PLEURA AND PERITONEUM
SUPPLEMENTARY MATERIAL

RNA expression profiling of peritoneal metastasis from pancreatic cancer treated with systemic chemotherapy and PIPAC

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Supplementary Table 1: List of antibodies, retrieval methods, incubations times, dilutions and staining platform used for immunohistochemistry

| Antigen | Species and clonality | Company | Clone | Epitope retrieval | Incubation | Dilution | Platform | Detection |
|---------|-----------------------|---------|-------|-------------------|------------|----------|----------|-----------|
| CEA     | Mouse, mAb            | Thermo Fisher Scientific | Col-1 | HIER: CC1_32_100  | 20min/36˚C | RTU      | BenchMark| OptiView-DAB |
| EpCAM   | Mouse, mAb            | Nordic BioSite ApS        | BS14  | HIER: CC1_32_100  | 32min/36˚C | RTU      | BenchMark| OptiView-DAB |
| Maspin  | Mouse, mAb            | Pharmingen                   | G167-70 | HIER: CC1_32_100  | 32min/36˚C | RTU      | BenchMark| OptiView-DAB |
| Vimentin| Mouse, mAb            | Ventana Medical Systems     | V9     | HIER: CC1_32_100  | 16min/36˚C | RTU      | BenchMark| OptiView-DAB |

CC1: cell conditioning solution 1 (pH 8.5, Ventana Medical Systems), CC1_X_X: CC1_minutes incubated_degrees Celsius, HIER: heat induced epitope retrieval, mAb: monoclonal antibody, RTU: ready to use.
Supplementary Table 2. Significantly upregulated (n=6) and downregulated genes (n=197) when comparing Regression with therapy-naïve PM-PC

| Upregulated genes | logFC | P Value | FDR   |
|-------------------|-------|---------|-------|
| NCAM1             | 1.81  | 0.0008  | 0.006 |
| IL33              | 1.17  | 0.002   | 0.013 |
| ANGPT1            | 1.05  | 0.002   | 0.014 |
| DPP4              | 1.02  | 0.005   | 0.026 |
| CD209             | 1.06  | 0.006   | 0.027 |
| ACVR1C            | 1.39  | 0.012   | 0.048 |
| LAMB3             | -5.20 | 8.61E-15| 3.81E-12|
| EPCAM             | -6.02 | 9.53E-15| 3.81E-12|
| CDH1              | -4.75 | 1.20E-12| 3.20E-10|
| CEACAM5           | -5.95 | 3.75E-12| 7.51E-10|
| SERPINB5          | -3.97 | 1.49E-11| 2.38E-09|
| MUC1              | -4.44 | 7.00E-11| 9.33E-09|
| LAMC2             | -5.00 | 2.47E-10| 2.74E-08|
| MMP7              | -6.75 | 2.74E-10| 2.74E-08|
| COL17A1           | -3.97 | 4.61E-10| 4.10E-08|
| F2RL1             | -3.36 | 6.62E-10| 5.29E-08|
| PROM1             | -4.27 | 8.03E-10| 5.84E-08|
| ITGA2             | -3.49 | 1.01E-09| 6.72E-08|
| LIF               | -2.78 | 5.47E-09| 3.37E-07|
| AREG              | -4.29 | 7.57E-09| 4.33E-07|
| CBLC              | -2.79 | 9.86E-09| 5.26E-07|
| RASAL1            | -2.29 | 1.70E-08| 8.51E-07|
| CXCL3             | -3.22 | 2.45E-08| 1.16E-06|
| KRT8              | -3.27 | 4.44E-08| 1.97E-06|
| HNF1A             | -2.93 | 4.75E-08| 2.00E-06|
| HMGA1             | -3.24 | 6.58E-08| 2.63E-06|
| IER3              | -2.56 | 1.15E-07| 4.38E-06|
| WNT7B             | -2.72 | 2.05E-07| 7.47E-06|
| PDZK1IP1          | -3.51 | 3.92E-07| 1.36E-05|
| KRT7              | -3.43 | 5.47E-07| 1.82E-05|
| UBE2C             | -2.81 | 6.29E-07| 2.01E-05|
| CXCL8             | -3.45 | 8.14E-07| 2.50E-05|
| ZC3H12A           | -1.69 | 9.51E-07| 2.82E-05|
| ERBB2             | -1.79 | 1.18E-06| 3.25E-05|
| DTX4              | -2.11 | 1.21E-06| 3.25E-05|
Detlefsen et al., Pleura and Peritoneum: RNA expression profiling of peritoneal metastasis from pancreatic cancer treated with Pressurized Intraperitoneal Aerosol Chemotherapy (PIPAC)

