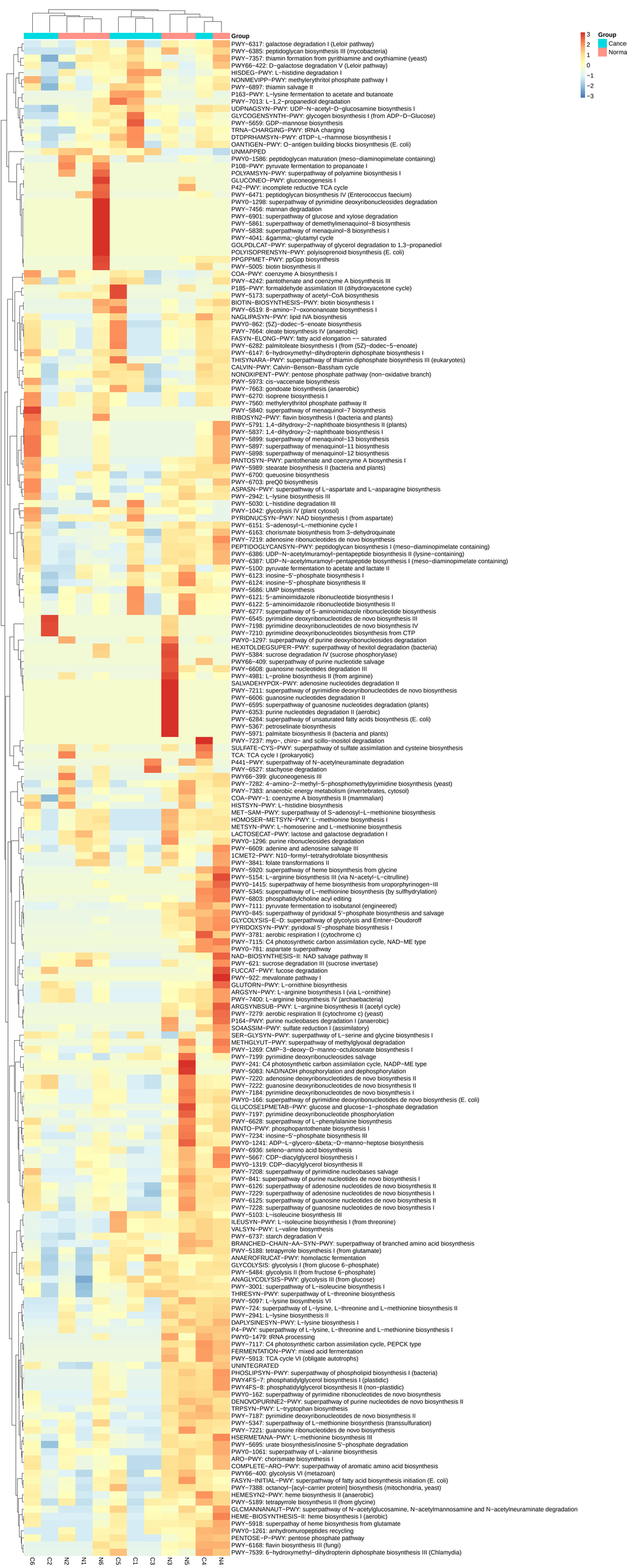
Group
Cancer
Normal
3
2
1
0
−1
−2
−3
Group
PWY−6317: galactose degradation I (Leloir pathway)
PWY−6385: peptidoglycan biosynthesis III (mycobacteria)
PWY−7357: thiamin formation from pyrithiamine and oxythiamine (yeast)
PWY66−422: D−galactose degradation V (Leloir pathway)
HISDEG−PWY: L−histidine degradation I
NONMEVIPP−PWY: methylerythritol phosphate pathway I
PWY−6897: thiamin salvage II
P163−PWY: L−lysine fermentation to acetate and butanoate
PWY−7013: L−1,2−propanediol degradation
UDPNAGSYN−PWY: UDP−N−acetyl−D−glucosamine biosynthesis I
GLYCOGENSYNTH−PWY: glycogen biosynthesis I (from ADP−D−Glucose)
PWY−5659: GDP−mannose biosynthesis
TRNA−CHARGING−PWY: tRNA charging
DTDPRHAMSYN−PWY: dTDP−L−rhamnose biosynthesis I
OANTIGEN−PWY: O−antigen building blocks biosynthesis (E. coli)
UNMAPPED
PWY0−1586: peptidoglycan maturation (meso−diaminopimelate containing)
P108−PWY: pyruvate fermentation to propanoate I
POLYAMSYN−PWY: superpathway of polyamine biosynthesis I
GLUCONEO−PWY: gluconeogenesis I
P42−PWY: incomplete reductive TCA cycle
PWY−6471: peptidoglycan biosynthesis IV (Enterococcus faecium)
PWY0−1298: superpathway of pyrimidine deoxyribonucleosides degradation
PWY−7456: mannan degradation
PWY−6901: superpathway of glucose and xylose degradation
PWY−5861: superpathway of demethylmenaquinol−8 biosynthesis
PWY−5838: superpathway of menaquinol−8 biosynthesis I
PWY−4041: γ−glutamyl cycle
GOLPDLCAT−PWY: superpathway of glycerol degradation to 1,3−propanediol
POLYISOPRENSYN−PWY: polyisoprenoid biosynthesis (E. coli)
PPGPPMET−PWY: ppGpp biosynthesis
PWY−5005: biotin biosynthesis II
COA−PWY: coenzyme A biosynthesis I
PWY−4242: pantothenate and coenzyme A biosynthesis III
P185−PWY: formaldehyde assimilation III (dihydroxyacetone cycle)
PWY−5173: superpathway of acetyl−CoA biosynthesis
BIOTIN−BIOSYNTHESIS−PWY: biotin biosynthesis I
PWY−6519: 8−amino−7−oxononanoate biosynthesis I
NAGLIPASYN−PWY: lipid IVA biosynthesis
PWY0−862: (5Z)−dodec−5−enoate biosynthesis
PWY−7664: oleate biosynthesis IV (anaerobic)
FASYN−ELONG−PWY: fatty acid elongation −− saturated
PWY−6282: palmitoleate biosynthesis I (from (5Z)−dodec−5−enoate)
PWY−6147: 6−hydroxymethyl−dihydropterin diphosphate biosynthesis I
THISYNARA−PWY: superpathway of thiamin diphosphate biosynthesis III (eukaryotes)
CALVIN−PWY: Calvin−Benson−Bassham cycle
NONOXIPENT−PWY: pentose phosphate pathway (non−oxidative branch)
PWY−5973: cis−vaccenate biosynthesis
PWY−7663: gondoate biosynthesis (anaerobic)
PWY−6270: isoprene biosynthesis I
PWY−7560: methylerythritol phosphate pathway II
PWY−5840: superpathway of menaquinol−7 biosynthesis
RIBOSYN2−PWY: flavin biosynthesis I (bacteria and plants)
PWY−5791: 1,4−dihydroxy−2−naphthoate biosynthesis II (plants)
PWY−5837: 1,4−dihydroxy−2−naphthoate biosynthesis I
PWY−5899: superpathway of menaquinol−13 biosynthesis
