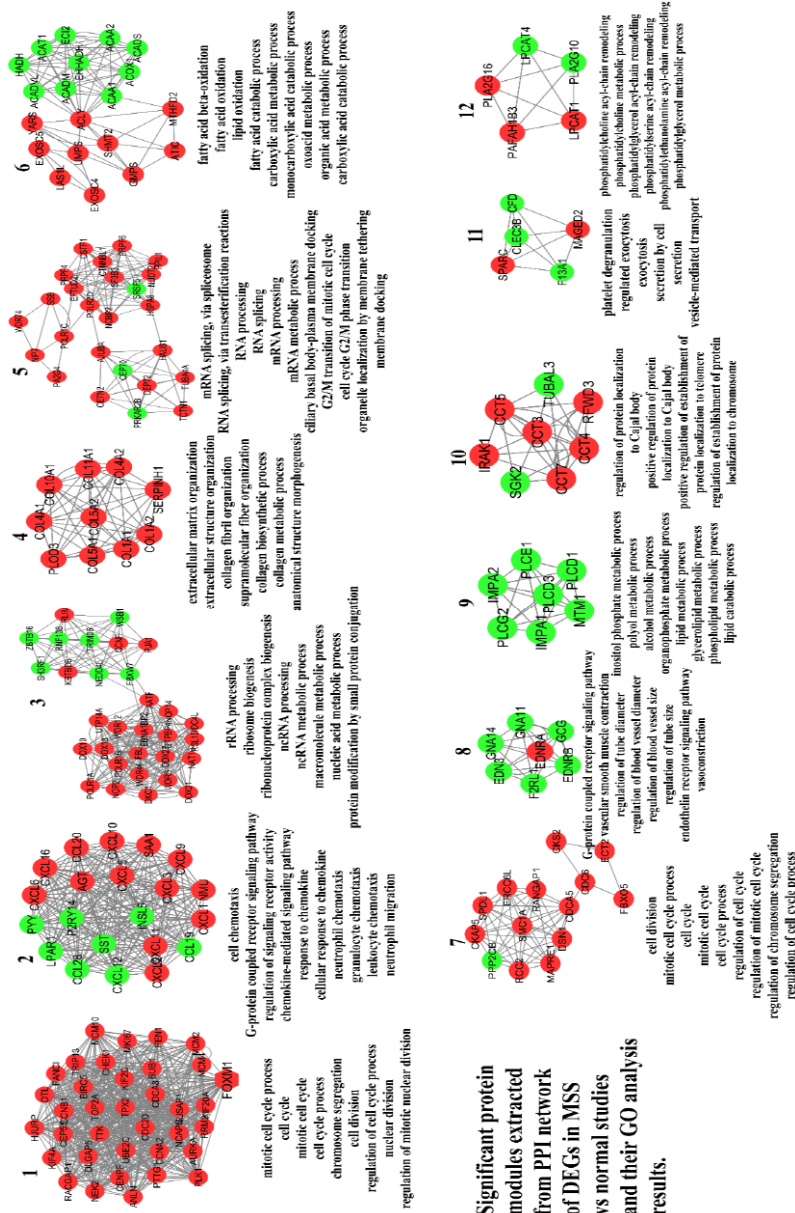**Supplementary File 5**

Figure 1: Significant modules with score>4 from MCODE topology analysis of PPI network constructed by DEGs in MSS vs normal comparison and their biological processes from GO analysis.

Figure 2: Significant modules with score>4 from MCODE topology analysis of PPI network constructed by DEGs in MSI-H vs normal comparison and their biological processes from GO analysis.

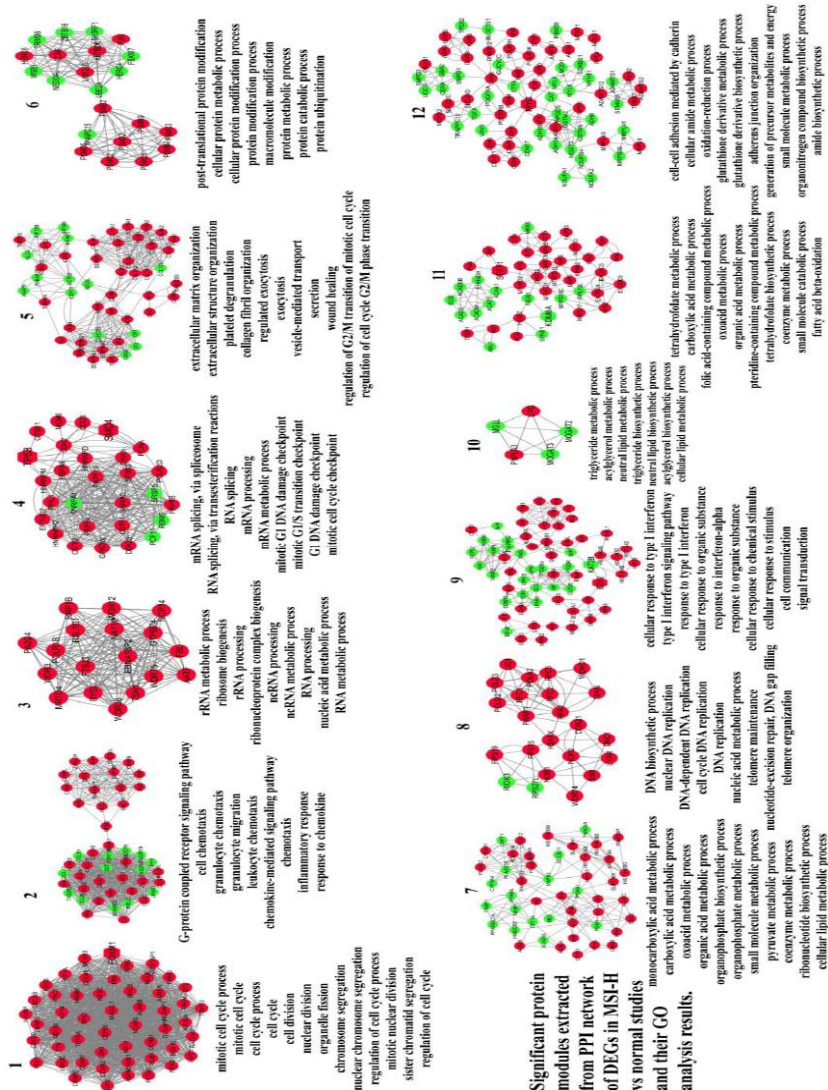**Figure 3:** Sorting of DE-TFs based on their number of interactions in PPI networks.

