Exosomes are small (~30-100 nm) secreted extracellular microvesicles that are involved in the transport of bioactive molecules between cells. First described as secretory vesicles in cultured reticulocytes in the early 1980s, the term “exosome” was coined in 1987. Since then, exosome research has exploded, with over 2000 publications on “exosome” in PubMed. Exosomes are enriched in the tumor microenvironment, and their role in cancer development and metastasis is well-documented. Exosomes contain a wealth of molecular information from their cell of origin, including microRNAs, proteins, DNA, RNA, and lipids. Exosomes can be isolated from nearly all tissue samples and can be isolated from cell culture media, plasma, serum, saliva, semen, urine, and body fluids. The diagram summarizes the emerging roles for exosomes in different fields.