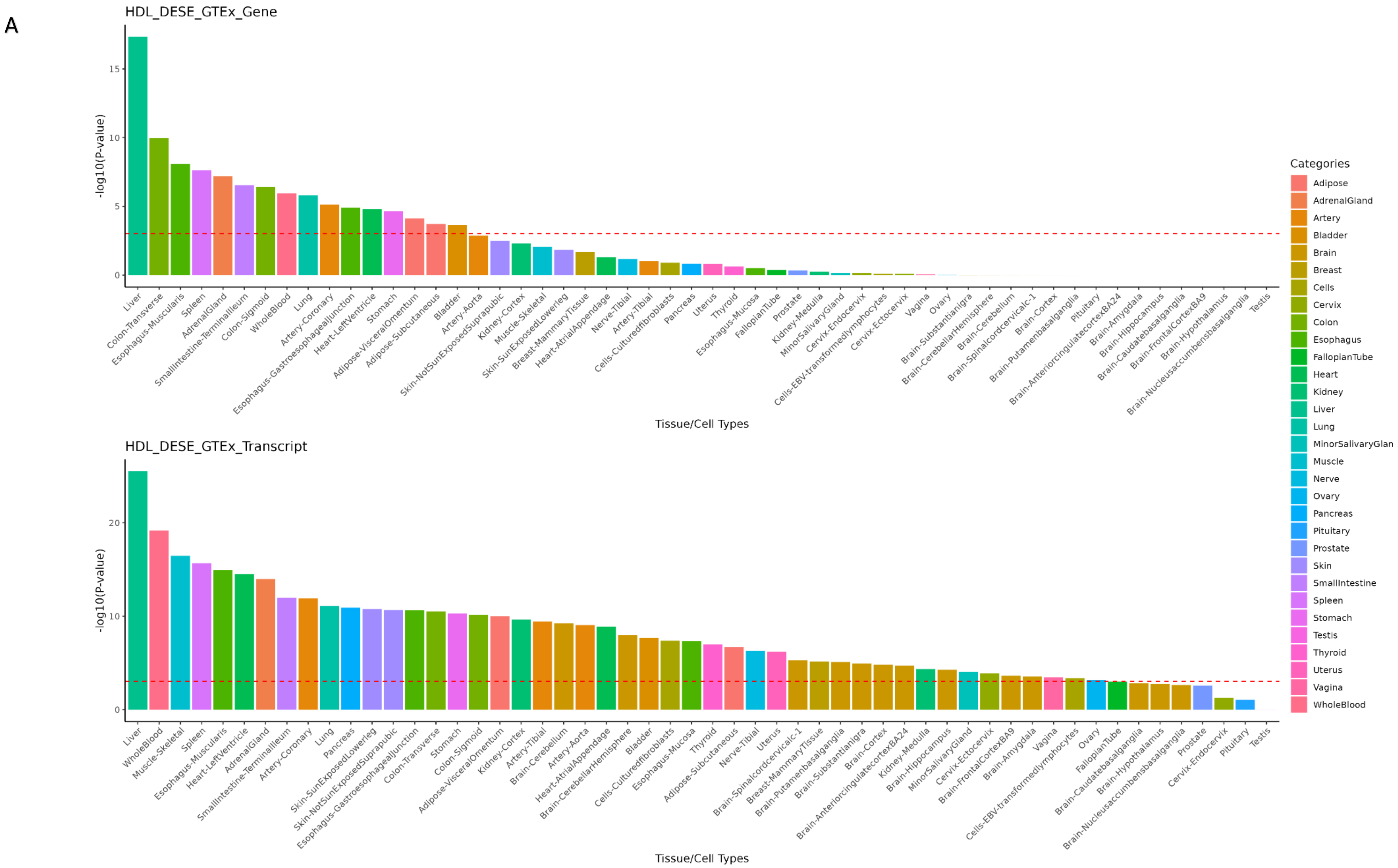
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HDL_DESE_GTEx_Gene
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15
Liver
Colon-Transverse
Esophagus-Muscularis
Spleen
AdrenalGland
SmallIntestine-TerminalIleum
Colon-Sigmoid
WholeBlood
Lung
Artery-Coronary
Esophagus-GastroesophagealJunction
Heart-LeftVentricle
Stomach
Adipose-VisceralOmentum
Adipose-Subcutaneous
Bladder
Artery-Aorta
Skin-NotSunExposedSuprapubic
Kidney-Cortex
Muscle-Skeletal
Skin-SunExposedLowerleg
Breast-MammaryTissue
Heart-AtrialAppendage
Nerve-Tibial
Artery-Tibial
Cells-Culturedfibroblasts
Pancreas
Uterus
Thyroid
Esophagus-Mucosa
FallopianTube
Prostate
Kidney-Medulla
MinorSalivaryGland
Cervix-Endocervix
Cells-EBV-transformedlymphocytes
Cervix-Ectocervix
Vagina
Ovary
Brain-Substantianigra
Brain-CerebellarHemisphere
Brain-Cerebellum
Brain-Spinalcordcervicalc-1
Brain-Cortex
Brain-Putamenbasalganglia
Pituitary
Brain-AnteriorcingulatecortexBA24
Brain-Amygdala
Brain-Hippocampus
Brain-Caudatebasalganglia
Brain-FrontalCortexBA9
Brain-Hypothalamus
Brain-Nucleusaccumbensbasalganglia
Testis
Tissue/Cell Types
HDL_DESE_GTEx_Transcript
-log10(P-value)
0
10
20
Liver
WholeBlood
Muscle-Skeletal
Spleen
Esophagus-Muscularis
