL: TISSUES TUMORS
CARCASS ID	091	011	002	121	131	
ALIMENTARY SYSTEM						
Esophagus	+	+	+	+	+	55
Gallbladder	+	+	+	M	+	44
Lymphoma malignant lymphocytic						1
Intestine large	+	+	+	+	+	50
Intestine large, cecum	+	+	+	+	+	49
Intestine large, colon	+	+	+	+	+	49
Intestine large, rectum	+	+	+	+	+	50
Intestine small	+	+	+	+	+	50
Intestine small, duodenum	+	+	+	+	+	50
Intestine small, ileum	+	+	+	+	+	48
Adenocarcinoma						1
Lymphoma malignant lymphocytic						1
Intestine small, jejunum	+	+	+	+	+	50
Liver	+	+	+	+	+	55
Fibrosarcoma, metastatic, skin						1
Hemangioma, marked						1
Hemangiosarcoma						1
Hepatocellular carcinoma						12
Hepatocellular carcinoma, multiple						1
Hepatocellular adenoma		X		X		9
Lymphoma malignant histiocytic						2
Lymphoma malignant lymphocytic						2
Mesentery						6
Alveolar/bronchiolar carcinoma, metastatic, lung						1
Pancreas	+	+	+	+	+	54
Lymphoma malignant lymphocytic						1
Salivary glands	+	+	+	+	+	55
Lymphoma malignant lymphocytic						2
Stomach	+	+	+	+	+	55
Stomach, forestomach	+	+	+	+	+	55
Papilloma squamous		X				2
Stomach, glandular	+	+	+	+	+	55
Tooth	+					6
CARDIOVASCULAR SYSTEM						
Heart	+	+	+	+	+	55
Alveolar/bronchiolar carcinoma, metastatic, lung						1
Lymphoma malignant lymphocytic						1
ENDOCRINE SYSTEM						
Adrenal gland	+	+	+	+	+	55
Adrenal gland, cortex	+	+	+	+	+	55
Adenoma						2
Adrenal gland, medulla	+	+	+	+	+	54
Pheochromocytoma benign						1
Islets, pancreatic	+	+	+	+	+	53
Parathyroid gland	+	+	+	M	+	46
Pituitary gland	M	+	+	+	+	50
Pars distalis, adenoma					X	3
Thyroid gland	+	+	+	+	+	55
Follicular cell, adenoma						2
GENERAL BODY SYSTEM						
None						
GENITAL SYSTEM						
Coagulating gland				+		1
Epididymis	+	+	+	+	+	54
Penis			+			1
Preputial gland						11
Prostate	+	+	+	+	+	55
Lymphoma malignant lymphocytic						1
Seminal vesicle	+	+	+	+	+	55
Testes	+	+	+	+	+	55
Interstitial cell, adenoma						1

TABLE C2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE MICE: VEHICLE CONTROL (Continued)

WEEKS ON STUDY	048	050	058	061	077	080	087	087	090	091	093	093	095	098	098	098	099	100	100	100	101	102	105	105	105
CARCASS ID	135	025	055	015	125	045	134	035	064	094	114	113	124	104	044	014	073	013	034	033	093	112	012	023	042
HEMATOPOIETIC SYSTEM																									
Bone marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymph node	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Bronchial, lymphoma malignant lymphocytic																									
Deep cervical, lymphoma malignant lymphocytic																									
Iliac, lymphoma malignant histiocytic									X																
Iliac, lymphoma malignant lymphocytic																									
Inguinal, lymphoma malignant histiocytic																						X			
Inguinal, lymphoma malignant lymphocytic																									
Pancreatic, lymphoma malignant histiocytic									X																
Pancreatic, lymphoma malignant lymphocytic																									
Renal, lymphoma malignant histiocytic																						X			
Renal, lymphoma malignant lymphocytic																								X	
Lymph node, mandibular	+	M	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant lymphocytic																								X	
Lymph node, mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant histiocytic									X													X			
Lymphoma malignant lymphocytic	X																							X	
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant lymphocytic																								X	
Thymus	+	+	+	+	M	M	M	M	M	+	M	+	+	M	M	M	M	+	+	M	+	+	+	+	M
Lymphoma malignant lymphocytic	X																								
INTEGUMENTARY SYSTEM																									
Mammary gland	M	M	M	M	M	M	M	M	M	+	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Fibroma																								X	
Fibrosarcoma											X							X							
Papilloma squamous																									
Subcutaneous tissue, fibroma																									
Subcutaneous tissue, fibrosarcoma										X			X	X							X				
Subcutaneous tissue, lymphoma malignant lymphocytic																								X	
Subcutaneous tissue, neurofibroma																									
Subcutaneous tissue, sarcoma																X									
MUSCULOSKELETAL SYSTEM																									
Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Osteosarcoma																			X						
Skeletal muscle									+											+		+			
Intercostal, alveolar/bronchiolar carcinoma, metastatic, lung																				X					
NERVOUS SYSTEM																									
Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Spinal cord									+										+						
RESPIRATORY SYSTEM																									
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Alveolar/bronchiolar adenoma																							X		
Alveolar/bronchiolar adenoma, multiple												X						X		X		X			
Alveolar/bronchiolar carcinoma																									
Hepatocellular carcinoma, metastatic, liver					X										X									X	X
Lymphoma malignant lymphocytic	X																							X	
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
SPECIAL SENSES SYSTEM																									
Eye				+						+															
Harderian gland										+		+						+							
Adenoma										X		X						X							
URINARY SYSTEM																									
Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant lymphocytic																								X	
Urethra			+																						
Urinary bladder	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant lymphocytic																									

TABLE C2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE MICE: VEHICLE CONTROL (Continued)

WEEKS ON STUDY	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
CARCASS ID	043	052	053	063	081	082	083	092	103	123	133	011	021	022	032	041	062	072	111	122	132	031	051	061	071
HEMATOPOIETIC SYSTEM																									
Bone marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymph node	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Bronchial, lymphoma malignant lymphocytic									X																
Deep cervical, lymphoma malignant lymphocytic									X																
Iliac, lymphoma malignant histiocytic									X																
Iliac, lymphoma malignant lymphocytic																									
Inguinal, lymphoma malignant histiocytic																									
Inguinal, lymphoma malignant lymphocytic									X																
Pancreatic, lymphoma malignant histiocytic																									
Pancreatic, lymphoma malignant lymphocytic									X																
Renal, lymphoma malignant histiocytic									X																
Renal, lymphoma malignant lymphocytic	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymph node, mandibular									X																
Lymphoma malignant lymphocytic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymph node, mesenteric																									
Lymphoma malignant histiocytic									X																
Lymphoma malignant lymphocytic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Spleen									X																
Lymphoma malignant lymphocytic	+	M	+	+	M	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Thymus									X																
Lymphoma malignant lymphocytic																									
INTEGUMENTARY SYSTEM																									
Mammary gland	M	M	M	M	M	M	M	M	M	M	M	M	M		M	M	M	M	M	M	M	M	M	M	M
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Fibroma																									
Fibrosarcoma																									X
Papilloma squamous								X																	
Subcutaneous tissue, fibroma																						X			
Subcutaneous tissue, fibrosarcoma																									
Subcutaneous tissue, lymphoma malignant lymphocytic													X												
Subcutaneous tissue, neurofibroma																									
Subcutaneous tissue, sarcoma																									
MUSCULOSKELETAL SYSTEM																									
Bone	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+
Osteosarcoma																									
Skeletal muscle																									
Intercostal, alveolar/bronchiolar carcinoma, metastatic, lung																									
NERVOUS SYSTEM																									
Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Spinal cord														+											
RESPIRATORY SYSTEM																									
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Alveolar/bronchiolar adenoma								X												X					X
Alveolar/bronchiolar adenoma, multiple																								X	
Alveolar/bronchiolar carcinoma							X			X															
Hepatocellular carcinoma, metastatic, liver	X																								
Lymphoma malignant lymphocytic									X																
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
SPECIAL SENSES SYSTEM																									
Eye																	+			+					
Harderian gland																	+			+					
Adenoma																	X			X					
URINARY SYSTEM																									
Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant lymphocytic									X																
Urethra																									
Urinary bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant lymphocytic									X																

TABLE C2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE MICE: VEHICLE CONTROL (Continued)

