

# Colorectal incidence of crc in egypt constitutes

Psychology, Behaviorism



Colorectal cancer (CRC) is the second most common cancer in women and the third in men worldwide (Torre et al., 2015). In USA, it is considered the second cause of cancer-related deaths (Jemal et al., 2011). The incidence of CRC in Egypt constitutes about 6.

5% of all malignancies (Mokhtar et al., 2016a), 3. 14% of total malignancies in men and 3.

35% of total malignancies in women with male to female ratio about 1 (Mokhtar et al., 2016b). Treatment protocols for high stages of CRC are limited and improved survival is hoped with developing new therapeutic targets.

Fatty acid synthase (FAS) is a critical enzyme of lipid biosynthesis (Kuhajda, 2006). The expression of FAS enzyme in normal tissues is very minimal due to its inhibition by lipids intake. However, high expression of FAS was found in various metaplastic, dysplastic and malignant tumors as intestinal metaplasia, adenoma and carcinoma of the stomach; breast cancer; prostate cancer; and squamous cell carcinoma of the lung (Kusakabe et al., 2002; Piyathilake et al., 2000; Alò et al., 1996; Epstein et al., 1995).

The relation between lipid synthesis and metastatic behavior of cancer has been accepted, but still it is not clear how FAS regulates metastasis. The metastatic process is complex and undergoes multiple steps. It demands that cancer cells acquire an aggressive behavior with tumor microenvironment modulation, including its valuable component, the vascular niche (Dvorak et al., 2011; Joyce and Pollard, 2009). Angiogenesis

has an impressive role in tumor development, progressive course and metastatic behavior (Potente et al., 2011).

Vascular endothelial growth factor (VEGF) is the most effective angiogenic growth factor in angiogenesis pathway (Nowak et al., 2008). It induces endothelial cell proliferation, blood vessels permeability, and migratory potential of endothelial cells (Lau et al., 2014; Hansen and Jakobsen, 2011).

Also, it suppresses apoptosis, whereas its inhibition reduces tumor growth (Jannuzzi et al., 2015). The aim of the current study is to assess FAS and VEGF immunohistochemical expression in primary CRC cases, their association with the clinicopathological parameters and whether there is a correlation between the expression of FAS and VEGF in primary CRC.