| Gene Symbol | Fold Change | Log10(p-value) | Adjusted p-value |
|-------------|-------------|----------------|------------------|
| IL22RA1     | -2.37       | 1.25E-06       | 3.25E-05         |
| CEP55       | -2.25       | 1.26E-06       | 3.25E-05         |
| OASL        | -1.79       | 1.55E-06       | 3.87E-05         |
| SERPINA1    | -2.95       | 2.09E-06       | 5.07E-05         |
| CXCL5       | -4.45       | 3.12E-06       | 7.35E-05         |
| MKI67       | -2.22       | 4.03E-06       | 9.22E-05         |
| ANO1        | -2.19       | 4.80E-06       | 0.0001           |
| CCNO        | -1.77       | 4.87E-06       | 0.0001           |
| MMP1        | -4.13       | 6.91E-06       | 0.0002           |
| RR2M2       | -2.14       | 7.93E-06       | 0.0002           |
| HES1        | -1.68       | 8.67E-06       | 0.0002           |
| BCL2L1      | -1.76       | 8.85E-06       | 0.0002           |
| EZH2        | -1.41       | 8.97E-06       | 0.0002           |
| FOSL1       | -2.13       | 9.28E-06       | 0.0002           |
| INHBA       | -2.86       | 1.02E-05       | 0.0002           |
| SLC2A1      | -1.42       | 1.07E-05       | 0.0002           |
| SLC7A5      | -2.03       | 1.28E-05       | 0.0002           |
| ANLN        | -2.24       | 1.36E-05       | 0.0002           |
| KIF2C       | -1.85       | 1.50E-05       | 0.0003           |
| SBNO2       | -1.21       | 1.66E-05       | 0.0003           |
| GLI1        | -1.84       | 1.66E-05       | 0.0003           |
| DUSP5       | -1.55       | 1.81E-05       | 0.0003           |
| COL11A1     | -3.43       | 1.82E-05       | 0.0003           |
| BIRC5       | -1.94       | 1.85E-05       | 0.0003           |
| EXO1        | -1.66       | 2.19E-05       | 0.0003           |
| MELK        | -1.57       | 2.50E-05       | 0.0004           |
| CDC25C      | -1.92       | 2.51E-05       | 0.0004           |
| TYMS        | -1.68       | 2.62E-05       | 0.0004           |
| CXCL2       | -2.12       | 3.35E-05       | 0.0005           |
| CENPF       | -1.87       | 4.25E-05       | 0.0006           |
| PTGS2       | -2.14       | 4.61E-05       | 0.0006           |
| WNT10A      | -2.41       | 5.38E-05       | 0.0007           |
| EGR1        | -1.76       | 5.53E-05       | 0.0007           |
| CCL20       | -2.50       | 6.43E-05       | 0.0008           |
| FANCA       | -1.44       | 6.55E-05       | 0.0008           |
| PVR         | -1.35       | 7.18E-05       | 0.0009           |
| CDC20       | -1.51       | 7.93E-05       | 0.001            |
| DKK1        | -3.04       | 8.15E-05       | 0.001            |
| BIRC3       | -1.59       | 8.36E-05       | 0.001            |
| SLC16A3     | -1.65       | 8.41E-05       | 0.001            |
| NECTIN2     | -1.14       | 8.88E-05       | 0.001            |
| CCNB1       | -1.68       | 9.01E-05       | 0.001            |
| Gene   | Fold Change | p-value   | q-value |
|--------|-------------|-----------|---------|
| HELLS  | -1.25       | 9.60E-05  | 0.001   |
| EDN1   | -1.54       | 9.78E-05  | 0.001   |
| SPRY4  | -1.15       | 0.0001    | 0.001   |
| FSTL3  | -1.56       | 0.0001    | 0.001   |
| FUT4   | -1.25       | 0.0002    | 0.002   |
| OLR1   | -2.15       | 0.0002    | 0.002   |
| CXCL1  | -2.27       | 0.0002    | 0.002   |
| CTLA4  | -1.71       | 0.0002    | 0.002   |
| IRF7   | -1.13       | 0.0002    | 0.002   |
| IL32   | -1.66       | 0.0002    | 0.002   |
| CCNE1  | -1.26       | 0.0002    | 0.002   |
| IFI27  | -1.38       | 0.0002    | 0.002   |
| BRIP1  | -1.38       | 0.0003    | 0.002   |
| MET    | -1.73       | 0.0003    | 0.003   |
| CDK6   | -1.21       | 0.0003    | 0.003   |
| VCAN   | -1.75       | 0.0003    | 0.003   |
| TPM1   | -1.05       | 0.0003    | 0.003   |
| IL2RA  | -1.34       | 0.0004    | 0.003   |
| CSF2   | -1.02       | 0.0004    | 0.004   |
| TPI1   | -1.18       | 0.0004    | 0.004   |
| RELB   | -1.13       | 0.0004    | 0.004   |
| TGFB3  | -1.71       | 0.0005    | 0.004   |
| ERO1A  | -1.63       | 0.0005    | 0.004   |
| FLNB   | -1.23       | 0.0005    | 0.005   |
| UBE2T  | -1.15       | 0.0006    | 0.005   |
| NECTIN1| -1.15       | 0.0007    | 0.006   |
| H2AFX  | -1.18       | 0.0007    | 0.006   |
| IL1R2  | -2.08       | 0.0007    | 0.006   |
| BRCA2  | -1.21       | 0.0007    | 0.006   |
| IRF1   | -1.13       | 0.0008    | 0.006   |
| CCR4   | -1.53       | 0.0008    | 0.006   |
| COL4A1 | -1.17       | 0.0008    | 0.007   |
| FOXP3  | -1.53       | 0.0009    | 0.007   |
| TICAM1 | -1.12       | 0.001     | 0.008   |
| SLC11A1| -1.87       | 0.001     | 0.008   |
| MYC    | -0.99       | 0.001     | 0.008   |
| DUSP2  | -1.38       | 0.001     | 0.008   |
| AXIN1  | -0.88       | 0.001     | 0.009   |
| FADD   | -0.97       | 0.001     | 0.009   |
| LTB    | -1.67       | 0.001     | 0.009   |
| VEGFA  | -1.22       | 0.001     | 0.009   |
| GPR160 | -1.35       | 0.001     | 0.009   |
IL1A & -1.56 & 0.001 & 0.009 \\
ISG15 & -1.29 & 0.001 & 0.009 \\
BBC3 & -1.05 & 0.001 & 0.009 \\
CCND1 & -1.53 & 0.001 & 0.010 \\
JAK3 & -1.04 & 0.002 & 0.010 \\
NFkB2 & -0.93 & 0.002 & 0.010 \\
CCL4 & -1.25 & 0.002 & 0.011 \\
HLA-F & -0.99 & 0.002 & 0.011 \\
CXCR4 & -1.52 & 0.002 & 0.011 \\
TNFSF13 & -0.98 & 0.002 & 0.012 \\
IHH & -1.33 & 0.002 & 0.012 \\
CD80 & -1.21 & 0.002 & 0.012 \\
RUNX3 & -1.16 & 0.002 & 0.012 \\
RAD51 & -1.11 & 0.002 & 0.012 \\
TNFRSF10B & -0.96 & 0.002 & 0.013 \\
CDK2 & -0.91 & 0.002 & 0.014 \\
CHUK & -0.73 & 0.002 & 0.014 \\
NLRC5 & -0.92 & 0.002 & 0.014 \\
WNT5A & -1.04 & 0.003 & 0.015 \\
IFI35 & -0.79 & 0.003 & 0.016 \\
LGALS9 & -1.00 & 0.003 & 0.016 \\
PSMB10 & -0.99 & 0.003 & 0.017 \\
CTNNB1 & -0.98 & 0.003 & 0.017 \\
HRAS & -0.78 & 0.003 & 0.018 \\
IL7R & -1.40 & 0.003 & 0.018 \\
IRF3 & -0.87 & 0.003 & 0.019 \\
AXL & -1.04 & 0.004 & 0.020 \\
TNFRSF4 & -0.86 & 0.004 & 0.020 \\
IL11 & -1.30 & 0.004 & 0.020 \\
TCF3 & -0.87 & 0.004 & 0.020 \\
KRAS & -1.06 & 0.004 & 0.021 \\
TAP2 & -0.98 & 0.004 & 0.021 \\
TIGIT & -1.37 & 0.004 & 0.021 \\
DNAJC14 & -0.77 & 0.004 & 0.021 \\
POLD1 & -0.86 & 0.004 & 0.021 \\
SNAI1 & -1.00 & 0.004 & 0.021 \\
WNT5B & -0.90 & 0.004 & 0.021 \\
BRCA1 & -0.92 & 0.004 & 0.021 \\
PRSS1 & -1.05 & 0.004 & 0.021 \\
VTCN1 & -1.22 & 0.004 & 0.022 \\
IL2RG & -1.46 & 0.004 & 0.022 \\
OAS3 & -0.93 & 0.004 & 0.022
Detlefsen et al., Pleura and Peritoneum: RNA expression profiling of peritoneal metastasis from pancreatic cancer treated with Pressurized Intraperitoneal Aerosol Chemotherapy (PIPAC)