WEEKS ON STUDY	105	105	105	105	105	TOTAL: TISSUES TUMORS
CARCASS ID	091	011	002	121	131	
HEMATOPOIETIC SYSTEM						
Bone marrow	+	+	+	+	+	55
Lymph node	+	+	+	+	+	55
Bronchial, lymphoma malignant lymphocytic						1
Deep cervical, lymphoma malignant lymphocytic						1
Iliac, lymphoma malignant histiocytic						1
Iliac, lymphoma malignant lymphocytic						1
Inguinal, lymphoma malignant histiocytic						1
Inguinal, lymphoma malignant lymphocytic						1
Pancreatic, lymphoma malignant histiocytic						1
Pancreatic, lymphoma malignant lymphocytic				X		2
Renal, lymphoma malignant histiocytic						1
Renal, lymphoma malig. lymphocytic				X		3
Lymph node, mandibular	+	+	+	+	+	52
Lymphoma malignant lymphocytic						2
Lymph node, mesenteric	+	+	+	M	+	54
Lymphoma malignant histiocytic						2
Lymphoma malignant lymphocytic						3
Spleen	+	+	+	+	+	55
Lymphoma malignant lymphocytic				X		3
Thymus	+	+	M	+	+	39
Lymphoma malignant lymphocytic						2
INTEGUMENTARY SYSTEM						
Mammary gland	M	M	M	M	M	1
Skin	+	+	+	+	+	55
Fibroma						1
Fibrosarcoma						2
Papilloma squamous						1
Subcutaneous tissue, fibroma						1
Subcutaneous tissue, fibrosarcoma						5
Subcutaneous tissue, lymphoma malignant lymphocytic						1
Subcutaneous tissue, neurofibroma						1
Subcutaneous tissue, sarcoma						1
MUSCULOSKELETAL SYSTEM						
Bone	+	+	+	+	+	54
Osteosarcoma						1
Skeletal muscle						3
Intercostal, alveolar/bronchiolar carcinoma, metastatic, lung						1
NERVOUS SYSTEM						
Brain	+	+	+	+	+	55
Spinal cord						3
RESPIRATORY SYSTEM						
Lung	+	+	+	+	+	55
Alveolar/bronchiolar adenoma				X		5
Alveolar/bronchiolar adenoma, multiple						1
Alveolar/bronchiolar carcinoma					X	8
Hepatocellular carcinoma, metastatic, liver						5
Lymphoma malignant lymphocytic						3
Nose	+	+	+	+	+	55
Trachea	+	+	+	+	+	55
SPECIAL SENSES SYSTEM						
Eye						3
Harderian gland						5
Adenoma						5
URINARY SYSTEM						
Kidney	+	+	+	+	+	55
Lymphoma malignant lymphocytic						2
Urethra			+	+		3
Urinary bladder	+	+	+	+	+	54
Lymphoma malignant lymphocytic						1

TABLE C2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE MICE IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE: LOW DOSE

WEEKS ON STUDY	003	032	053	063	067	069	079	086	093	094	094	094	094	095	098	099	099	101	105	105	105	105	105	105	105
CARCASS ID	234	165	145	263	175	205	233	265	174	232	215	243	195	141	203	173	194	142	172	185	192	193	201	202	211
ALIMENTARY SYSTEM																									
Esophagus		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+							
Gallbladder		+	+	+	+	A	A	A	+	M	+		A	+	+	+	M	+					+		
Intestine large		A	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+							
Intestine large, cecum			+		+	A	A	+	+	+	+	+	+	+	+	+	+	+							
Intestine large, colon			+		+	+	A	+	+	+	+	+	+	+	+	+	+	+							
Lymphoma malignant lymphocytic									X																
Intestine large, rectum			+		+	+	+	+	+	+	+	+	+	+	+	+	+	+							
Intestine small		A	+	A	+	+	A	+	+	+	+	+	A	+	+	+	+	+							
Intestine small, duodenum			+		+	+	A	+		+	+			+		+	+	+							
Intestine small, ileum			+		+	A	A	M	+	+	+			+		+	+	+							
Lymphoma malignant lymphocytic									X																
Intestine small, jejunum			+		+	A	A	+		+	+	+		+	+	+	+	+							
Lymphoma malignant lymphocytic												X						X							
Liver		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hemangiosarcoma					X					X			X	X	X		X			X				X	
Hepatocellular carcinoma				X	X									X	X	X						X			
Hepatocellular adenoma																									
Hepatocellular adenoma, multiple									X																
Lymphoma malignant lymphocytic																									
Sinusoid, sarcoma							+		+			+					+								
Mesentery									X																
Lymphoma malignant lymphocytic		A	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+							
Pancreas									X																
Lymphoma malignant lymphocytic		+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+							
Salivary glands												X													
Lymphoma malignant lymphocytic		A	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+							
Stomach			+		+	+	+	+	+	+	+	+	+	+	+	+	+	+							
Stomach, forestomach			+		+	+	+	+	+	+	+	+	+	+	+	+	+	+							
Stomach, glandular																		+							
Tooth																									
CARDIOVASCULAR SYSTEM																									
Heart		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+							
ENDOCRINE SYSTEM																									
Adrenal gland		+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+
Capsule, lymphoma malignant lymphocytic									X																
Adrenal gland, cortex		+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+		+	+	+	+	+
Adenoma																								X	
Adrenal gland, medulla		+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+
Pheochromocytoma benign																								X	
Islets, pancreatic		A	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+							
Parathyroid gland		+	+	+	+	+	M	+	+	+	M	+	+	+	+	+	+	+							
Pituitary gland		+	+	+	+	+	+	+	M	+	M	M	+	+	+	+	+	+							
Thyroid gland		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Follicular cell, adenoma																			X						
GENERAL BODY SYSTEM																									
Tissue, NOS													+												
Carcinoma													X												
GENITAL SYSTEM																									
Coagulating gland				+																					
Epididymis		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+							
Lymphoma malignant lymphocytic									X																
Preputial gland				+				+					+					+		+	+	+			
Prostate		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+							
Lymphoma malignant lymphocytic									X			X													
Seminal vesicle		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+							
Lymphoma malignant lymphocytic									X																
Testes		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+					
Lymphoma malignant lymphocytic									X																

TABLE C2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE MICE: LOW DOSE (Continued)

WEEKS ON STUDY	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
CARCASS ID	212	213	214	225	242	254	153	154	162	181	182	183	184	224	231	241	252	253	262	264	151	152	161	171	191
ALIMENTARY SYSTEM																									
Esophagus																									
Gallbladder																									
Intestine large																									
Intestine large, cecum																									
Intestine large, colon																									
Lymphoma malignant lymphocytic																									
Intestine large, rectum																									
Intestine small														+			+								
Intestine small, duodenum																									
Intestine small, ileum																									
Lymphoma malignant lymphocytic																									
Intestine small, jejunum														+			+								
Lymphoma malignant lymphocytic														X											
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hemangiosarcoma				X																					
Hepatocellular carcinoma			X	X				X																	
Hepatocellular adenoma	X					X			X			X			X				X	X	X	X			
Hepatocellular adenoma, multiple							X							X		X	X	X							
Lymphoma malignant lymphocytic																									
Sinusoid, sarcoma																		X							
Mesentery																									
Lymphoma malignant lymphocytic																									
Pancreas																									
Lymphoma malignant lymphocytic																									
Salivary glands																									
Lymphoma malignant lymphocytic																									
Stomach																									
Stomach, forestomach																									
Stomach, glandular																									
Tooth																									
CARDIOVASCULAR SYSTEM																									
Heart																									
ENDOCRINE SYSTEM																									
Adrenal gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Capsule, lymphoma malignant lymphocytic																							X		
Adrenal gland, cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adenoma																				X					
Adrenal gland, medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M
Pheochromocytoma benign											X												X		
Islets, pancreatic																									
Parathyroid gland																									
Pituitary gland																									
Thyroid gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+
Follicular cell, adenoma																									
GENERAL BODY SYSTEM																									
Tissue, NOS																									
Carcinoma																									
GENITAL SYSTEM																									
Coagulating gland																									
Epididymis																									
Lymphoma malignant lymphocytic																									
Preputial gland				+																+					
Prostate																									
Lymphoma malignant lymphocytic																									
Seminal vesicle																									
Lymphoma malignant lymphocytic																									
Testes																									
Lymphoma malignant lymphocytic																									

TABLE C2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE MICE: LOW DOSE (Continued)

