Objective: To evaluate the impact of early tumor shrinkage (ETS) on long-term outcome in patients (pts) with wild-type-KRAS unresectable colorectal liver-limited metastases (CLLM) receiving cetuximab (cet) plus chemotherapy (CT, FOLFIRI or mFOLFOX6).

Material and Methods: 138 pts treated in a randomized controlled trial (ClinicalTrials.gov number: NCT01564810, has been accepted by JCO and planed for publication on April 8), where 70 in arm A received CT plus cet and 68 in arm B received CT alone, were included into this analysis. ETS was defined as a reduction of >=20% in the sum of the longest diameters of target lesions compared to baseline at the first evaluation (8 weeks). Outcome measures were progression-free survival (PFS) and overall survival (OS).

Results: 132 pts were available for evaluation, and ETS occurred more frequently in arm A than that in arm B (45/68 vs. 26/64, p = .003). Irrespective of treatment arm, pts achieved ETS were associated with longer OS (arm A: 38.0 vs. 18.7 months, p < .001; arm B 30.6 vs. 17.7 months, p = .003) and PFS (arm A: 11.8 vs. 4.8 months, p < .001; arm B 8.0 vs. 4.6 months, p = .001) when compared to pts with no-ETS. Among pts with ETS, there were statistic difference between arm A and arm B in terms of PFS (11.8 vs. 8.0 months, p = .041) but not of OS (38.0 vs. 30.6 months, p = .30); the converted resection rates for liver metastases were 40.0% (18/45) in arm A and 19.2% (5/26) in arm B, which were no significantly different (p = .054). For pts without liver surgery, pts observed ETS also gained an increased survival benefit over those no-ETS in arm A with regards to OS (p = .01) and PFS (p < .001) though it was not full certified in arm B (OS: p = .054; PFS: p = .041). In addition, cox regression for OS using indicated a hazard ratio of 0.39 (95%CI 0.21-0.72, p = .003).

Conclusions: ETS >=20% at 8 weeks may serve as a predictor of favorable outcome in pts with wild-type-KRAS CLLM receiving cet plus CT.