Heart-LeftVentricle
AdrenalGland
SmallIntestine-TerminalIleum
Artery-Coronary
Lung
Pancreas
Skin-SunExposedLowerleg
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Esophagus-GastroesophagealJunction
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Stomach
Colon-Sigmoid
Adipose-VisceralOmentum
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Bladder
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Esophagus-Mucosa
Thyroid
Adipose-Subcutaneous
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Cervix-Ectocervix
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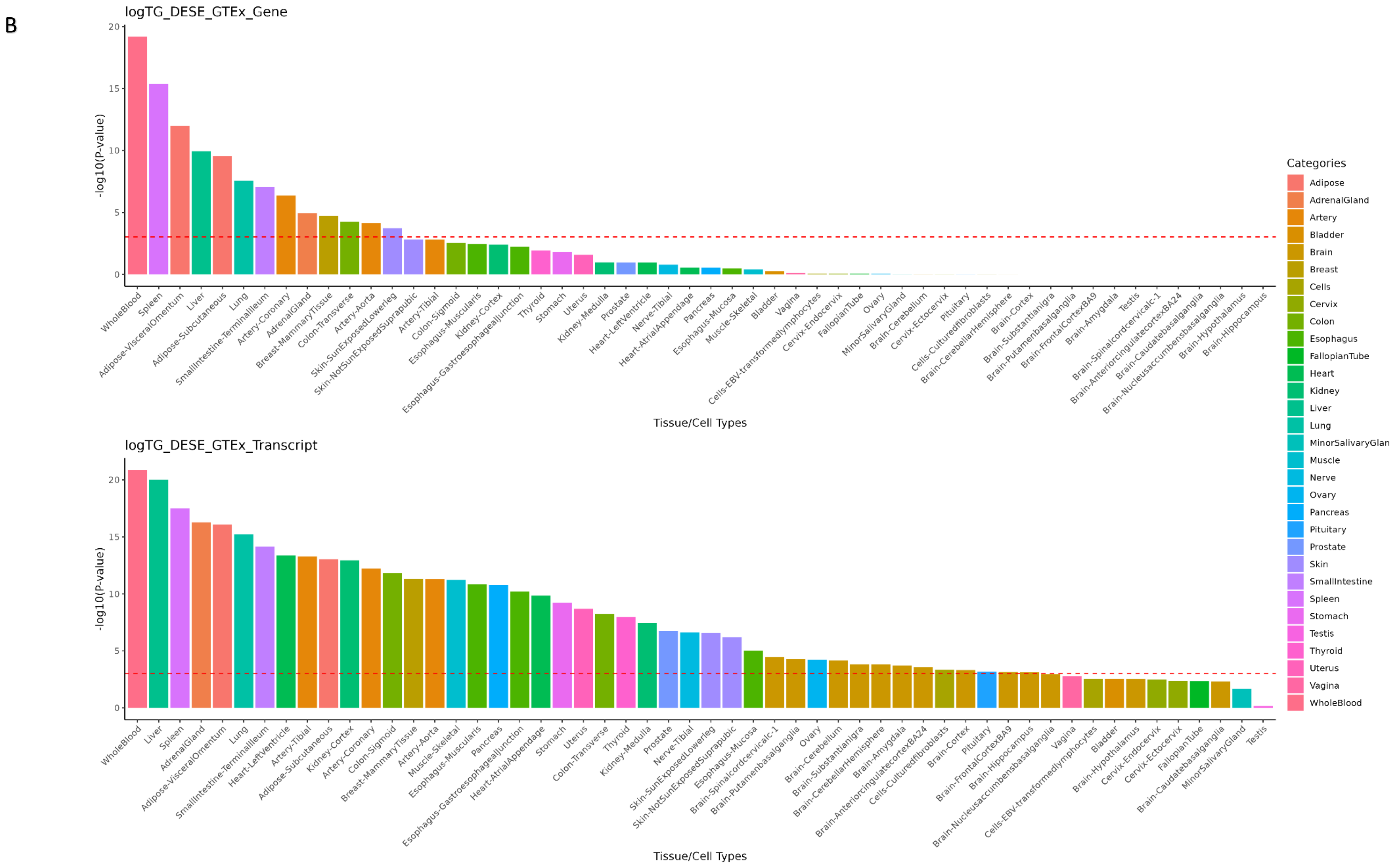
Brain-Amygdala
Vagina
Cells-EBV-transformedlymphocytes
Ovary
FallopianTube
Brain-Caudatebasalganglia
Brain-Hypothalamus
Brain-Nucleusaccumbensbasalganglia
Prostate
Cervix-Endocervix
Pituitary
Testis
Tissue/Cell Types
Categories
Adipose
AdrenalGland
Artery
Bladder
Brain
Breast
Cells
Cervix
Colon
Esophagus
FallopianTube
Heart
Kidney
Liver
Lung
MinorSalivaryGlan
Muscle
Nerve
Ovary
Pancreas
Pituitary
Prostate
Skin
SmallIntestine
Spleen
Stomach
Testis
Thyroid
Uterus
Vagina
WholeBlood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WholeBlood
Spleen
Adipose-VisceralOmentum
Liver
Adipose-Subcutaneous
Lung