WEEKS ON STUDY	105	105	105	105	105	TOTAL: TISSUES TUMORS
CARCASS ID	221	222	223	251	261	
ALIMENTARY SYSTEM						
Esophagus						17
Gallbladder						11
Intestine large						15
Intestine large, cecum						13
Intestine large, colon						14
Lymphoma malignant lymphocytic						1
Intestine large, rectum						15
Intestine small			+			16
Intestine small, duodenum						10
Intestine small, ileum			+			10
Lymphoma malignant lymphocytic			X			2
Intestine small, jejunum						13
Lymphoma malignant lymphocytic						3
Liver	+	+	+	+	+	54
Hemangiosarcoma						1
Hepatocellular carcinoma						11
Hepatocellular adenoma	X					15
Hepatocellular adenoma, multiple						6
Lymphoma malignant lymphocytic						1
Sinusoid, sarcoma						1
Mesentery						4
Lymphoma malignant lymphocytic						1
Pancreas						15
Lymphoma malignant lymphocytic						1
Salivary glands						16
Lymphoma malignant lymphocytic						1
Stomach						15
Stomach, forestomach						15
Stomach, glandular						15
Tooth						1
CARDIOVASCULAR SYSTEM						
Heart						17
ENDOCRINE SYSTEM						
Adrenal gland	+	+	+	+	+	53
Capsule, lymphoma malignant lymphocytic						2
Adrenal gland, cortex	+	+	+	+	+	52
Adenoma				X		2
Adrenal gland, medulla	+	+	+	+	+	52
Pheochromocytoma benign						3
Islets, pancreatic						15
Parathyroid gland						15
Pituitary gland						14
Thyroid gland	+	+	+	+	+	53
Follicular cell, adenoma						1
GENERAL BODY SYSTEM						
Tissue, NOS						1
Carcinoma						1
GENITAL SYSTEM						
Coagulating gland						1
Epididymis						17
Lymphoma malignant lymphocytic						1
Preputial gland						9
Prostate						17
Lymphoma malignant lymphocytic						2
Seminal vesicle						17
Lymphoma malignant lymphocytic						1
Testes						18
Lymphoma malignant lymphocytic						1

TABLE C2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE MICE: LOW DOSE (Continued)

WEEKS ON STUDY	003	032	053	063	067	069	079	086	093	094	094	094	094	095	098	099	099	101	105	105	105	105	105	105	105
CARCASS ID	234	165	145	263	175	205	233	265	174	232	215	243	195	141	203	173	194	142	172	185	192	193	201	202	211
HEMATOPOIETIC SYSTEM																									
Bone marrow		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+							
Lymph node		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+					
Axillary, lymphoma malignant mixed																									
Inguinal, lymphoma malignant mixed																									
Lumbar, lymphoma malignant lymphocytic																									
Mediastinal, lymphoma malignant lymphocytic																		X							
Mediastinal, lymphoma malignant mixed																									
Pancreatic, lymphoma malignant lymphocytic																									
Renal, lymphoma malignant lymphocytic																									
Renal, lymphoma malignant mixed																									
Thoracic, lymphoma malignant lymphocytic									X																
Lymph node, mandibular		+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+							
Lymphoma malignant lymphocytic									X			X						X							
Lymphoma malignant mixed																									
Lymph node, mesenteric		M	+	+	+	+	A	+	+	+	+	+	+	M	+	+	+	+		+					
Lymphoma malignant lymphocytic									X						X			X							
Lymphoma malignant mixed																									
Spleen		A	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant lymphocytic									X									X							
Lymphoma malignant mixed																									
Thymus		+	+	+	+	M	M	+		M	M	+	+	+	M	+	M	M							
INTEGUMENTARY SYSTEM																									
Mammary gland		M		M	M	M	M	M	M	M	M	M	M	M	M	M	M								
Skin		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+				+	+	+	+
Fibroma														X											
Fibrosarcoma														X											
Subcutaneous tissue, fibroma																							X		
Subcutaneous tissue, fibroma, multiple																									
Subcutaneous tissue, fibrosarcoma								X			X					X		X					X		X
Subcutaneous tissue, sarcoma																						X			
MUSCULOSKELETAL SYSTEM																									
Bone		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+
NERVOUS SYSTEM																									
Brain		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+							
Lymphoma malignant lymphocytic									X																
RESPIRATORY SYSTEM																									
Lung		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+				+		+	
Alveolar/bronchiolar adenoma																		X				X		X	
Alveolar/bronchiolar carcinoma														X											
Nose		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+							
Mucosa, lymphoma malignant lymphocytic									X																
Trachea		A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+							
SPECIAL SENSES SYSTEM																									
Ear																									
Pinna, histiocytic sarcoma																									
Harderian gland																									
Adenoma																									
Lacrimal gland																									
URINARY SYSTEM																									
Kidney		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+							
Lymphoma malignant lymphocytic									X																
Urinary bladder		A	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+							

TABLE C2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE MICE: LOW DOSE (Continued)

WEEKS ON STUDY	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
CARCASS ID	212	213	214	225	242	254	153	154	162	181	182	183	184	224	231	241	252	253	262	264	151	152	161	171	191
HEMATOPOIETIC SYSTEM																									
Bone marrow	+			+		+			+	+				+		+	+	+					+		
Lymph node	X																								
Axillary, lymphoma malignant mixed	X																						X		
Inguinal, lymphoma malignant mixed																									
Lumbar, lymphoma malignant lymphocytic																							X		
Mediastinal, lymphoma malignant lymphocytic	X																								
Mediastinal, lymphoma malignant mixed														X									X		
Pancreatic, lymphoma malignant lymphocytic																							X		
Renal, lymphoma malignant lymphocytic	X																								
Renal, lymphoma malignant mixed																									
Thoracic, lymphoma malignant lymphocytic	+																								
Lymph node, mandibular	X																								
Lymphoma malignant lymphocytic	+					+			+	+						+		+					+		
Lymphoma malignant mixed																X							X		
Lymph node, mesenteric	X																								
Lymphoma malignant lymphocytic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant mixed																X									X
Spleen	X												X												
Lymphoma malignant lymphocytic	+																								
Lymphoma malignant mixed																									
Thymus																									
INTEGUMENTARY SYSTEM																									
Mammary gland		+		+	+			+		+		+		+	+	+		+							
Skin																									
Fibroma																									
Fibrosarcoma														X											
Subcutaneous tissue, fibroma												X				X									
Subcutaneous tissue, fibroma, multiple															X										
Subcutaneous tissue, fibrosarcoma		X																							
Subcutaneous tissue, sarcoma																									
MUSCULOSKELETAL SYSTEM																									
Bone	+	+	+		+		+							+					+				+		
NERVOUS SYSTEM																									
Brain																									
Lymphoma malignant lymphocytic																									
RESPIRATORY SYSTEM																									
Lung		+	+			+				+	+		+			+							+		
Alveolar/bronchiolar adenoma			X								X					X									
Alveolar/bronchiolar carcinoma										X	X														
Nose																									
Mucosa, lymphoma malignant lymphocytic																									
Trachea																									
SPECIAL SENSES SYSTEM																									
Ear																								+	
Pinna, histiocytic sarcoma																								X	
Harderian gland							+																		+
Adenoma							X																		X
Lacrimal gland																									
URINARY SYSTEM																									
Kidney																									
Lymphoma malignant lymphocytic																									
Urinary bladder																									

TABLE C2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE MICE: LOW DOSE (Continued)

WEEKS ON STUDY	105	105	105	105	105	TOTAL: TISSUES TUMORS
CARCASS ID	221	222	223	251	261	
HEMATOPOIETIC SYSTEM						
Bone marrow						17
Lymph node			+			29
Axillary, lymphoma malignant mixed						1
Inguinal, lymphoma malignant mixed						1
Lumbar, lymphoma malig. lymphocytic						1
Mediastinal, lymphoma malignant lymphocytic						2
Mediastinal, lymphoma malig. mixed						1
Pancreatic, lymphoma malignant lymphocytic						2
Renal, lymphoma malig. lymphocytic						1
Renal, lymphoma malignant mixed						1
Thoracic, lymphoma malignant lymphocytic						1
Lymph node, mandibular						17
Lymphoma malignant lymphocytic						3
Lymphoma malignant mixed						1
Lymph node, mesenteric			+			23
Lymphoma malignant lymphocytic			X			6
Lymphoma malignant mixed						1
Spleen	+	+	+	+	+	52
Lymphoma malignant lymphocytic						4
Lymphoma malignant mixed						2
Thymus						10
INTEGUMENTARY SYSTEM						
Mammary gland						33
Skin	+	+				1
Fibroma						1
Fibrosarcoma						1
Subcutaneous tissue, fibroma						1
Subcutaneous tissue, fibroma, multiple						1
Subcutaneous tissue, fibrosarcoma						8
Subcutaneous tissue, sarcoma						3
MUSCULOSKELETAL SYSTEM						
Bone			+			32
NERVOUS SYSTEM						
Brain						17
Lymphoma malignant lymphocytic						1
RESPIRATORY SYSTEM						
Lung	+		+	+	+	31
Alveolar/bronchiolar adenoma	X		X	X		9
Alveolar/bronchiolar carcinoma			X			4
Nose						17
Mucosa, lymphoma malig. lymphocytic						1
Trachea						16
SPECIAL SENSES SYSTEM						
Ear						1
Pinna, histiocytic sarcoma						1
Harderian gland						2
Adenoma						2
Lacrimal gland					+	1
URINARY SYSTEM						
Kidney						17
Lymphoma malignant lymphocytic						1
Urinary bladder						15

