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Knowledge of colorectal carcinoma screening among general population in western region of Nepal

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Introduction: Colorectal Carcinoma (CRC) has emerged as third most common malignant tumor, second leading cause of death among cancer patients in the world and has been increasing in developing countries. In this study our objective was to determine the knowledge and attitude of CRC and to understand the factors that contribute to low screening rates in our region.

Materials and Method: We interviewed 800 participants aged 40 years and above with 200 participants each from Kaski, Baglung, Parbat and Syangja district which are in Western region of Nepal. We used questionnaires to determine the socio-demographic characteristic, knowledge about CRC, screening, as well as screening test.

Result: The majority participants were illiterate with monthly income less than Nrs 10,000 (\$100). Regarding lifestyle practices most of them were smokers (68%) and consumed alcohol (48%). Among the participants, 20% of them said there exists no cancer as Colorectal Carcinoma. The rest of them who knew CRC exists the knowledge about it and is screening were very poor. Only 25% and 10% of them knew about FOBT and Colonoscopy but none of them had idea about barium enema and flexible sigmoidoscopy. Majority of them (55%) agreed to do screening tests even if they did not have any symptom and 40% of the participants said the disease had good prognosis if diagnosed early.

Conclusion: The result of the current study provide information about the need for education campaigns about CRC and its screening to reduce the incidence of deaths due to CRC.

CD95 Ligand in breast cancer metastasis

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Triplenegative (TN) breast tumor account for a disproportionate number of patient deaths due to their aggressive nature and the lack of effective therapeutic treatment options. TN/basal-like breast cancers (TNBC) exhibit the greatest extent of metastasis compared to other malignant cells. Thus, gaining insight into the molecular factor(s) and pathways that promote TNBC metastasis may offer substantial therapeutic benefit. CD95L (or FasL) belongs to the Tumor Necrosis Factor family and is the ligand of the "death receptor" CD95 (or Fas). CD95L can be cleaved by metalloproteases to produce a soluble ligand. This soluble ligand was initially described as an inert ligand. However, we recently demonstrated that cleaved-CD95L actively participates in aggravating inflammation in chronic inflammatory disorders. In TNBC, we showed that cleaved-CD95L promotes the formation of an atypical complex that we have designated MISC, for Motility-Inducing Signaling Complex. TNBC cells exposed to cleaved-CD95L undergo an ordered sequence of events NADPH-driven ROS generation, c-jun activation, EGFR recruitment and opening of Ca²⁺ channel Orai1 that leads to activation of PI3K signal and cell migration. We also showed that the amount of serum CD95L is increased in patients with TNBC as compared to non-TNBC and is associated with risk of relapse and predicts risk of distant metastasis. Analysis of breast tumor architecture reveals that CD95L is expressed on endothelial cells covering blood vessels and after cleavage by metalloproteases we assume that cleaved-CD95L could participate in TNBC metastasis. Overall, these findings unveil the prometastatic role of CD95L in breast cancers.

Biography

Sebastien Tauzin holds a PhD in Cell Biology and Physiopathology from the University of Bordeaux (France). During his PhD, he collaborated with Prof. Daniel Hoessli at the University of Geneva (Switzerland) to study plasma membrane-associated molecular mechanisms promoting carcinogenesis of hematopoietic cells. More precisely, he showed that some B lymphomas were addicted to the Src kinase Lyn for their proliferation and survival. Next, he joined Dr Patrick Legembre's lab (Rennes, France) to address the role of Fas ligand (FasL) in carcinogenesis. He brought to light that this so-called "apoptotic" ligand drives a c-Jun (Src Kinase) signaling pathway that leads to the migration of T-lymphocytes, leukemic cell lines and breast cancer cells. He currently investigate the role of Src Family Kinase in inflammation resolution in Prof. Anna Huttenlocher's Lab (University of Wisconsin, USA). His long-term project is to analyze *in vivo* the role of inflammation in the two major diseases in developed countries, cardiovascular diseases and cancer using the zebrafish model.