SmallIntestine-TerminalIleum
Artery-Coronary
AdrenalGland
Breast-MammaryTissue
Colon-Transverse
Artery-Aorta
Skin-SunExposedLowerleg
Skin-NotSunExposedSuprapubic
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Colon-Sigmoid
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Kidney-Cortex
Esophagus-GastroesophagealJunction
Thyroid
Stomach
Uterus
Kidney-Medulla
Prostate
Heart-LeftVentricle
Nerve-Tibial
Heart-AtrialAppendage
Pancreas
Esophagus-Mucosa
Muscle-Skeletal
Bladder
Vagina
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Cervix-Endocervix
FallopianTube
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Cervix-Ectocervix
Pituitary
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Brain-Amygdala
Testis
Brain-Spinalcordcervicalc-1
Brain-AnteriorcingulatecortexBA24
Brain-Caudatebasalganglia
Brain-Nucleusaccumbensbasalganglia
Brain-Hypothalamus
Brain-Hippocampus
Tissue/Cell Types
logTG_DESE_GTEx_Transcript
-log10(P-value)
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WholeBlood
Liver
Spleen
AdrenalGland
Adipose-VisceralOmentum
Lung
SmallIntestine-TerminalIleum
Heart-LeftVentricle
Artery-Tibial
Adipose-Subcutaneous
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Ovary
