

Supporting Information

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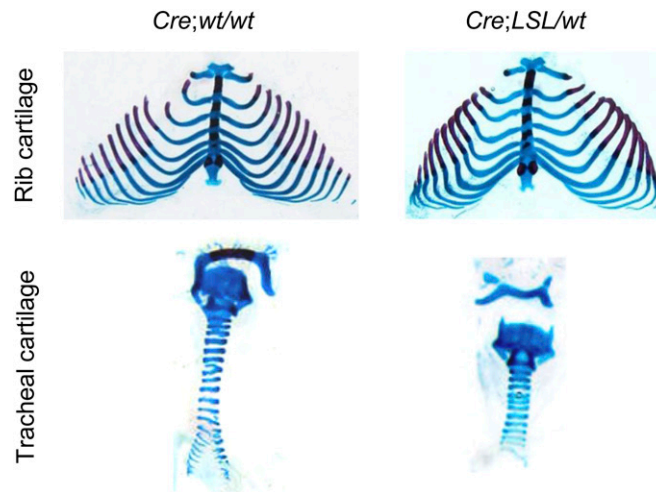


Fig. S1. *Col2a1-Cre;Idh1-KI* mice exhibit dysplasia of cartilage in the respiratory system. (Upper) Ribs and (Lower) tracheas are harvested from WT and *Col2a1-Cre;Idh1-KI* mutant littermates at E17.5 after whole-mount skeletal staining with alcian blue and alizarin red.

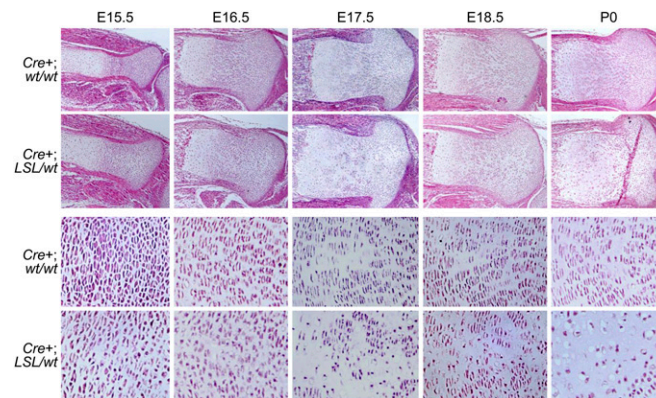


Fig. S2. H&E staining of proximal tibia from *Col2a1-Cre;Idh1-KI* and WT mice at perinatal stages. Disrupted columnar structures in the middle of proliferative chondrocytes are detected from E16.5 and become more evident at later stages of development.

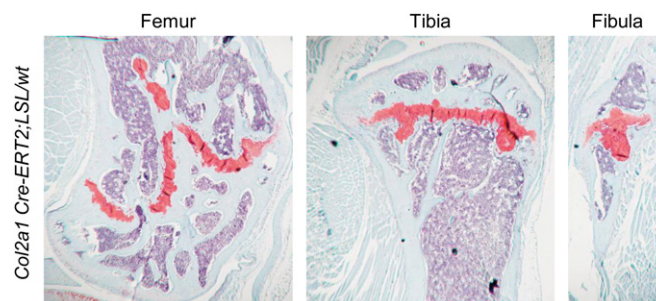


Fig. S3. Representative Safranin O staining of femur, tibia, and fibula harvested from *Col2a1-Cre/ERT2;Idh1-KI* mice 6 mo after injection of tamoxifen. Multiple enchondroma-like cartilage lesions were persistent in these animals.

Table S1. Genotypes of neonates and embryos from *Col2a1*-Cre × *Idh1*^{LSL/wt} crosses

| | Embryos | Neonates | Total |
|-------------------|---------|----------|-------|
| <i>wt/wt</i> | 7 | 17 | 24 |
| <i>LSL/wt</i> | 5 | 15 (1*) | 21 |
| <i>Cre;wt/wt</i> | 8 | 12 | 20 |
| <i>Cre;LSL/wt</i> | 4 | 1 (3*) | 8 |

*Number of mice found dead at birth.