PWY−5897: superpathway of menaquinol−11 biosynthesis
PWY−5898: superpathway of menaquinol−12 biosynthesis
PANTOSYN−PWY: pantothenate and coenzyme A biosynthesis I
PWY−5989: stearate biosynthesis II (bacteria and plants)
PWY−6700: queuosine biosynthesis
PWY−6703: preQ0 biosynthesis
ASPASN−PWY: superpathway of L−aspartate and L−asparagine biosynthesis
PWY−2942: L−lysine biosynthesis III
PWY−5030: L−histidine degradation III
PWY−1042: glycolysis IV (plant cytosol)
PYRIDNUCSYN−PWY: NAD biosynthesis I (from aspartate)
PWY−6151: S−adenosyl−L−methionine cycle I
PWY−6163: chorismate biosynthesis from 3−dehydroquinate
PWY−7219: adenosine ribonucleotides de novo biosynthesis
PEPTIDOGLYCANSYN−PWY: peptidoglycan biosynthesis I (meso−diaminopimelate containing)
PWY−6386: UDP−N−acetylmuramoyl−pentapeptide biosynthesis II (lysine−containing)
PWY−6387: UDP−N−acetylmuramoyl−pentapeptide biosynthesis I (meso−diaminopimelate containing)
PWY−5100: pyruvate fermentation to acetate and lactate II
PWY−6123: inosine−5'−phosphate biosynthesis I
PWY−6124: inosine−5'−phosphate biosynthesis II
PWY−5686: UMP biosynthesis
PWY−6121: 5−aminoimidazole ribonucleotide biosynthesis I
PWY−6122: 5−aminoimidazole ribonucleotide biosynthesis II
PWY−6277: superpathway of 5−aminoimidazole ribonucleotide biosynthesis
PWY−6545: pyrimidine deoxyribonucleotides de novo biosynthesis III
PWY−7198: pyrimidine deoxyribonucleotides de novo biosynthesis IV
PWY−7210: pyrimidine deoxyribonucleotides biosynthesis from CTP
PWY0−1297: superpathway of purine deoxyribonucleosides degradation
HEXITOLDEGSUPER−PWY: superpathway of hexitol degradation (bacteria)
PWY−5384: sucrose degradation IV (sucrose phosphorylase)
PWY66−409: superpathway of purine nucleotide salvage
PWY−6608: guanosine nucleotides degradation III
PWY−4981: L−proline biosynthesis II (from arginine)
SALVADEHYPOX−PWY: adenosine nucleotides degradation II
PWY−7211: superpathway of pyrimidine deoxyribonucleotides de novo biosynthesis
PWY−6606: guanosine nucleotides degradation II
PWY−6595: superpathway of guanosine nucleotides degradation (plants)
PWY−6353: purine nucleotides degradation II (aerobic)
PWY−6284: superpathway of unsaturated fatty acids biosynthesis (E. coli)
PWY−5367: petroselinate biosynthesis
PWY−5971: palmitate biosynthesis II (bacteria and plants)
PWY−7237: myo−, chiro− and scillo−inositol degradation
SULFATE−CYS−PWY: superpathway of sulfate assimilation and cysteine biosynthesis
TCA: TCA cycle I (prokaryotic)
P441−PWY: superpathway of N−acetylneuraminate degradation
PWY−6527: stachyose degradation
PWY66−399: gluconeogenesis III
PWY−7282: 4−amino−2−methyl−5−phosphomethylpyrimidine biosynthesis (yeast)
PWY−7383: anaerobic energy metabolism (invertebrates, cytosol)
COA−PWY−1: coenzyme A biosynthesis II (mammalian)
HISTSYN−PWY: L−histidine biosynthesis
MET−SAM−PWY: superpathway of S−adenosyl−L−methionine biosynthesis