TABLE C2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE MICE IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE: HIGH DOSE

WEEKS ON STUDY	048	069	076	081	083	090	091	091	092	093	094	094	095	095	098	098	098	099	100	105	105	105	105	105	105
CARCASS ID	315	395	294	274	381	284	273	355	333	363	354	332	375	325	313	311	374	373	344	283	295	303	304	323	324
ALIMENTARY SYSTEM																									
Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Gallbladder	+	+	+	+	+	+	+	M	+	+	M	M	+	A	A	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant mixed																									
Intestine large	+	+	A	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large, cecum	+	+	A	A	+	+	+	+	A	+	A	+	+	A	A	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant histiocytic					X																				
Intestine large, colon	+	+	A	A	A	+	+	+	A	+	A	A	+	+	A	+	+	+	+	+	+	+	+	+	+
Intestine large, rectum	+	+	A	+	A	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Serosa, carcinoid tumor benign																									
Intestine small	+	+	A	+	A	+	+	+	A	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+
Intestine small, duodenum	+	+	A	+	A	+	+	+	A	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+
Intestine small, ileum	+	M	A	A	A	+	+	+	A	+	A	+	+	A	A	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant lymphocytic																									
Jejunum, lymphoma malignant lymphocytic																					X				
Intestine small, jejunum	+	A	A	A	A	+	+	+	A	+	A	+	+	A	A	+	+	+	+	+		+	+	+	+
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hemangioma														X											
Hemangiosarcoma											X														
Hepatocellular carcinoma			X						X							X									
Hepatocellular adenoma													X				X	X							X
Hepatocellular adenoma, multiple																									
Lymphoma malignant histiocytic	X				X																				
Lymphoma malignant mixed																									
Mesentery	+					+	+															+			
Lymphoma malignant histiocytic	X																								
Pancreas	+	+	A	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant mixed																									
Salivary glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant histiocytic	X																								
Lymphoma malignant lymphocytic																									
Stomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, forestomach	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Tooth																									
CARDIOVASCULAR SYSTEM																									
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pericardium, lymphoma malignant histiocytic	X																								
ENDOCRINE SYSTEM																									
Adrenal gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adrenal gland, cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adrenal gland, medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Islets, pancreatic	+	+	M	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Parathyroid gland	+	+	+	M	+	M	+	+	+	+	M	+	+	+	+	+	+	M	M	+	+	+	+	M	+
Pituitary gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+
Thyroid gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Follicular cell, adenoma														X											
GENERAL BODY SYSTEM																									
Tissue, NOS																									
GENITAL SYSTEM																									
Coagulating gland																									
Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Preputial gland											+							+	+						
Prostate	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant mixed																									
Seminal vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Interstitial cell, adenoma																									

TABLE C2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE MICE: HIGH DOSE (Continued)

WEEKS ON STUDY	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
CARCASS ID	353	362	372	271	272	282	292	293	302	322	331	343	352	361	384	281	291	301	312	321	341	342	351	371	382
ALIMENTARY SYSTEM																									
Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Gallbladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant mixed							X																		
Intestine large																									
Intestine large, cecum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant histiocytic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine large, colon																									
Intestine large, rectum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Serosa, carcinoid tumor benign	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine small																			X						
Intestine small, duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine small, ileum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant lymphocytic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Jejunum, lymphoma malignant lymphocytic										X															
Intestine small, jejunum																									
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hemangioma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hemangiosarcoma																									
Hepatocellular carcinoma				X					X								X								
Hepatocellular adenoma	X							X	X	X					X			X		X		X			
Hepatocellular adenoma, multiple			X											X					X				X		
Lymphoma malignant histiocytic																									
Lymphoma malignant mixed							X																		
Mesentery																									
Lymphoma malignant histiocytic											+														
Pancreas																									
Lymphoma malignant mixed	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Salivary glands							X																		
Lymphoma malignant histiocytic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant lymphocytic																									
Stomach																									
Stomach, forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Tooth	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
						+	+																		
CARDIOVASCULAR SYSTEM																									
Heart																									
Pericardium, lymphoma malignant histiocytic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
ENDOCRINE SYSTEM																									
Adrenal gland																									
Adrenal gland, cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Adrenal gland, medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Islets, pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Parathyroid gland	+	M	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pituitary gland	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+
Thyroid gland	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	M
Follicular cell, adenoma																							X		
GENERAL BODY SYSTEM																									
Tissue, NOS			+																						
GENITAL SYSTEM																									
Coagulating gland																									
Epididymis													+	+											
Preputial gland	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Prostate														+											
Lymphoma malignant mixed	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Seminal vesicle							X																		
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Interstitial cell, adenoma	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		X																X						X	

TABLE C2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE MICE: HIGH DOSE (Continued)

WEEKS ON STUDY	105	105	105	105	105	TOTAL: TISSUES TUMORS
CARCASS ID	383	391	392	393	394	
ALIMENTARY SYSTEM						
Esophagus	+	+	+	+	+	55
Gallbladder	+	+	+	+	M	48
Lymphoma malignant mixed						1
Intestine large	+	+	+	+	+	53
Intestine large, cecum	+	+	+	+	+	49
Lymphoma malignant histiocytic						1
Intestine large, colon	+	+	+	+	+	48
Intestine large, rectum	+	+	+	+	+	52
Serosa, carcinoid tumor benign						1
Intestine small	+	+	+	+	+	51
Intestine small, duodenum	+	+	+	+	+	51
Intestine small, ileum	+	+	+	+	+	47
Lymphoma malignant lymphocytic						1
Jejunum, lymphoma malignant lymphocytic						1
Intestine small, jejunum	M	+	+	+	+	45
Liver	+	+	+	+	+	55
Hemangioma						1
Hemangiosarcoma					X	2
Hepatocellular carcinoma				X		7
Hepatocellular adenoma	X	X		X		15
Hepatocellular adenoma, multiple					X	5
Lymphoma malignant histiocytic						2
Lymphoma malignant mixed						1
Mesentery						5
Lymphoma malignant histiocytic						1
Pancreas	+	+	+	+	+	53
Lymphoma malignant mixed						1
Salivary glands	+	+	+	+	+	55
Lymphoma malignant histiocytic						1
Lymphoma malignant lymphocytic		X				1
Stomach	+	+	+	+	+	55
Stomach, forestomach	+	M	+	+	+	53
Stomach, glandular	+	+	+	+	+	55
Tooth						2
CARDIOVASCULAR SYSTEM						
Heart	+	+	+	+	+	55
Pericardium, lymphoma malignant histiocytic						1
ENDOCRINE SYSTEM						
Adrenal gland	+	M	+	+	+	54
Adrenal gland, cortex	+		+	+	+	54
Adrenal gland, medulla	+		+	+	+	54
Islets, pancreatic	+	+	+	+	+	53
Parathyroid gland	+	M	+	+	M	44
Pituitary gland	+	M	+	+	+	50
Thyroid gland	+	+	+	+	+	54
Follicular cell, adenoma						2
GENERAL BODY SYSTEM						
Tissue, NOS						1
GENITAL SYSTEM						
Coagulating gland						2
Epididymis	+	+	+	+	+	54
Preputial gland						7
Prostate	+	+	+	+	+	55
Lymphoma malignant mixed						1
Seminal vesicle	+	+	+	+	+	55
Testes	+	+	+	+	+	55
Interstitial cell, adenoma						3

TABLE C2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE MICE: HIGH DOSE (Continued)

