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Metastatic pulmonary carcinoma in a long-finned pilot whale (*Globicephala melas*)

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We describe gross, histopathological and immunohistochemical features of a pulmonary carcinoma with disseminated metastases in a long-finned pilot whale (LFPW). An adult, female LFPW stranded alive in the south cost of Spain (36°05'49.5"N, -5°26'33.0"W; Algeciras, Andalucía) in 2011. The animal died shortly after. On necropsy examination multiple pulmonary nodules and generalized thoracic lymphadenomegaly were noted. Histologically, the pulmonary parenchyma, mediastinal and pulmonary associated lymph nodes, and the right adrenal gland cortex were invaded by a multifocally coalescing, poorly demarcated, unencapsulated, moderately cellular and highly infiltrative neoplasm. It was composed of disorganized acini, tubules and variably sized and dilated intercommunicating glands lined by neoplastic epithelial cells. Immunohistochemically neoplastic cells were AE1/AE3 and vimentin positive. Vasculogenic mimicry and epithelial immunophenotype suggestive of mesenchymal transition were also noticed. Based on above findings a metastatic pulmonary carcinoma was determined. Primary pulmonary neoplasia has been rarely identified in cetaceans with only two descriptions of primary pulmonary squamous cell carcinoma (SCC) in an Amazon River dolphin (*Inia geoffrensis*) and in a bottlenose dolphin (*Tursiops truncatus*), hemangiomas in bottlenose dolphin, common dolphin (*Delphinus delphis*) and beluga whales (*Delphinapterus leucas*), fibromas in blue whale (*Balaenoptera musculus*) and fin whale (*Balaenoptera physalus*), and a chondroma and lipoma in a beluga whale. This is the first report of a pulmonary carcinoma in a LFPW.

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