Racing Prognosis of Thoroughbred Yearlings With Subchondral Bone Lucencies in the Proximal Interphalangeal Joint

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Subchondral bone lucencies (cysts) located on the condyles and facets of the proximal interphalangeal joint had no effect on racing performance; severe midline lucencies did affect performance. Authors’ address: Rood and Riddle Equine Hospital, PO Box 12070, Lexington, KY 40580-2070; e-mail: julie.v.vargas@gmail.com. *Corresponding author. © 2011 AAEP.

1. Introduction
Radiographic lucencies found in the proximal interphalangeal joint (PIJ) have historically been considered benign unless found in combination with degenerative arthritis. There is no documented evidence concerning the relationship between PIJ lucencies and racing performance.

2. Materials and Methods
Repository radiograph reports of Thoroughbred yearlings offered for public auction from 2002 to 2007 were examined. Horses were eligible for inclusion if they had a “cystic-like” lucency located in the PIJ. Racing performance during the 2- and 3-year-old years were compared with maternal siblings used as controls. Statistical analyses were performed using unequal variance ANOVA and paired t test.

3. Results
One hundred seventy-one affected yearlings and 832 maternal siblings were included in the study. There was no difference in 2- or 3-year-old starts, earnings, or earnings per start for yearlings with condyle or facet lucencies. Midline lucencies had decreased starts at 2-year-old (p = 0.0077) as well as earnings and earnings per start during the 2-year-old (p = 0.0003 and p = 0.0001) and 3-year-old years (p < 0.0001 and p < 0.0001).

4. Discussion
The PIJ is seldom recognized as a source of lameness in racing Thoroughbreds. Midline lucencies of the PIJ, which have traditionally been considered innocuous to the horse, showed an affect on racing performance. Midline lucencies are often considered insignificant and not recorded by the interpreter unless they are large and can be seen on at least two radiographic views. Therefore, the horses with midline lucencies that were included in this study represented a population of more severe lesions. Further investigation should better define when midline lucencies become a concern.