WEEKS ON STUDY	048	069	076	081	083	090	091	091	092	093	094	094	095	095	098	098	098	099	100	105	105	105	105	105	105
CARCASS ID	315	395	294	274	381	284	273	355	333	363	354	332	375	325	313	311	374	373	344	283	295	303	304	323	324
HEMATOPOIETIC SYSTEM																									
Bone marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymph node	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Alveolar/bronchiolar carcinoma, metastatic, lung															X										
Iliac, lymphoma malignant mixed																									
Renal, lymphoma malignant lymphocytic																					X				
Thoracic, lymphoma malignant histiocytic	X																								
Lymph node, mandibular	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+
Lymphoma malignant histiocytic	X																								
Lymphoma malignant lymphocytic																									
Lymph node, mesenteric	+	+	M	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+
Lymphoma malignant histiocytic	X				X																				
Lymphoma malignant lymphocytic																					X				
Spleen	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant histiocytic	X																								
Lymphoma malignant lymphocytic																									
Thymus	M	M	M	+	M	+	+	+	M	+	+	M	+	M	M	+	+	+	M	+	+	+	+	+	+
Lymphoma malignant lymphocytic																									
INTEGUMENTARY SYSTEM																									
Mammary gland	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Fibrosarcoma													X												
Subcutaneous tissue, fibrosarcoma																									
Subcutaneous tissue, hemangiosarcoma																									
Subcutaneous tissue, lymphoma malignant lymphocytic																									
MUSCULOSKELETAL SYSTEM																									
Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
NERVOUS SYSTEM																									
Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Spinal cord	+							+									+		+						
RESPIRATORY SYSTEM																									
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Alveolar/bronchiolar adenoma																					X				X
Alveolar/bronchiolar adenoma, multiple																									
Alveolar/bronchiolar carcinoma				X											X				X			X			
Hepatocellular carcinoma, metastatic, liver																X									
Lymphoma malignant histiocytic	X																								
Lymphoma malignant lymphocytic																									
Lymphoma malignant mixed																									
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
SPECIAL SENSES SYSTEM																									
Eye										+															
Harderian gland										+										+					
Adenoma										X										X					
Lacrimal gland																									
URINARY SYSTEM																									
Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant histiocytic	X																								
Lymphoma malignant lymphocytic																									
Lymphoma malignant mixed																									
Renal tubule, carcinoma																									
Urethra									+			+													
Urinary bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

TABLE C2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE MICE: HIGH DOSE (Continued)

WEEKS ON STUDY	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
CARCASS ID	353	362	372	271	272	282	292	293	302	322	331	343	352	361	384	281	291	301	312	321	341	342	351	371	382
HEMATOPOIETIC SYSTEM																									
Bone marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymph node	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Alveolar/bronchiolar carcinoma, metastatic, lung																									
Iliac, lymphoma malignant mixed							X																		
Renal, lymphoma malignant lymphocytic																									
Thoracic, lymphoma malignant histiocytic																									
Lymph node, mandibular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	M	+	+	+	+
Lymphoma malignant histiocytic										X															
Lymphoma malignant lymphocytic																									
Lymph node, mesenteric	+	+	+	+	+	M	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant histiocytic									X	X															
Lymphoma malignant lymphocytic																									
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant histiocytic																									
Lymphoma malignant lymphocytic																									
Thymus	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M
Lymphoma malignant lymphocytic										X															
INTEGUMENTARY SYSTEM																									
Mammary gland	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	+	M	M	M
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Fibrosarcoma																									
Subcutaneous tissue, fibrosarcoma																									
Subcutaneous tissue, hemangiosarcoma																									
Subcutaneous tissue, lymphoma malignant lymphocytic										X															
MUSCULOSKELETAL SYSTEM																									
Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
NERVOUS SYSTEM																									
Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Spinal cord								+																	
RESPIRATORY SYSTEM																									
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Alveolar/bronchiolar adenoma										X															
Alveolar/bronchiolar adenoma, multiple																					X				
Alveolar/bronchiolar carcinoma																X									
Hepatocellular carcinoma, metastatic, liver				X																					
Lymphoma malignant histiocytic																									
Lymphoma malignant lymphocytic																									
Lymphoma malignant mixed							X																		
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
SPECIAL SENSES SYSTEM																									
Eye													+											+	
Harderian gland				+	+								+											+	
Adenoma					X								X											X	
Lacrimal gland																						+			
URINARY SYSTEM																									
Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Lymphoma malignant histiocytic																									
Lymphoma malignant lymphocytic																									
Lymphoma malignant mixed							X																		
Renal tubule, carcinoma					X																				
Urethra																									
Urinary bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

TABLE C2. INDIVIDUAL ANIMAL TUMOR PATHOLOGY OF MALE MICE: HIGH DOSE (Continued)

WEEKS ON STUDY	105	105	105	105	105	TOTAL: TISSUES TUMORS
CARCASS ID	383	391	392	393	394	
HEMATOPOIETIC SYSTEM						
Bone marrow	+	+	+	+	+	55
Lymph node	+	+	+	+	+	55
Alveolar/bronchiolar carcinoma, metastatic, lung						1
Iliac, lymphoma malignant mixed						1
Renal, lymphoma malig. lymphocytic						1
Thoracic, lymphoma malignant histiocytic						1
Lymph node, mandibular	+	+	+	+	+	51
Lymphoma malignant histiocytic						1
Lymphoma malignant lymphocytic						1
Lymph node, mesenteric	+	+	+	+	+	50
Lymphoma malignant histiocytic						2
Lymphoma malignant lymphocytic						3
Spleen	+	+	+	+	+	54
Lymphoma malignant histiocytic						1
Lymphoma malignant lymphocytic		X				1
Thymus	+	+	+	M	M	42
Lymphoma malignant lymphocytic						1
INTEGUMENTARY SYSTEM						
Mammary gland	M	M	M	M	M	1
Skin	+	+	+	+	+	55
Fibrosarcoma						1
Subcutaneous tissue, fibrosarcoma			X		X	2
Subcutaneous tissue, hemangiosarcoma				X		1
Subcutaneous tissue, lymphoma malignant lymphocytic		X				2
MUSCULOSKELETAL SYSTEM						
Bone	+	+	+	+	+	55
NERVOUS SYSTEM						
Brain	+	+	+	+	+	55
Spinal cord	+					6
RESPIRATORY SYSTEM						
Lung	+	+	+	+	+	55
Alveolar/bronchiolar adenoma						3
Alveolar/bronchiolar adenoma, multiple						1
Alveolar/bronchiolar carcinoma					X	6
Hepatocellular carcinoma, metastatic, liver				X		3
Lymphoma malignant histiocytic						1
Lymphoma malignant lymphocytic		X				1
Lymphoma malignant mixed						1
Nose	+	+	+	+	+	55
Trachea	+	+	+	+	+	55
SPECIAL SENSES SYSTEM						
Eye						3
Harderian gland		+				7
Adenoma		X				6
Lacrimal gland						1
URINARY SYSTEM						
Kidney	+	+	+	+	+	55
Lymphoma malignant histiocytic						1
Lymphoma malignant lymphocytic		X				1
Lymphoma malignant mixed						1
Renal tubule, carcinoma						1
Urethra						2
Urinary bladder	+	+	+	+	+	55

