**Reviewer 1**

**In the current study, authors evaluate whether dermal lymphatic function and architecture are systemically altered in dextran sulfate sodium (DSS)-induced acute colitis. The authors demonstrate that lymphatics are locally and systemically altered in acute colitis by the use of near infrared fluorescence (NIRF) lymphatic imaging. The study is interesting and well structured, however I would suggest few observation:**

**1. Is the DSS alteration of the skin and lymphatics reversible? The authors should discuss this point.**

We had data from mice after 2% DSS treatment for 7 days, followed 7 days of water. We observed restored lymphatic contraction frequency, although it was not statistically significant. In response to the Reviewer's comment, we have added this statement, "Previous studies demonstrated that Balb/c mice treated with DSS for 5 days developed acute colitis; however, Balb/c mice were completely recovered 4 weeks after DSS removal as evidenced by histopathology and cytokine levels (reference 52 in the text). Our preliminary data in mice treated with 2% DSS for 7 days, followed by 7 days of water, showed significantly decreased lymphatic contractility 7 days after DSS treatment as compared to baseline (Baseline vs Day 7, 4.2 ± 1.5 vs 1.6 ± 0.4; $p<0.001$); however, we observed partial restoration of lymphatic contractile function in the popliteal afferent lymphatic vessels at day 14, although it is not significantly different from that on Day 7 (Day 7 vs Day 14, 1.6 ± 0.4 vs 2.6 ± 0.5; $p=0.154$). Our data also showed that mice regained their body weight 7 days after DSS removal (changes in body weight; baseline vs Day 7 vs Day 14, 100 vs 95 ± 1.5 vs 100.4 ± 1.3), indicating that it is in the process of recovery of lymphatic function from acute colitis. "

**2. The authors do not evaluate the potential mechanisms related to the local and systemic alteration of lymphatics: this point should be better evaluated in association with literature.**

In response to the Reviewer's comment, we have revised the text to discuss potential mechanisms underlying our observations.

**Reviewer 2**

**The authors examined the dermal lymphatic function and architecture in the murine DSS-induced acute colitis. They showed alteration in dermal lymphatic architecture and reduction in dermal lymphatic contractility in the skin of DSS-induced colitis mice using imaging techniques. Based on these results, the authors concluded that the lymphatic are locally and systemically altered in DSS-induced acute colitis. Although these results show interesting observations, there are some questions to reach until their conclusion.**

**1. The recovery of dermal lymphatic function is observed after finishing the DSS treatment?**

We observed partial lymphatic function restoration in mice that were treated with 2% DSS for 7 days and then water for 7 days. For detailed response, see comment #1 above to Reviewer 1.

**2. I wonder a causal relationship between impaired lymphatic function and cutaneous complications associated with colitis because the authors did not observe any clinically apparent manifestations in**

**the skin of DSS-treated mice. How about the proinflammtory cytokine level in the skin of DSS-treated mice?**

We observed different levels of proinflammatory cytokines in the skin of mice treated with DSS-induced colitis. In response to the Reviewer's comment, we have added this statement to the revised manuscript: "We found increased levels of both interleukin (IL)-6 (control vs DSS; 12.4 ± 8.7 vs 34.8 ± 9.3 in arbitrary unit; p=0.04) and TNF-α (control vs DSS; 0.9 ± 0.6 vs 24.9 ± 5.7; p=0.006) in skin of DSS-treated mice compared to control mice."