**RESULTS**

99 independent cohorts were selected for the meta-analysis of the pooled HR for OS (55,004 patients) and 66 independent cohorts were selected for the meta-analysis of the pooled HR for PFS for 80,966 patients and 37 for PD (2,984 patients). The pooled ORs for ORR (6,966 patients) and 37 for PD (2,984 patients). The pooled ORs for ORR and PD were respectively 0.58 (95% CI 0.44-0.77) and 1.89 (95% CI 1.41-2.55), reflecting both a decreased odds of treatment response and an almost two-fold increased odds of cancer progression in cancer patients treated with ICI and exposed to antibiotics (Figure 1).

**CONCLUSION**

This study confirms that a large majority of publications report reduced survival outcomes and response to ICI in patients receiving ABX. The overall effect as analyzed by pooling the data is strongly statistically significant. Two (non mutually exclusive) mechanisms are increasingly discussed in the literature to explain the role of the intestinal microbiome (and in disruption by ABX) on response to immunotherapy: the immunomo- modulatory effects of bacterial molecules, and antigenic mimicry between commensal bacteria and tumor antigens cross reactive for the same antigen specific T cell(s). Continued research in the area and new products capable of protecting/modulating the gut microbiome are crucially needed in order to preserve IC efficacy.

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**REFERENCES**