TABLE C3. ANALYSIS OF PRIMARY TUMORS IN MALE MICE IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE

	Vehicle Control	50 mg/kg	100 mg/kg
Adrenal Medulla: Pheochromocytoma			
Overall Rates (a)	1/54 (2%)	3/52 (6%)	0/54 (0%)
Adjusted Rates (b)	2.6%	8.3%	0.0%
Terminal Rates (c)	0/32 (0%)	3/36 (8%)	0/35 (0%)
Day of First Observation	691	729	
Life Table Tests (d)	P=0.359N	P=0.341	P=0.505N
Logistic Regression Tests (d)	P=0.366N	P=0.311	P=0.498N
Cochran-Armitage Trend Test (d)	P=0.379N		
Fisher Exact Test (d)		P=0.295	P=0.500N
Harderian Gland: Adenoma			
Overall Rates (a)	5/55 (9%)	2/54 (4%)	6/55 (11%)
Adjusted Rates (b)	12.6%	5.4%	15.8%
Terminal Rates (c)	2/33 (6%)	2/37 (5%)	5/36 (14%)
Day of First Observation	635	729	649
Life Table Tests (d)	P=0.470	P=0.192N	P=0.544
Logistic Regression Tests (d)	P=0.447	P=0.220N	P=0.518
Cochran-Armitage Trend Test (d)	P=0.430		
Fisher Exact Test (d)		P=0.226N	P=0.500
Liver: Hepatocellular Adenoma			
Overall Rates (a)	9/55 (16%)	21/54 (39%)	20/55 (36%)
Adjusted Rates (b)	25.5%	49.3%	51.1%
Terminal Rates (c)	7/33 (21%)	16/37 (43%)	17/36 (47%)
Day of First Observation	694	441	661
Life Table Tests (d)	P=0.025	P=0.022	P=0.025
Logistic Regression Tests (d)	P=0.018	P=0.008	P=0.015
Cochran-Armitage Trend Test (d)	P=0.015		
Fisher Exact Test (d)		P=0.007	P=0.015
Liver: Hepatocellular Carcinoma			
Overall Rates (a)	13/55 (24%)	11/54 (20%)	7/55 (13%)
Adjusted Rates (b)	29.6%	24.8%	16.8%
Terminal Rates (c)	5/33 (15%)	5/37 (14%)	4/36 (11%)
Day of First Observation	537	465	526
Life Table Tests (d)	P=0.088N	P=0.367N	P=0.106N
Logistic Regression Tests (d)	P=0.094N	P=0.430N	P=0.114N
Cochran-Armitage Trend Test (d)	P=0.090N		
Fisher Exact Test (d)		P=0.429N	P=0.108N
Liver: Hepatocellular Adenoma or Carcinoma			
Overall Rates (a)	20/55 (36%)	29/54 (54%)	25/55 (45%)
Adjusted Rates (b)	46.2%	64.1%	59.0%
Terminal Rates (c)	11/33 (33%)	21/37 (57%)	19/36 (53%)
Day of First Observation	537	441	526
Life Table Tests (d)	P=0.299	P=0.151	P=0.317
Logistic Regression Tests (d)	P=0.223	P=0.053	P=0.250
Cochran-Armitage Trend Test (d)	P=0.194		
Fisher Exact Test (d)		P=0.052	P=0.219
Lung: Alveolar/Bronchiolar Adenoma			
Overall Rates (a)	6/55 (11%)	(e) 9/31 (29%)	4/55 (7%)
Adjusted Rates (b)	18.2%		11.1%
Terminal Rates (c)	6/33 (18%)		4/36 (11%)
Day of First Observation	729		729
Life Table Test (d)			P=0.313N
Logistic Regression Test (d)			P=0.313N
Fisher Exact Test (d)			P=0.371N

TABLE C3. ANALYSIS OF PRIMARY TUMORS IN MALE MICE IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	50 mg/kg	100 mg/kg
Lung: Alveolar/Bronchiolar Carcinoma			
Overall Rates (a)	8/55 (15%)	(e) 4/31 (13%)	6/55 (11%)
Adjusted Rates (b)	21.1%		14.7%
Terminal Rates (c)	4/33 (12%)		3/36 (8%)
Day of First Observation	649		563
Life Table Test (d)			P=0.354N
Logistic Regression Test (d)			P=0.370N
Fisher Exact Test (d)			P=0.388N
Lung: Alveolar/Bronchiolar Adenoma or Carcinoma			
Overall Rates (a)	14/55 (25%)	(e) 11/31 (35%)	10/55 (18%)
Adjusted Rates (b)	37.4%		25.0%
Terminal Rates (c)	10/33 (30%)		7/36 (19%)
Day of First Observation	649		563
Life Table Test (d)			P=0.197N
Logistic Regression Test (d)			P=0.213N
Fisher Exact Test (d)			P=0.245N
Pituitary Gland/Pars Distalis: Adenoma			
Overall Rates (a)	3/50 (6%)	(e) 0/14 (0%)	0/50 (0%)
Adjusted Rates (b)	9.3%		0.0%
Terminal Rates (c)	2/30 (7%)		0/31 (0%)
Day of First Observation	701		
Life Table Test (d)			P=0.117N
Logistic Regression Test (d)			P=0.120N
Fisher Exact Test (d)			P=0.121N
Integumentary System: Fibroma			
Overall Rates (a)	2/55 (4%)	3/54 (6%)	0/55 (0%)
Adjusted Rates (b)	6.1%	7.7%	0.0%
Terminal Rates (c)	2/33 (6%)	2/37 (5%)	0/36 (0%)
Day of First Observation	729	662	
Life Table Tests (d)	P=0.185N	P=0.539	P=0.219N
Logistic Regression Tests (d)	P=0.193N	P=0.507	P=0.219N
Cochran-Armitage Trend Test (d)	P=0.203N		
Fisher Exact Test (d)		P=0.491	P=0.248N
Integumentary System: Fibroma or Neurofibroma			
Overall Rates (a)	3/55 (5%)	3/54 (6%)	0/55 (0%)
Adjusted Rates (b)	9.1%	7.7%	0.0%
Terminal Rates (c)	3/33 (9%)	2/37 (5%)	0/36 (0%)
Day of First Observation	729	662	
Life Table Tests (d)	P=0.088N	P=0.620N	P=0.106N
Logistic Regression Tests (d)	P=0.094N	P=0.654N	P=0.106N
Cochran-Armitage Trend Test (d)	P=0.102N		
Fisher Exact Test (d)		P=0.652	P=0.122N
Integumentary System: Fibrosarcoma			
Overall Rates (a)	7/55 (13%)	9/54 (17%)	3/55 (5%)
Adjusted Rates (b)	16.3%	20.9%	7.8%
Terminal Rates (c)	1/33 (3%)	4/37 (11%)	2/36 (6%)
Day of First Observation	635	596	661
Life Table Tests (d)	P=0.144N	P=0.441	P=0.160N
Logistic Regression Tests (d)	P=0.145N	P=0.380	P=0.158N
Cochran-Armitage Trend Test (d)	P=0.149N		
Fisher Exact Test (d)		P=0.378	P=0.160N

TABLE C3. ANALYSIS OF PRIMARY TUMORS IN MALE MICE IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	50 mg/kg	100 mg/kg
Integumentary System: Fibroma or Fibrosarcoma			
Overall Rates (a)	9/55 (16%)	10/54 (19%)	3/55 (5%)
Adjusted Rates (b)	21.6%	23.3%	7.8%
Terminal Rates (c)	3/33 (9%)	5/37 (14%)	2/36 (6%)
Day of First Observation	635	596	661
Life Table Tests (d)	P=0.060N	P=0.555	P=0.064N
Logistic Regression Tests (d)	P=0.058N	P=0.487	P=0.060N
Cochran-Armitage Trend Test (d)	P=0.062N		
Fisher Exact Test (d)		P=0.482	P=0.062N
Integumentary System: Sarcoma or Fibrosarcoma			
Overall Rates (a)	8/55 (15%)	12/54 (22%)	3/55 (5%)
Adjusted Rates (b)	18.4%	28.1%	7.8%
Terminal Rates (c)	1/33 (3%)	7/37 (19%)	2/36 (6%)
Day of First Observation	635	596	661
Life Table Tests (d)	P=0.105N	P=0.291	P=0.107N
Logistic Regression Tests (d)	P=0.102N	P=0.218	P=0.100
Cochran-Armitage Trend Test (d)	P=0.108N		
Fisher Exact Test (d)		P=0.216	P=0.101N
Integumentary System: Fibroma, Neurofibroma, Sarcoma, or Fibrosarcoma			
Overall Rates (a)	11/55 (20%)	13/54 (24%)	3/55 (5%)
Adjusted Rates (b)	26.1%	30.5%	7.8%
Terminal Rates (c)	4/33 (12%)	8/37 (22%)	2/36 (6%)
Day of First Observation	635	596	661
Life Table Tests (d)	P=0.026N	P=0.485	P=0.025N
Logistic Regression Tests (d)	P=0.024N	P=0.398	P=0.021N
Cochran-Armitage Trend Test (d)	P=0.027N		
Fisher Exact Test (d)		P=0.389	P=0.021N
Testis: Interstitial Cell Adenoma			
Overall Rates (a)	1/55 (2%)	(e) 0/18 (0%)	3/55 (5%)
Adjusted Rates (b)	2.6%		8.3%
Terminal Rates (c)	0/33 (0%)		3/36 (8%)
Day of First Observation	691		729
Life Table Test (d)			P=0.328
Logistic Regression Test (d)			P=0.318
Fisher Exact Test (d)			P=0.309
Circulatory System: Hemangiosarcoma			
Overall Rates (a)	1/55 (2%)	1/54 (2%)	3/55 (5%)
Adjusted Rates (b)	3.0%	2.7%	7.7%
Terminal Rates (c)	1/33 (3%)	1/37 (3%)	2/36 (6%)
Day of First Observation	729	729	655
Life Table Tests (d)	P=0.222	P=0.736N	P=0.334
Logistic Regression Tests (d)	P=0.211	P=0.736N	P=0.316
Cochran-Armitage Trend Test (d)	P=0.203		
Fisher Exact Test (d)		P=0.748	P=0.309
Circulatory System: Hemangioma or Hemangiosarcoma			
Overall Rates (a)	2/55 (4%)	1/54 (2%)	4/55 (7%)
Adjusted Rates (b)	5.0%	2.7%	9.9%
Terminal Rates (c)	1/33 (3%)	1/37 (3%)	2/36 (6%)
Day of First Observation	604	729	655
Life Table Tests (d)	P=0.261	P=0.478N	P=0.365
Logistic Regression Tests (d)	P=0.243	P=0.505N	P=0.337
Cochran-Armitage Trend Test (d)	P=0.240		
Fisher Exact Test (d)		P=0.507N	P=0.339

