

Appendix F: Reported Metastatic Tumors in Birds. From: Speer: Current Therapy in Avian Medicine and Surgery, 1st Edition, “Advances in Avian Medicine, Section 1, p. 110. Elsevier, 2016

Reported Metastatic Tumors in Birds				
Tumor Type	Species	Primary Tumor Site	Site of Metastasis	Reference
Adrenal carcinoma	Budgerigar (<i>Melopsittacus undulatus</i>)	Adrenal gland	Air sac, testicular capsule, kidney	104
Air sac carcinoma	Unspecified avian species	Air sac	Not provided	1
Biliary carcinoma/adenocarcinomas	Budgerigar (<i>Melopsittacus undulatus</i>)	Liver	Not provided	3
Bile duct carcinomas	Unspecified avian species	Liver	Not provided	1
Cholangiocarcinoma	Adelie penguin (<i>Pygoscelis adellae</i>)	Liver	Lung, pancreas, mesentery, and cloaca	105
Cholangiocarcinoma	Red-tailed hawk (<i>Buteo jamaicensis</i>)	Liver	Adrenal gland, lung, and left femur	106
Bronchial carcinoma	Grey parrot (<i>Psittacus erithacus</i>)	Lung	Humerus	107
Bronchial carcinoma	Red-shouldered hawk (<i>Buteo lineatus</i>)	Lung	Caudal air sac, Kidney, peritoneal surfaces	108
Chromophobic pituitary carcinomas	Budgerigar (<i>Melopsittacus undulatus</i>)	Pituitary	Liver, mid-brain, air sac	109
Fibrosarcoma	Budgerigar, rose-ringed parakeet, Amazon parrot	Skin	Not provided	3
Fibrosarcoma	Budgerigar (<i>Melopsittacus undulatus</i>)	Spleen	Not provided	3
Fibrosarcoma	Budgerigar (<i>Melopsittacus undulatus</i>)	Cloaca	Not provided	3
Fibrosarcoma	Budgerigar (<i>Melopsittacus undulatus</i>)	Intestine	Not provided	3
Fibrosarcoma	Grey parrot (<i>Psittacus erithacus</i>)	Unknown Not determined	Beak, syrinx, tibio-metatarsus	110
Fibrosarcoma	Cockatiel (<i>Nymphicus hollandicus</i>)	Lung	Liver	111
Hepatocellular carcinoma	Unspecified avian species	Liver	Not provided	1
Leiomyosarcoma	Budgerigar (<i>Melopsittacus undulatus</i>)	Unknown Not determined	Bone marrow, spleen, and liver	112
Hemangiosarcoma	Java sparrow	Metatarsal pad	Kidney, liver	113
Hemangiosarcoma	Unspecified avian species	Not provided	Not provided	1
Hemangiosarcoma	White turtle dove	Skin	Not provided	3
Hemangiosarcoma	Java sparrow (<i>Lonchura oryzivora</i>)	Foot—metatarsal pad	Kidney, liver	113
Hepatocellular carcinoma	Mynah	Liver	Not provided	3
Malignant melanoma	Macaroni penguin (<i>Eudyptes chrysolophus</i>)	Beak	Adrenal gland	114
Malignant melanoma	Red-tailed hawk (<i>Buteo jamaicensis</i>)	Adrenal gland	Lungs, liver, pancreas, skeletal muscle	114
Malignant melanoma	Mandarin duck (<i>Aix galericulata</i>)	Beak	Tissues in the neck	115
Malignant melanoma	Zebra finch (<i>Poephila castanotis</i>)	Coelom	Lung	116
Malignant melanoma	Pigeon (<i>Columba livia</i>)	Mucous membrane lower beak	Liver, kidney, spleen, and femur bone marrow	8