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Brain-Cortex
Pituitary
Brain-FrontalCortexBA9
Brain-Hippocampus
Brain-Nucleusaccumbensbasalganglia
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Cells-EBV-transformedlymphocytes
Bladder
Brain-Hypothalamus
Cervix-Endocervix
Cervix-Ectocervix
FallopianTube
Brain-Caudatebasalganglia
MinorSalivaryGland
Testis
Tissue/Cell Types
Categories
Adipose
AdrenalGland
Artery
Bladder
Brain
Breast
Cells
Cervix
Colon
Esophagus
FallopianTube
Heart
Kidney
Liver
Lung
MinorSalivaryGlan
Muscle
Nerve
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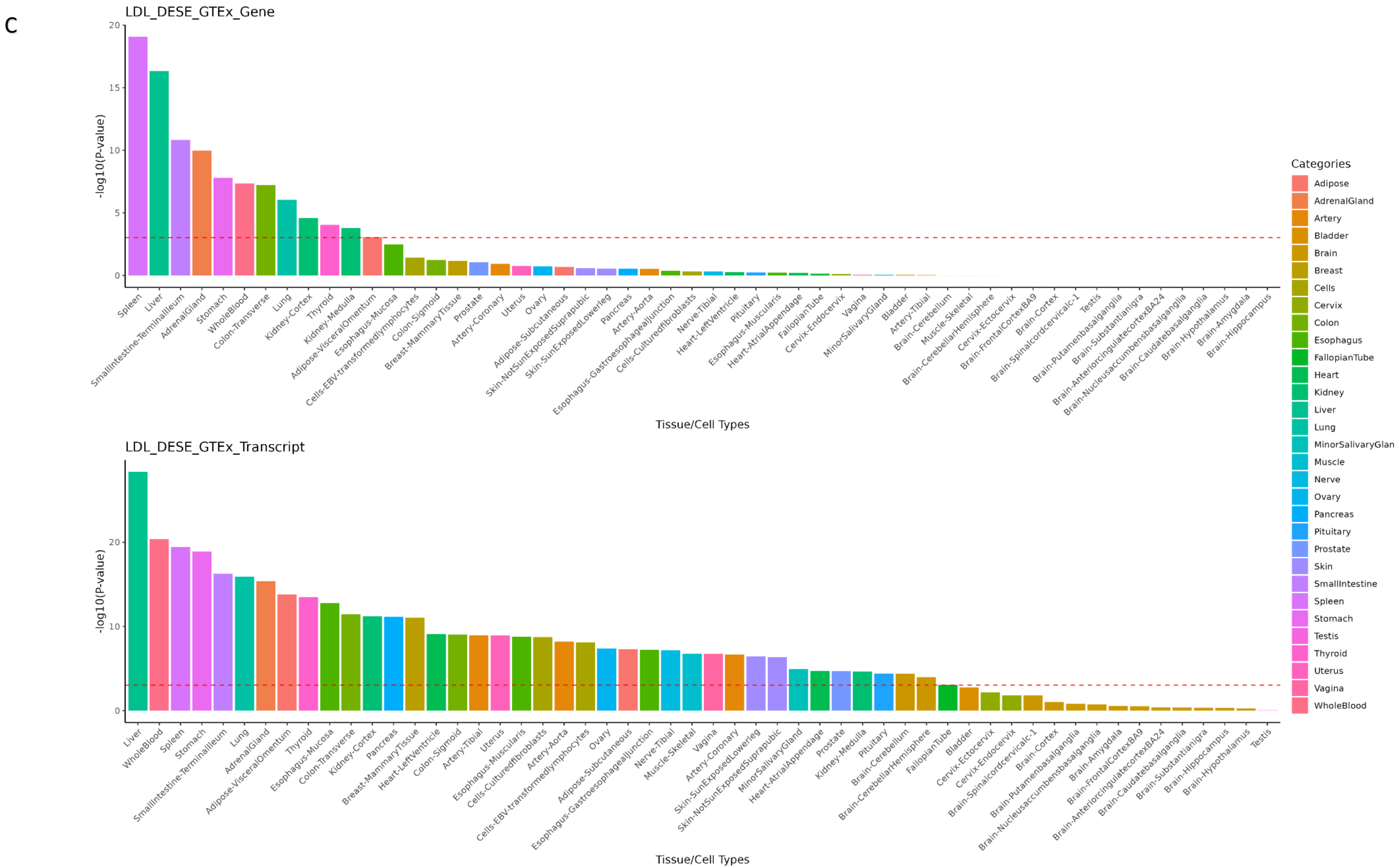
WholeBlood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Liver
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AdrenalGland
Stomach
WholeBlood
Colon-Transverse
Lung
Kidney-Cortex
Thyroid
Kidney-Medulla
Adipose-VisceralOmentum
Esophagus-Mucosa
Cells-EBV-transformedlymphocytes
Colon-Sigmoid
Breast-MammaryTissue
Prostate
Artery-Coronary
Uterus
Ovary
Adipose-Subcutaneous
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Brain-Hypothalamus
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Brain-Hippocampus
Tissue/Cell Types
LDL_DESE_GTEx_Transcript
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WholeBlood