TABLE C3. ANALYSIS OF PRIMARY TUMORS IN MALE MICE IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	50 mg/kg	100 mg/kg
Hematopoietic System: Lymphoma, All Malignant			
Overall Rates (a)	6/55 (11%)	11/54 (20%)	7/55 (13%)
Adjusted Rates (b)	15.2%	26.3%	17.1%
Terminal Rates (c)	3/33 (9%)	7/37 (19%)	5/36 (14%)
Day of First Observation	330	648	330
Life Table Tests (d)	P=0.499	P=0.203	P=0.548
Logistic Regression Tests (d)	P=0.436	P=0.137	P=0.446
Cochran-Armitage Trend Test (d)	P=0.446		
Fisher Exact Test (d)		P=0.136	P=0.500

(a) Number of tumor-bearing animals/number of animals examined at the site
(b) Kaplan-Meier estimated tumor incidences at the end of the study after adjusting for intercurrent mortality
(c) Observed tumor incidence at terminal kill
(d) Beneath the vehicle control incidence are the P values associated with the trend test. Beneath the dosed group incidence are the P values corresponding to pairwise comparisons between that dosed group and the vehicle controls. The life table analysis regards tumors in animals dying prior to terminal kill as being (directly or indirectly) the cause of death. The logistic regression test regards these lesions as nonfatal. The Cochran-Armitage and Fisher exact tests compare directly the overall incidence rates. A negative trend or lower incidence in a dosed group is indicated by (N).
(e) Incomplete sampling of tissues

TABLE C4. HISTORICAL INCIDENCE OF HEPATOCELLULAR TUMORS IN MALE $B6C3F_1$ MICE (a)

Study	Incidence in Controls		
	Adenoma	Carcinoma	Adenoma or Carcinoma
Historical Incidence for All Water Gavage Vehicle Controls			
Iodinated glycerol (b)	8/50	2/50	10/50
Chlorpheniramine maleate (c)	10/50	6/50	16/50
Tetrakis(hydroxymethyl)phosphonium chloride (c)	8/49	10/49	17/49
Malonaldehyde, sodium salt (c)	4/50	14/50	17/50
Tetrakis(hydroxymethyl)phosphonium sulfate (c)	9/48	10/48	18/48
Methyl carbamate (d)	9/50	5/50	14/50
Chlorinated trisodium phosphate (b)	6/50	9/50	14/50
TOTAL	54/347 (15.6%)	56/347 (16.1%)	106/347 (30.5%)
SD (e)	4.21%	8.03%	5.83%
Range (f)			
High	10/50	14/50	18/48 (38%)
Low	4/50	2/50	10/50
Overall Historical Incidence for Untreated Controls			
TOTAL	259/2,032 (12.7%)	379/2,032 (18.7%)	609/2,032 (30.0%)
SD (e)	7.21%	6.50%	7.59%
Range (f)			
High	22/50	15/50	29/50 (58%)
Low	0/49	4/50	8/50

(a) Data as of April 29, 1987, for studies of at least 104 weeks
(b) Study performed at EG&G Mason Research Institute
(c) Study performed at Battelle Columbus Laboratories
(d) Study performed at Microbiological Associates
(e) Standard deviation
(f) Range and SD are presented for groups of 35 or more animals.

TABLE C5. SUMMARY OF THE INCIDENCE OF NONNEOPLASTIC LESIONS IN MALE MICE IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE

	Vehicle Control	Low Dose	High Dose
Animals initially in study	65	65	65
Animals removed	65	65	65
Animals examined histopathologically	55	54	55
ALIMENTARY SYSTEM			
Gallbladder	(44)	(11)	(48)
Inflammation, chronic			1 (2%)
Intestine small, ileum	(48)	(10)	(47)
Amyloid deposition	1 (2%)		
Mucosa, necrosis			1 (2%)
Peyer's patch, hyperplasia, lymphoid			1 (2%)
Intestine small, jejunum	(50)	(13)	(45)
Diverticulum		1 (8%)	
Hyperplasia, lymphoid			1 (2%)
Mucosa, inflammation, suppurative		1 (8%)	
Liver	(55)	(54)	(55)
Amyloid deposition			1 (2%)
Anisokaryosis		2 (4%)	12 (22%)
Autolysis		1 (2%)	
Basophilic focus	2 (4%)	5 (9%)	11 (20%)
Clear cell focus		2 (4%)	
Cyst	1 (2%)	1 (2%)	1 (2%)
Cytomegaly			3 (5%)
Eosinophilic focus	2 (4%)	3 (6%)	4 (7%)
Fatty change			3 (5%)
Focal cellular change		1 (2%)	
Hematopoietic cell proliferation	1 (2%)	1 (2%)	
Hyperplasia, lymphoid		1 (2%)	
Hyperplasia, re cell			1 (2%)
Infarct	1 (2%)		1 (2%)
Inflammation, chronic		1 (2%)	1 (2%)
Mixed cell focus	2 (4%)		1 (2%)
Necrosis	4 (7%)	2 (4%)	2 (4%)
Necrosis, focal	1 (2%)		
Syncytial alteration	5 (9%)	3 (6%)	25 (45%)
Thrombus	1 (2%)		
Centrilobular, degeneration, ballooning			1 (2%)
Sinusoid, dilatation, focal			1 (2%)
Mesentery	(6)	(4)	(5)
Hemorrhage	1 (17%)		
Inflammation, acute	1 (17%)		1 (20%)
Inflammation, chronic		1 (25%)	1 (20%)
Inflammation, suppurative		1 (25%)	
Fat, inflammation, chronic			1 (20%)
Fat, necrosis, focal	3 (50%)		1 (20%)
Pancreas	(54)	(15)	(53)
Fibrosis, focal	1 (2%)		
Hemorrhage, focal	1 (2%)		
Inflammation, chronic			2 (4%)
Acinus, vacuolization cytoplasmic			1 (2%)
Serosa, inflammation, acute			1 (2%)
Salivary glands	(55)	(16)	(55)
Concretion, chronic			1 (2%)
Degeneration, chronic	1 (2%)		
Inflammation, chronic	30 (55%)	8 (50%)	31 (56%)
Stomach, forestomach	(55)	(15)	(53)
Acanthosis			1 (2%)
Ulcer			1 (2%)
Stomach, glandular	(55)	(15)	(55)
Ulcer	1 (2%)		1 (2%)