HOMOSER−METSYN−PWY: L−methionine biosynthesis I
METSYN−PWY: L−homoserine and L−methionine biosynthesis
LACTOSECAT−PWY: lactose and galactose degradation I
PWY0−1296: purine ribonucleosides degradation
PWY−6609: adenine and adenosine salvage III
1CMET2−PWY: N10−formyl−tetrahydrofolate biosynthesis
PWY−3841: folate transformations II
PWY−5920: superpathway of heme biosynthesis from glycine
PWY−5154: L−arginine biosynthesis III (via N−acetyl−L−citrulline)
PWY0−1415: superpathway of heme biosynthesis from uroporphyrinogen−III
PWY−5345: superpathway of L−methionine biosynthesis (by sulfhydrylation)
PWY−6803: phosphatidylcholine acyl editing
PWY−7111: pyruvate fermentation to isobutanol (engineered)
PWY0−845: superpathway of pyridoxal 5'−phosphate biosynthesis and salvage
GLYCOLYSIS−E−D: superpathway of glycolysis and Entner−Doudoroff
PYRIDOXSYN−PWY: pyridoxal 5'−phosphate biosynthesis I
PWY−3781: aerobic respiration I (cytochrome c)
PWY−7115: C4 photosynthetic carbon assimilation cycle, NAD−ME type
PWY0−781: aspartate superpathway
NAD−BIOSYNTHESIS−II: NAD salvage pathway II
PWY−621: sucrose degradation III (sucrose invertase)
FUCCAT−PWY: fucose degradation
PWY−922: mevalonate pathway I
GLUTORN−PWY: L−ornithine biosynthesis
ARGSYN−PWY: L−arginine biosynthesis I (via L−ornithine)
PWY−7400: L−arginine biosynthesis IV (archaebacteria)
ARGSYNBSUB−PWY: L−arginine biosynthesis II (acetyl cycle)
PWY−7279: aerobic respiration II (cytochrome c) (yeast)
P164−PWY: purine nucleobases degradation I (anaerobic)
SO4ASSIM−PWY: sulfate reduction I (assimilatory)
SER−GLYSYN−PWY: superpathway of L−serine and glycine biosynthesis I
METHGLYUT−PWY: superpathway of methylglyoxal degradation
PWY−1269: CMP−3−deoxy−D−manno−octulosonate biosynthesis I
PWY−7199: pyrimidine deoxyribonucleosides salvage
PWY−241: C4 photosynthetic carbon assimilation cycle, NADP−ME type
PWY−5083: NAD/NADH phosphorylation and dephosphorylation
PWY−7220: adenosine deoxyribonucleotides de novo biosynthesis II
PWY−7222: guanosine deoxyribonucleotides de novo biosynthesis II
PWY−7184: pyrimidine deoxyribonucleotides de novo biosynthesis I
PWY0−166: superpathway of pyrimidine deoxyribonucleotides de novo biosynthesis (E. coli)
GLUCOSE1PMETAB−PWY: glucose and glucose−1−phosphate degradation
PWY−7197: pyrimidine deoxyribonucleotide phosphorylation
PWY−6628: superpathway of L−phenylalanine biosynthesis
PANTO−PWY: phosphopantothenate biosynthesis I
PWY−7234: inosine−5'−phosphate biosynthesis III
PWY0−1241: ADP−L−glycero−β−D−manno−heptose biosynthesis
PWY−6936: seleno−amino acid biosynthesis
PWY−5667: CDP−diacylglycerol biosynthesis I
PWY0−1319: CDP−diacylglycerol biosynthesis II
PWY−7208: superpathway of pyrimidine nucleobases salvage
PWY−841: superpathway of purine nucleotides de novo biosynthesis I
PWY−6126: superpathway of adenosine nucleotides de novo biosynthesis II
