Colorectal cancer (CRC) is a major public health problem in France with more than 43,000 new cases and 17,000 deaths in 2018. Current CRC screening tests lack of reliability and often give false-positives in 9 cases out of 10. Previous works carry by our team shown that O-GlcNAcylation, a glycosylation modification, was increased in colon cancer cell lines and colon cancer tissues. Extracellular vesicles (EVs) designate exosomes and microvesicles are now considered as an additional mechanism for intercellular communication. EVs are present in some biological fluids (blood, urine, stools...) and are involved in multiple physiological and pathological processes like CRC. Our recent data show that CRC cells produce EVs, contain proteins involved in biological pathways of O-GlcNAcylation and the level of O-GlcNAc is increased in these CRC EVs. In addition, we have recently developed and validated a protocol to isolate EVs from stool sample (dog and human). Analysis of a first small cohort of OC-sensor positive patients revealed a whole new signature that could be used later in the detection of CRC. Taken together, our data bring new information in the EV glycosylation field and highlight the importance of O-GlcNAcylation to potentially diagnose CRC.