TABLE C5. SUMMARY OF THE INCIDENCE OF NONNEOPLASTIC LESIONS IN MALE MICE IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	Low Dose	High Dose
ALIMENTARY SYSTEM (Continued)			
Tooth	(6)	(1)	(2)
Peridontal tissue, inflammation, suppurative	2 (33%)		1 (50%)
Peridontal tissue, pulp, abscess	1 (17%)		
Pulp, abscess	2 (33%)		1 (50%)
Pulp, necrosis	1 (17%)	1 (100%)	
CARDIOVASCULAR SYSTEM			
Heart	(55)	(17)	(55)
Cardiomyopathy			1 (2%)
Inflammation, acute	1 (2%)	1 (6%)	
Inflammation, chronic	1 (2%)		
Atrium left, thrombus			1 (2%)
ENDOCRINE SYSTEM			
Adrenal gland	(55)	(53)	(54)
Subcapsular, hyperplasia	1 (2%)		
Adrenal gland, cortex	(55)	(52)	(54)
Degeneration, focal	5 (9%)	1 (2%)	
Ectopic tissue	1 (2%)		
Hyperplasia, focal	9 (16%)	2 (4%)	6 (11%)
Hypertrophy, focal	1 (2%)		1 (2%)
Spindle cell, subcapsular, proliferation		1 (2%)	
Adrenal gland, medulla	(54)	(52)	(54)
Hyperplasia, focal	1 (2%)	3 (6%)	1 (2%)
Pituitary gland	(50)	(14)	(50)
Pars distalis, hyperplasia, focal	3 (6%)	1 (7%)	5 (10%)
Thyroid gland	(55)	(53)	(54)
Inflammation, chronic		1 (2%)	2 (4%)
Inflammation, suppurative		1 (2%)	
Follicle, cyst, multiple	1 (2%)		
Follicle, inflammation, acute			1 (2%)
Follicular cell, hyperplasia	5 (9%)	15 (28%)	19 (35%)
GENERAL BODY SYSTEM			
None			
GENITAL SYSTEM			
Epididymis	(54)	(17)	(54)
Inflammation, chronic	1 (2%)		3 (6%)
Preputial gland	(11)	(9)	(7)
Inflammation, chronic	5 (45%)	3 (33%)	2 (29%)
Inflammation, suppurative	5 (45%)	6 (67%)	4 (57%)
Duct, ectasia	1 (9%)	1 (11%)	1 (14%)
Prostate	(55)	(17)	(55)
Inflammation, acute			1 (2%)
Inflammation, chronic	6 (11%)	1 (6%)	9 (16%)
Inflammation, chronic active	3 (5%)		
Inflammation, suppurative	1 (2%)	1 (6%)	
Serosa, inflammation, acute			1 (2%)
Seminal vesicle	(55)	(17)	(55)
Dilatation	1 (2%)		
Inflammation, chronic	2 (4%)		
Inflammation, suppurative	1 (2%)		
Serosa, inflammation, acute			1 (2%)
Testes	(55)	(18)	(55)
Atrophy	2 (4%)		1 (2%)
Germinal epithelium, degeneration			1 (2%)

TABLE C5. SUMMARY OF THE INCIDENCE OF NONNEOPLASTIC LESIONS IN MALE MICE IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	Low Dose	High Dose
HEMATOPOIETIC SYSTEM			
Lymph node	(55)	(29)	(55)
Congestion		1 (3%)	
Hyperplasia, lymphoid			1 (2%)
Hyperplasia, lymphoid, plasma cell		1 (3%)	
Hyperplasia, plasma cell	1 (2%)	1 (3%)	
Inflammation, acute			1 (2%)
Axillary, hyperplasia, lymphoid	1 (2%)		
Axillary, hyperplasia, plasma cell	1 (2%)		1 (2%)
Iliac, hematopoietic cell proliferation		1 (3%)	
Iliac, hyperplasia		1 (3%)	
Iliac, hyperplasia, lymphoid	1 (2%)		
Iliac, hyperplasia, plasma cell	1 (2%)	1 (3%)	
Inguinal, cyst	1 (2%)		
Inguinal, hyperplasia, lymphoid		1 (3%)	
Lumbar, congestion	1 (2%)		
Lumbar, hyperplasia, lymphoid	1 (2%)		
Mediastinal, hyperplasia	1 (2%)		
Pancreatic, congestion	1 (2%)		
Popliteal, hyperplasia, lymphoid	1 (2%)		
Popliteal, hyperplasia, plasma cell	1 (2%)		
Renal, hyperplasia, lymphoid	1 (2%)		
Renal, hyperplasia, plasma cell	1 (2%)		
Lymph node, mandibular	(52)	(17)	(51)
Congestion	2 (4%)		
Hyperplasia, lymphoid	1 (2%)		
Hyperplasia, plasma cell			5 (10%)
Lymph node, mesenteric	(54)	(23)	(50)
Congestion	11 (20%)	6 (26%)	10 (20%)
Hematopoietic cell proliferation	1 (2%)	1 (4%)	1 (2%)
Hyperplasia, lymphoid	3 (6%)		
Inflammation, acute	1 (2%)		
Spleen	(55)	(52)	(54)
Amyloid deposition			1 (2%)
Hematopoietic cell proliferation	10 (18%)	14 (27%)	6 (11%)
Hyperplasia, lymphoid			2 (4%)
Thymus	(39)	(10)	(42)
Amyloid deposition			1 (2%)
INTEGUMENTARY SYSTEM			
Skin	(55)	(33)	(55)
Acanthosis	2 (4%)	3 (9%)	2 (4%)
Alopecia			1 (2%)
Atrophy	2 (4%)	3 (9%)	1 (2%)
Inflammation, chronic	1 (2%)	1 (3%)	2 (4%)
Ulcer	5 (9%)	6 (18%)	14 (25%)
Artery, subcutaneous tissue, inflammation, chronic	1 (2%)		
Dermis, fibrosis	1 (2%)		
Dermis, inflammation, chronic	1 (2%)	1 (3%)	2 (4%)
Dermis, dorsal, atrophy			1 (2%)
Prepuce, inflammation, chronic	2 (4%)		
Prepuce, inflammation, suppurative		1 (3%)	
Subcutaneous tissue, edema	2 (4%)		
Subcutaneous tissue, hemorrhage	1 (2%)		
Subcutaneous tissue, inflammation, chronic	1 (2%)		1 (2%)
Subcutaneous tissue, inflammation, subacute	1 (2%)		
Subcutaneous tissue, inflammation, suppurative	1 (2%)	1 (3%)	
Tail, dermis, inflammation			1 (2%)

TABLE C5. SUMMARY OF THE INCIDENCE OF NONNEOPLASTIC LESIONS IN MALE MICE IN THE TWO-YEAR GAVAGE STUDY OF HYDROQUINONE (Continued)

	Vehicle Control	Low Dose	High Dose
MUSCULOSKELETAL SYSTEM			
Bone	(54)	(32)	(55)
Hyperostosis		5 (16%)	
Joint, tarsal, hyperostosis	10 (19%)	10 (31%)	7 (13%)
Skeletal muscle	(3)		
Abdominal, fibrosis	1 (33%)		
NERVOUS SYSTEM			
Brain	(55)	(17)	(55)
Cyst epithelial inclusion		1 (6%)	
Mineralization	2 (4%)		3 (5%)
RESPIRATORY SYSTEM			
Lung	(55)	(31)	(55)
Congestion		4 (13%)	
Hemorrhage			1 (2%)
Alveolar epithelium, hyperplasia		1 (3%)	1 (2%)
Alveolar epithelium, hyperplasia, atypical		1 (3%)	
Alveolus, hyperplasia, macrophage	1 (2%)	1 (3%)	2 (4%)
Vein, leukocytosis		1 (3%)	
Nose	(55)	(17)	(55)
Lumen, turbinate, inflammation, suppurative	2 (4%)		1 (2%)
Mucosa, inflammation, chronic			1 (2%)
Nasolacrimal duct, inflammation, chronic	2 (4%)		3 (5%)
SPECIAL SENSES SYSTEM			
Lacrimal gland		(1)	(1)
Extraorbital, inflammation, chronic			1 (100%)
URINARY SYSTEM			
Kidney	(55)	(17)	(55)
Amyloid deposition			1 (2%)
Calculus micro observation only	2 (4%)		
Cyst, multiple	1 (2%)		
Cytoplasmic alteration		1 (6%)	
Glomerulosclerosis	3 (5%)		1 (2%)
Inflammation, chronic	45 (82%)	11 (65%)	44 (80%)
Inflammation, suppurative	1 (2%)	1 (6%)	
Nephropathy	1 (2%)	1 (6%)	1 (2%)
Cortex, infarct	1 (2%)		
Renal tubule, mineralization			2 (4%)
Urethra	(3)		(2)
Distal, concretion			1 (50%)
Distal, inflammation, chronic	1 (33%)		
Distal, inflammation, suppurative			1 (50%)
Proximal, inflammation, suppurative	2 (67%)		1 (50%)
Urinary bladder	(54)	(15)	(55)
Muscularis, hemorrhage			1 (2%)
Perivascular, inflammation, chronic	2 (4%)		
Submucosa, inflammation, chronic	15 (28%)	2 (13%)	13 (24%)
Wall, inflammation, subacute	1 (2%)		