Table. 1 – List of ncRNA commonly associated with cancer regression

ncRNA	Role
miR-155(Wang et al., 2010a)	Promote type-I IFN signalling in macrophages and helps in tumor elimination.
miR-511-3p(Squadrito et al., 2012)	Inhibits tumor growth by downregulating pro-tumoral gene signature of TAMs.
miR-122, miR-21, miR-15b and miR-155(He et al., 2013)	Activate NK cells by via TLRs and repress tumor development in mice model.
LncRNA GAS5(Fang et al., 2019)	Overexpression can decrease *miR-544* expression and increases secretion of IFN-γ and TNF-α, and cytotoxicity/anti-tumor activity of NK cell.
LncRNA-NKILA (Liu et al., 2015)	This ncRNA is up-regulated in response to IL-1b and TNF-a, and enhance inflammation/anti-tumor response by negatively regulating *NF-KB* signalling and inflammation.
CASC2c(Zhang et al., 2018)	Suppresses M2 polarization and represses cancer progression.
LncRNA-FENDRR(Yu et al., 2019) *lncRNASNHG1*(Pei et al., 2018)	Prevents Treg differentiation and cancer immune evasion.
GM16343(Mao et al., 2019)	Decreases tumor volume by increasing the secretion of IFN-γ by CD8+ T cells.
LncRNA-MAF-4(Ranzani et al., 2015)	Recruits' chromatin modifiers and promote TH1 polarization, which supports inflammatory roles.
LincRNA-p21(Zhou et al., 2020)	Downregulation promotes M1 polarization.
LncRNA-MM2P (Cao et al., 2019)	Knocking down resulted in inhibition of M2 polarization thus inhibiting tumorigenesis.
MALAT1(Hou et al., 2020)	Silencing enhances anti-cancer immunity by promoting M1 polarization and attenuating IL-10 secretion/M2 polarization by inhibiting *miR-140*.

Table. 2 – List of ncRNA commonly associated with cancer progression

ncRNA	Role
miRNA-223(Zhang et al., 2015) *miR-233-3p* (Bauernfeind et al., 2012) *miR-22*(Yan et al., 2019b)	Blocks NLRP3 and supresses the release of IL-1β & IL-18 in active forms and favour tumor progression.
miR-133a-1 (Bandyopadhyay et al., 2013) *miR-21*(Xue et al., 2019)	Over-expression of is positively related with enhanced NLRP3 activation and tumor progression.
miR-146(Taganov et al., 2006)	Targets IRAK1 and TRAF (TNF receptor-related factor) and inhibit the activation of NF-KB.
lncRNA NKILA(Huang et al., 2018)(Liu et al., 2015)	• Promote tumor development by sensitizing T_H1 and CTL for AICD (activation induced cell death). • Ngatively regulates the expression of *NFKB* and prevent its over-expression, reduction in the level of this LncRNA triggers breast cancer progression.
miR-33 miRNA-19a-3p(Ouimet et al., 2015)	Promote M2 polarization, thus promoting tumorigenesis.
miR-21(Caescu et al., 2015)	Reprogram M1 phenotype into M2 phenotype.
miR-17-92(Shen et al., 2017) *miR-20a*(Xie et al., 2014) *miR-146a*(Paik et al., 2011) *miR-150*(Watanabe et al., 2011) *miR-30b*(Ng et al., 2011)	Supress NK cell activation, cytotoxicity, pro-proliferative and pro-survival factor in NK/T cell and might play a role in tumor progression.
NEAT1(Yan et	Promote apoptosis and exhaustion of T cells.

al., 2019a) *NKILA*(Huang et al., 2018) *LncRNA-SOX5*(Wu et al., 2017)	
RUNXOR(Tian et al., 2018a) *Olfr29-ps1*(Shang et al., 2019b) *CHOP*(Gao et al., 2018a)	Promotes the differentiation and immunosuppressive/pro-cancer functions of MDSCs like enhanced Treg, ROS, NOS, and Arg-1 production.
GNAS-AS1 (Li et al., 2020b; Liu et al., 2020) *XIST*(Sun and Xu, 2019) *MM2P*(Cao et al., 2019)	Mediated M2 polarization in TME (tumor micro-environment) is closely linked with tumor progression.
LINK-A(Hu et al., 2019)	Expression degrades TAP1 and TAP2 proteins which are very essential for antigen presentation, studies with LINK-A inhibitors in pre-clinical models have shown increased CD8 T cell infiltration and decreased cancer progression.
LncRNA-POU3F3(Xiong et al., 2015) *INSR*(Wang et al., 2018)	Enhances Treg differentiation and create immune suppressive/anti-inflammatory environment contributed by tumor associated macrophages (TAM), Cancer associated fibroblast (CAF), IL10, TGF-b, IL-35, which weakens cytotoxic abilities of T lymphocytes.
MALA(Huang et al., 2017)	Decreases the production of inflammatory cytokines in thyroid cancer.
LncRNA-HOTTIP(Shang et al., 2019a)	Trigger production and release of IL-6 and up-regulate *PD-L1* in neutrophils and drive cancer immune evasion in ovarian cancer.
LncRNA-RNCR3(Shang et al., 2017) *CHOP*(Gao et al., 2018a)	Upon inflammation, these ncRNA are up-regulated in MDSCs, and promote differentiation and immunosuppressive activities of MDSCs.

LINC00662(Tian et al., 2020)	This ncRNA is up-regulated in cancer cells and promote WNT3A secretion, which drives M2 polarization via Wnt/β-catenin axis.