Equivalence relations generated by surgeries which preserve metabelian information

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Abstract. We consider knots modulo surgery which preserved metabelian subgroups of the knot group. When these subgroups are fixed and finite, the number of equivalence classes is finite. For certain groups the equivalence classes can be completely determined. Universally, the maximal metabelian subgroup of a knot is preserved by surgeries along unit-framed links which form boundary links with the knot. The induced equivalence relation interpolates between loop Y_1-equivalence (S-equivalence) and loop Y_2-equivalence.