Figure 1

Significant protein modules extracted from PPI network of DEGs in MSS vs normal studies and their GO analysis results.

Figure 2

Significant protein modules extracted from PPI network of DEGs in MSI-H vs normal studies and their GO analysis results.

1
- mitotic cell cycle process
- mitotic cell cycle
- cell cycle process
- cell cycle
- cell division
- nuclear division
- organelle fission
- chromosome segregation
- nuclear chromosome segregation
- regulation of cell cycle process
- mitotic nuclear division
- sister chromatid segregation
- regulation of cell cycle

2
- G-protein coupled receptor signaling pathway
- cell chemotaxis
- granulocyte chemotaxis
- granulocyte migration
- leukocyte chemotaxis
- chemokine-mediated signaling pathway
- chemotaxis
- inflammatory response
- response to chemokine

3
- rRNA metabolic process
- ribosome biogenesis
- rRNA processing
- ribonucleoprotein complex biogenesis
- ncRNA processing
- ncRNA metabolic process
- RNA processing
- nucleic acid metabolic process
- RNA metabolic process

4
- mRNA splicing, via spliceosome
- RNA splicing, via transesterification reactions
- RNA splicing
- mRNA processing
- mRNA metabolic process
- mitotic G1 DNA damage checkpoint
- mitotic G1/S transition checkpoint
- G1 DNA damage checkpoint
- mitotic cell cycle checkpoint

5
- extracellular matrix organization
- extracellular structure organization
- platelet degranulation
- collagen fibril organization
- regulated exocytosis
- exocytosis
- vesicle-mediated transport
- secretion
- wound healing
- regulation of G2/M transition of mitotic cell cycle
- regulation of cell cycle G2/M phase transition

6
- post-translational protein modification
- cellular protein metabolic process
- cellular protein modification process
- protein modification process
- macromolecule modification
- protein metabolic process
- protein catabolic process
- protein ubiquitination

7
- monocarboxylic acid metabolic process
- carboxylic acid metabolic process
- oxoacid metabolic process
- organic acid metabolic process
- organophosphate biosynthetic process
- small molecule metabolic process
- pyruvate metabolic process
- coenzyme metabolic process
- ribonucleotide biosynthetic process
- cellular lipid metabolic process

8
- DNA biosynthetic process
- nuclear DNA replication
- DNA-dependent DNA replication
- cell cycle DNA replication
- DNA replication
- nucleic acid metabolic process
- telomere maintenance
- nucleotide-excision repair, DNA gap filling
- telomere organization

9
- cellular response to type 1 interferon
- type I interferon signaling pathway
- response to type I interferon
- cellular response to organic substance
- response to interferon-alpha
- response to organic substance
- cellular response to chemical stimulus
- cellular response to stimulus
- cell communication
- signal transduction

10
- triglyceride metabolic process
- acylglycerol metabolic process
- neutral lipid metabolic process
- triglyceride biosynthetic process
- acylglycerol biosynthetic process
- cellular lipid metabolic process

11
- tetrahydrofolate metabolic process
- carboxylic acid metabolic process
- folic acid-containing compound metabolic process
- oxoacid metabolic process
- organic acid metabolic process
- pteridine-containing compound metabolic process
- tetrahydrofolate biosynthetic process
- coenzyme metabolic process
- small molecule catabolic process
- fatty acid beta-oxidation

12
- cell-cell adhesion mediated by cadherin
- cellular amide metabolic process
- oxidation-reduction process
- glutathione derivative metabolic process
- glutathione derivative biosynthetic process
- adherens junction organization
- generation of precursor metabolites and energy
- small molecule metabolic process
- organonitrogen compound biosynthetic process
- amide biosynthetic process

Figure 3