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([lpiccirillo@math.utexas.edu](mailto:lpiccirillo@math.utexas.edu)). *Knot traces and concordance*.

A famous conjecture of Akbulut and Kirby from 1978 states that the concordance class of a knot is determined by its 0-surgery. In 2015, Yasui disproved this conjecture by providing pairs of knots which have the same 0-surgeries yet which can be distinguished in (smooth) concordance by an invariant associated to the four-dimensional trace of the 0-surgery. I will discuss joint work with Lisa Piccirillo in which we construct many pairs of knots which have diffeomorphic 0-surgery traces, some of which can be distinguished in smooth concordance by the Heegaard Floer  $d$ -invariants of their double branched covers. I will also discuss the applicability of this work to the existence of interesting invertible satellite maps on the smooth concordance group. (Received September 21, 2017)