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# Improving age determination of harbour porpoises

## Skeletal ossification scoring in pectoral flipper radiographs refines age determination of harbour porpoises (*Phocoena phocoena*)

### Accurate ageing is challenging

- Harbour porpoises exhibit limited signs of ageing
- Existing methods (e.g., measuring standard body length or counting dental growth layer groups) vary in reliability and precision decline with age
- This study builds upon previous efforts showing that bone maturation in harbour porpoises occurs along the proximodistal axis and can be used for age determination

### International collaborative effort

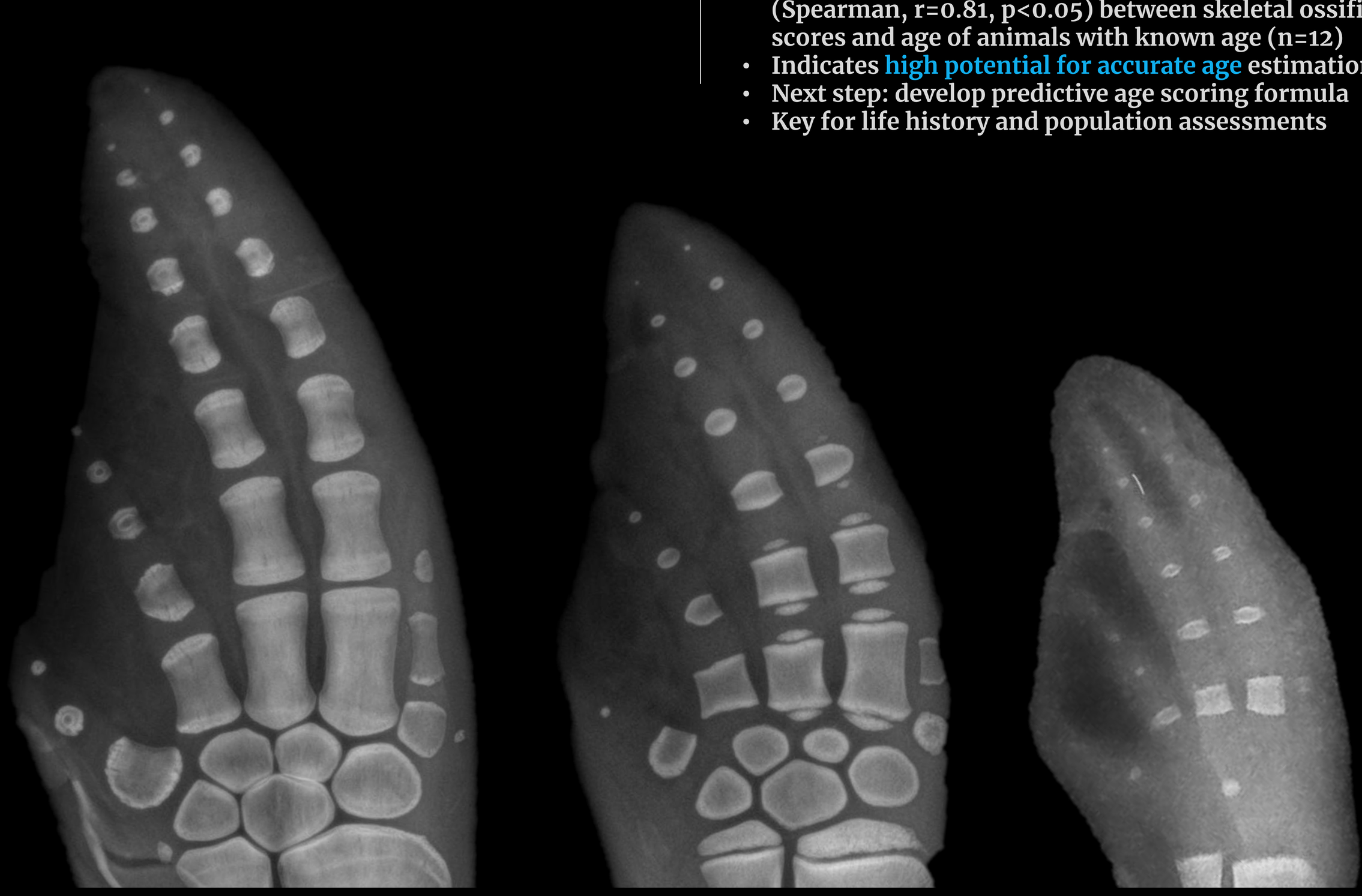
- Bringing together international expertise and animal data to create a unique dataset
- Includes individuals of known age for validation
- 150 radiographs (37 under human care/113 post-mortem)

### Standardized bone scoring

- Radiographs were scored using an established method for bottlenose and common dolphins (Barratclough et al., 2019; Hanninger et al., 2026)
- Skeletal ossification scores ranging from -1 to 7 were assigned to 16 locations on the pectoral bones
- Scores were assigned by three independent observers


### Ossification scores correlate with age

- Preliminary results demonstrated a strong correlation (Spearman, $r=0.81$, $p<0.05$) between skeletal ossification scores and age of animals with known age (n=12)
- Indicates high potential for accurate age estimation
- Next step: develop predictive age scoring formula
- Key for life history and population assessments



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