| Gene     | Fold Change | p-value (log) | FDR (log) |
|----------|-------------|---------------|-----------|
| CASP8    | -0.91       | 0.005         | 0.023     |
| THBD     | -0.94       | 0.005         | 0.023     |
| IL2RB    | -1.10       | 0.005         | 0.023     |
| LCK      | -1.29       | 0.005         | 0.025     |
| PDCD1    | -0.88       | 0.005         | 0.026     |
| ENO1     | -0.96       | 0.006         | 0.027     |
| CD2      | -1.17       | 0.006         | 0.027     |
| TAP1     | -1.03       | 0.006         | 0.029     |
| MYD88    | -0.81       | 0.006         | 0.029     |
| SAMD9    | -0.98       | 0.006         | 0.030     |
| ALDOA    | -0.88       | 0.006         | 0.030     |
| CXCL16   | -1.06       | 0.006         | 0.030     |
| OAS1     | -0.82       | 0.007         | 0.032     |
| TGFB1    | -0.82       | 0.007         | 0.032     |
| ITGA6    | -1.18       | 0.007         | 0.032     |
| NFKBIE   | -1.00       | 0.007         | 0.033     |
| EIF4EBP1 | -0.79       | 0.007         | 0.033     |
| IRF9     | -0.82       | 0.007         | 0.033     |
| TYMP     | -0.95       | 0.007         | 0.033     |
| TNF      | -0.90       | 0.007         | 0.033     |
| STK11IP  | -0.75       | 0.008         | 0.034     |
| BAX      | -0.74       | 0.008         | 0.035     |
| PVRIG    | -0.83       | 0.009         | 0.038     |
| PSMC4    | -0.87       | 0.009         | 0.038     |
| PARP4    | -0.82       | 0.009         | 0.040     |
| RSAD2    | -1.13       | 0.009         | 0.040     |
| TAPBP    | -0.93       | 0.010         | 0.041     |
| PSMB8    | -0.87       | 0.010         | 0.042     |
| TNFRSF18 | -0.92       | 0.010         | 0.042     |
| IL1RN    | -1.60       | 0.010         | 0.042     |
| SOCS1    | -0.98       | 0.010         | 0.043     |
| CLEC5A   | -1.31       | 0.010         | 0.043     |
| E2F3     | -0.76       | 0.011         | 0.044     |
| LDHA     | -0.88       | 0.011         | 0.046     |
| PGPEP1   | -0.69       | 0.011         | 0.047     |
| ITPK1    | -0.85       | 0.011         | 0.047     |
| CD5      | -1.00       | 0.012         | 0.047     |
| TRAF1    | -0.81       | 0.012         | 0.047     |
| WDR76    | -0.91       | 0.012         | 0.047     |
| FCGR2A   | -0.90       | 0.012         | 0.048     |
| ITGB8    | -1.14       | 0.013         | 0.050     |
| HLA-B    | -0.83       | 0.013         | 0.050     |
Detlefsen et al., Pleura and Peritoneum: RNA expression profiling of peritoneal metastasis from pancreatic cancer treated with Pressurized Intraperitoneal Aerosol Chemotherapy (PIPAC)

