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mulation of p53 protein between aerobic and hypoxic cells was attributable to that in the amount of DNA double-strand breaks between them.

In hypoxic cells, it was concluded that X irradiation induced less amount of DNA double-

strand breaks which resulted in the less accumulation of p53 protein followed by the less decrease in the cdk2 activity. The decrease in the cdk2 activity to a less extent yet enabled cells to precede to the next cell cycle, as reflected by the less induction of apoptotic cell death.

Population characteristics of the sea otter (*Enhydra lutris*)
on Cape Lopatka, Kamachatka Peninsula

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Morphometric measurements and tooth annuli counts from 593 skulls were used to determine sex and age characteristics of the Asian sea otter (*Enhydra lutris*) on Cape Lopatka, Kamchatka Peninsula, Russia. Measurements were taken on sea otter skulls from natural death recovered between 1983 and 1989 (n=551) and during January, 1997 (n=42). Five known aged skulls from aquariums were used as reference for age determination.

1) In addition to determining ages from cementum annuli, season of birth and season of death were determined from the condition of the innermost and outermost annuli respectively.

2) A reliable method of sex determination of pups was developed using morphometric characteristics of known sex skulls as reference.

3) An analysis of skull and canine tooth measurements across ages revealed continuing growth and development of the rostrum and coronoid process of the mandible, perhaps re-

flecting recent adaptations of this species to a marine environment.

4) Based upon a life table constructed from estimated age and sex, it appears that the waters around the Lopatka peninsula are inhabited primarily by young males.

Although the Cape Lopatka region provides ample food resources, strong winds and other environmental factors may make it a less favorable habitat than the more protected areas of this population's distribution. This may explain the preponderance of young, presumably dispersing males along the peninsula. A similar dynamic may be occurring among recently expanding populations near the southern Kuril islands and eastern Hokkaido. Improved research methods and continued studies of the Kamchatka, Kuril, and Hokkaido populations will help clarify the life history characteristics and population dynamics of the Asian sea otter, thus contributing to its conservation and management.