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Malignant melanoma	Thick-billed parrot (<i>Rhynchopsitta pachyrhynchos</i>)	Beak	Lung, liver, spleen	7
Malignant melanoma	Merlin (<i>Falco columbarius</i>)	Adrenal gland	Liver, spleen, lung	117
Nephroblastoma	Budgerigar (<i>Melopsittacus undulatus</i>)	Kidney	Not provided	3
Osteosarcoma	Ring-necked dove (<i>Streptopelia risoria</i>)	Tibiotarsus	Lung	118
Ovarian/Oviduct adenocarcinoma	Unspecified avian species	Gonad	Not provided	1
Oviduct adenocarcinoma	Great tit (<i>Parus major</i> L.)	Oviduct	Intestine, pancreas, liver, kidney	119
Ovarian adenocarcinoma	Budgerigar (<i>Melopsittacus undulatus</i>)	Ovary	Not provided	3
Pancreatic adenocarcinoma	Cockatiel (<i>Nymphicus hollandicus</i>)	Pancreas	Surrounding tissues	120
Pancreatic adenocarcinoma	Unspecified avian species	Pancreas	Not provided	1
Pancreatic adenocarcinoma	Mynah	Pancreas	Not provided	3
Pancreatic carcinoma	Cockatiel (<i>Nymphicus hollandicus</i>)	Pancreas	Not provided	3
Pheochromocytoma	Budgerigar (<i>Melopsittacus undulatus</i>)	Adrenal gland	Liver, lung	121
Pituitary gland: Chromophobe adenocarcinoma	Budgerigar (<i>Melopsittacus undulatus</i>)	Pituitary gland	Not provided	3
Pituitary gland: Somatotroph carcinoma	Budgerigar (<i>Melopsittacus undulatus</i>)	Pituitary gland	Liver, midbrain, air sac	109

Tumor Type	Species	Primary Tumor Site	Site of Metastasis	Reference
Proventricular adenocarcinoma	Unspecified avian species	Proventriculus	Not provided	1
Proventricular adenocarcinoma	Grey-cheeked parakeets (<i>Brotogeris pyrrhopterus</i>)	Proventriculus	Not provided	3
Proventricular adenocarcinoma	Budgerigar (<i>Melopsittacus undulatus</i>)	Proventriculus	Liver	122
Proventricular adenocarcinoma	Amazon parrot (<i>Amazona</i> species)	Proventriculus	Not provided	3
Pulmonary adenocarcinoma	Blue and gold macaw (<i>Ara ararauna</i>)	Lung	Vertebrae	123
Pulmonary carcinoma	Moluccan cockatoo (<i>Cacatua moluccensis</i>)	Lung	Vertebral column, humerus	124
Rhabdomyosarcoma	Yellow-headed caracara (<i>Milvago chimachima</i>)	Muscle region of proximal left humerus	Heart, lungs, and proventriculus	125
Rhabdomyosarcoma	Budgerigar (<i>Melopsittacus undulatus</i>)	Muscle	Not provided	3
Renal adenocarcinoma	Unspecified avian species	Kidney	Not provided	1
Renal adenocarcinoma	Budgerigar, Parakeet, Chestnut-eared finch	Kidney	Not provided	3
Renal carcinoma	Grey parrot (<i>Psittacus erithacus erithacus</i>)	Kidney	Lung, liver, heart, Subcutis	126
Seminoma	Amazon green parrot (<i>Amazona</i> species)	Testicle	Not provided	3
Seminoma	Cockatiel (<i>Nymphicus hollandicus</i>)	Testicle	Liver	127
Seminoma	Guinea fowl (<i>Numida meleagris</i>)	Testicle	Liver, lungs, kidney, heart	128
Seminoma	Duck (<i>Anas platyrhynchos</i>)	Testicle	Liver, lung, pancreas, peritoneal	129
Seminoma	Pigeon (<i>Columba livia</i>)	Testicle	Liver, kidney	130
Sertoli cell tumor	Unspecified avian species	Gonad	Not provided	1
Squamous cell carcinoma	Montagu's harrier (<i>Circus pygargus</i>)	Oral cavity (hard palate)	Right tibia and radius, and lung	131
Squamous cell carcinoma	Salmon-crested cockatoo (<i>Cacatua moluccensis</i>)	Unknown	Bone, lungs, liver, and spleen	132
Squamous cell carcinoma (cutaneous)	Grey parrot (<i>Psittacus erithacus</i>)	Skin	Skin multiple sites (patagial and axilla)	133
Ventricular carcinoma	Unspecified avian species	Ventriculus	Not provided	1
Ventricular carcinoma	Sulfur-crested cockatoo (<i>Cacatua galerita</i>)	Ventriculus	Lungs	134