Spleen
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Brain-Hippocampus
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Liver
Lung
MinorSalivaryGlan
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Nerve
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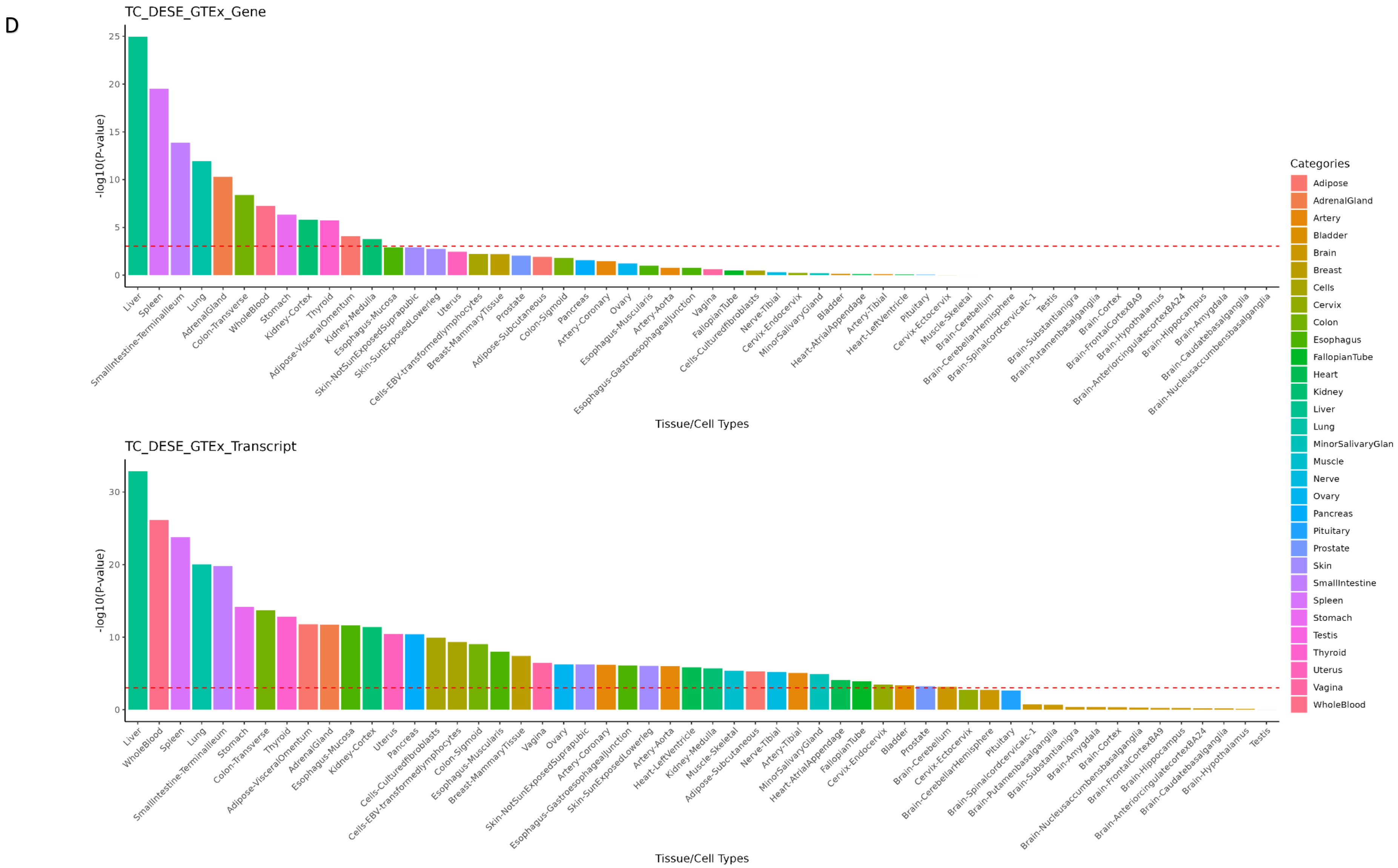
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AdrenalGland
Colon-Transverse
WholeBlood
Stomach
Kidney-Cortex
Thyroid
Adipose-VisceralOmentum
Kidney-Medulla
Esophagus-Mucosa
Skin-NotSunExposedSuprapubic
Skin-SunExposedLowerleg
Uterus
Cells-EBV-transformedlymphocytes
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Adipose-Subcutaneous
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Ovary
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Artery-Aorta
Esophagus-GastroesophagealJunction
Vagina
FallopianTube
Cells-Culturedfibroblasts
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Brain-Hypothalamus
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Brain-Hippocampus
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Brain-Caudatebasalganglia
Brain-Nucleusaccumbensbasalganglia
Tissue/Cell Types
TC_DESE_GTEx_Transcript
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20
