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**Michele Capovilla-Searle, Darin Li, Lily Li, Jacob McErlean, Alex Simons, Natalie
Stewart** and **Xiwen Wang**. *Lower Bounds on Volumes of Hyperbolic 3-Manifolds*. Preliminary
report.

Given a link in a 3-manifold that can be appropriately decomposed into tangles, we define certain types of hyperbolicity for the tangles and an associated volume. Using results of Agol-Storm-Thurston, we show that links obtained from the tangles are themselves hyperbolic. Further, we obtain surprisingly accurate lower bounds on the volumes of the links from the sum of the volumes of the constituent tangles in various 3-manifolds, including S^3 , $S^2 \times S^1$, $D^2 \times S^1$ and $S^1 \times S^1 \times (0, 1)$. (Received August 09, 2020)