PWY−7229: superpathway of adenosine nucleotides de novo biosynthesis I
PWY−6125: superpathway of guanosine nucleotides de novo biosynthesis II
PWY−7228: superpathway of guanosine nucleotides de novo biosynthesis I
PWY−5103: L−isoleucine biosynthesis III
ILEUSYN−PWY: L−isoleucine biosynthesis I (from threonine)
VALSYN−PWY: L−valine biosynthesis
PWY−6737: starch degradation V
BRANCHED−CHAIN−AA−SYN−PWY: superpathway of branched amino acid biosynthesis
PWY−5188: tetrapyrrole biosynthesis I (from glutamate)
ANAEROFRUCAT−PWY: homolactic fermentation
GLYCOLYSIS: glycolysis I (from glucose 6−phosphate)
PWY−5484: glycolysis II (from fructose 6−phosphate)
ANAGLYCOLYSIS−PWY: glycolysis III (from glucose)
PWY−3001: superpathway of L−isoleucine biosynthesis I
THRESYN−PWY: superpathway of L−threonine biosynthesis
PWY−5097: L−lysine biosynthesis VI
PWY−724: superpathway of L−lysine, L−threonine and L−methionine biosynthesis II
PWY−2941: L−lysine biosynthesis II
DAPLYSINESYN−PWY: L−lysine biosynthesis I
P4−PWY: superpathway of L−lysine, L−threonine and L−methionine biosynthesis I
PWY0−1479: tRNA processing
PWY−7117: C4 photosynthetic carbon assimilation cycle, PEPCK type
FERMENTATION−PWY: mixed acid fermentation
PWY−5913: TCA cycle VI (obligate autotrophs)
UNINTEGRATED
PHOSLIPSYN−PWY: superpathway of phospholipid biosynthesis I (bacteria)
PWY4FS−7: phosphatidylglycerol biosynthesis I (plastidic)
PWY4FS−8: phosphatidylglycerol biosynthesis II (non−plastidic)
PWY0−162: superpathway of pyrimidine ribonucleotides de novo biosynthesis
DENOVOPURINE2−PWY: superpathway of purine nucleotides de novo biosynthesis II
TRPSYN−PWY: L−tryptophan biosynthesis
PWY−7187: pyrimidine deoxyribonucleotides de novo biosynthesis II
PWY−5347: superpathway of L−methionine biosynthesis (transsulfuration)
PWY−7221: guanosine ribonucleotides de novo biosynthesis
HSERMETANA−PWY: L−methionine biosynthesis III
PWY−5695: urate biosynthesis/inosine 5'−phosphate degradation
PWY0−1061: superpathway of L−alanine biosynthesis
ARO−PWY: chorismate biosynthesis I
COMPLETE−ARO−PWY: superpathway of aromatic amino acid biosynthesis
PWY66−400: glycolysis VI (metazoan)
FASYN−INITIAL−PWY: superpathway of fatty acid biosynthesis initiation (E. coli)
PWY−7388: octanoyl−[acyl−carrier protein] biosynthesis (mitochondria, yeast)
HEMESYN2−PWY: heme biosynthesis II (anaerobic)
PWY−5189: tetrapyrrole biosynthesis II (from glycine)
GLCMANNANAUT−PWY: superpathway of N−acetylglucosamine, N−acetylmannosamine and N−acetylneuraminate degradation
HEME−BIOSYNTHESIS−II: heme biosynthesis I (aerobic)
PWY−5918: superpathay of heme biosynthesis from glutamate
PWY0−1261: anhydromuropeptides recycling
PENTOSE−P−PWY: pentose phosphate pathway
PWY−6168: flavin biosynthesis III (fungi)
PWY−7539: 6−hydroxymethyl−dihydropterin diphosphate biosynthesis III (Chlamydia)
C6
C2
N2
T1
N6
C5
T2
C3
N3
N5
C1
N4