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Liver
WholeBlood
Spleen
Lung
SmallIntestine-TerminalIleum
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Thyroid
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FallopianTube
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Kidney
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Lung
MinorSalivaryGlan
Muscle
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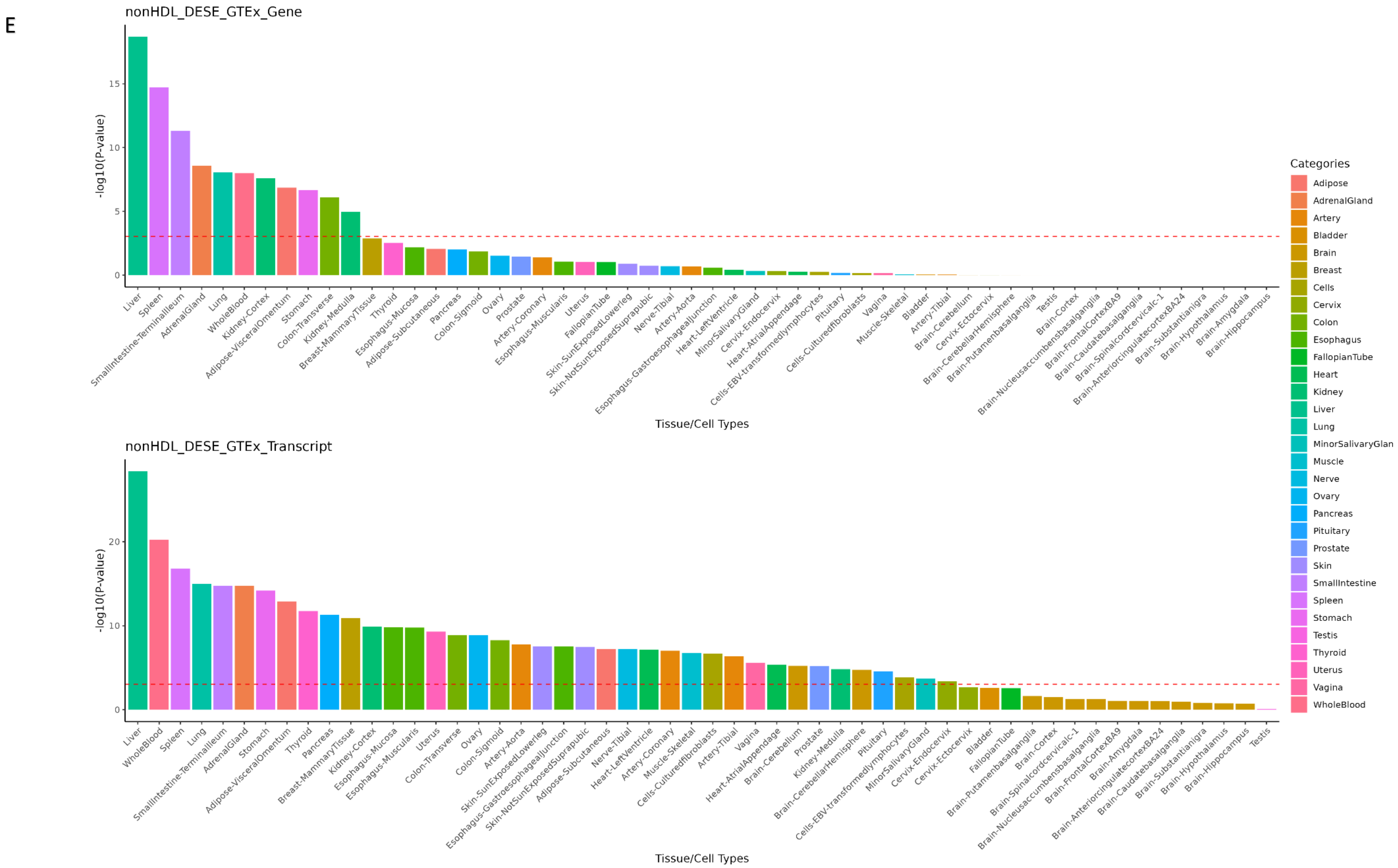
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Liver
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AdrenalGland
Lung
WholeBlood
Kidney-Cortex
Adipose-VisceralOmentum
Stomach
Colon-Transverse
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Uterus
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Vagina
Muscle-Skeletal
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Brain-Cortex
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Brain-AnteriorcingulatecortexBA24
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Brain-Hypothalamus
Brain-Amygdala
Brain-Hippocampus
Tissue/Cell Types
nonHDL_DESE_GTEx_Transcript
-log10(P-value)
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Liver
WholeBlood
Spleen
Lung
SmallIntestine-TerminalIleum
AdrenalGland
Stomach
Adipose-VisceralOmentum
Thyroid
Pancreas
Breast-MammaryTissue
Kidney-Cortex
Esophagus-Mucosa
Esophagus-Muscularis
Uterus
Colon-Transverse
Ovary
Colon-Sigmoid
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Muscle-Skeletal
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Heart-AtrialAppendage
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Muscle
Nerve
Ovary
Pancreas
Pituitary
Prostate
Skin
SmallIntestine
Spleen
Stomach
Testis
Thyroid
Uterus
Vagina
WholeBlood

Figure S3. **Lipid traits – tissue/cell type associations estimated by DESE according to GTEx gene-level and GTEx transcript-level selective expression.**

We performed phenotype-tissue association tests in five lipid traits: (**A**) HDL-C, (**B**) TG, (**C**) LDL-C, (**D**) TC, and (**E**) nonHDL-C with 54 GTEx tissues. For each lipid traits, the upper panel showed the estimated driver tissues according to GTEx gene-level selective expression and the bottom panel showed estimated driver tissues according to GTEx transcript-level selective expression. The tissues were ranked by their association significance (-log10(P-value)) with each lipid traits. The red horizontal line denoted the significance threshold using a Bonferroni correction.