A video coder performs a padding operation that processes a set of border pixels according to an order. The order starts at a bottom left border pixel and proceeds through the border pixels sequentially to a top right border pixel. When the padding operation processes an unavailable border pixel the padding operation predicts a value of the unavailable border pixel based on a value of a border pixel previously processed by the padding operation. The video coder may generate an intra predicted video block based on the border pixels.