Supplemental material, Larsen et al., “Pixel-Based Swallow Measurements: Correcting Nonsquare Pixels,” *JSLHR*,
https://doi.org/10.1044/2022_JSLHR-22-00306

Supplemental Material S2. Estimating pixel aspect ratio (PAR) using ImageJ (v1.53p).

The unknown pixel aspect ratio (PAR) of a video data can be estimated with ImageJ software with the following steps:

1. Capture a frame of the video data with unknown PAR and open it in ImageJ
2. Select the Oval Tool (Figure SM.1(a)) and draw an oval to match the X-ray aperture displayed on the image (Figure SM.1(b)) (Instead of the X-ray aperture, a known perfectly-placed circular object in X-ray view could be used.)
3. To measure the dimensions of the drawn oval, checking the “Bounding rectangle” checkbox in “Set Measurements…” Dialog box, which is accessible via the “Analyze” menu (Figure SM.1(c))
4. Measure the oval dimensions by pressing Ctrl-M on the keyboard or “Analyze->Measure” from the program menu. This immediately pops up “Results” window (Figure SM.1(d)) with the Width and Height columns.
5. Estimated PAR is the ratio of Height divided by Width. In pictured example, 996/1136 = 0.877. Alternately, a close integral ratio of 10:11 may be used (as used in the example in the article).

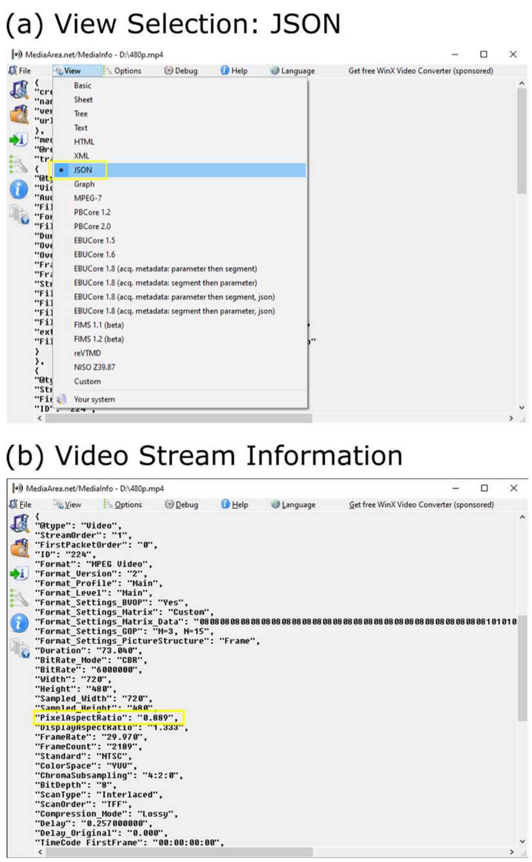

Figure SM.2. MediaInfo Screenshots for PAR retrieval.