FDR: False discovery rate.
Detlefsen et al., Pleura and Peritoneum: RNA expression profiling of peritoneal metastasis from pancreatic cancer treated with Pressurized Intraperitoneal Aerosol Chemotherapy (PIPAC)

**Supplementary Table 3.** Significantly up- (n=43) and downregulated (n=99) genes when comparing Regression with Controls.

| Upregulated genes | logFC | P Value  | FDR     |
|-------------------|-------|----------|---------|
| CXCL14            | 4.58  | 1.72E-10 | 6.86E-08|
| MET               | 1.82  | 4.67E-05 | 0.001   |
| NCAM1             | 2.43  | 6.58E-05 | 0.001   |
| CCND2             | 1.38  | 7.45E-05 | 0.002   |
| ITGB8             | 1.68  | 9.63E-05 | 0.002   |
| CD36              | 2.42  | 0.0002   | 0.004   |
| TGFB2             | 1.89  | 0.0003   | 0.005   |
| ACVR1C            | 2.28  | 0.0003   | 0.005   |
| ROBO4             | 1.05  | 0.0003   | 0.005   |
| CCND1             | 1.16  | 0.0005   | 0.006   |
| CCL14             | 1.78  | 0.0006   | 0.008   |
| ANGPT2            | 1.31  | 0.0008   | 0.010   |
| PECAM1            | 1.15  | 0.0009   | 0.011   |
| TGFB2R            | 1.42  | 0.001    | 0.011   |
| DTX4              | 1.08  | 0.001    | 0.012   |
| WNT2B             | 1.63  | 0.001    | 0.012   |
| WNT11             | 1.41  | 0.001    | 0.012   |
| TNFRSF8           | 1.29  | 0.001    | 0.015   |
| HEY1              | 1.28  | 0.002    | 0.015   |
| IFI27             | 1.29  | 0.002    | 0.016   |
| PPARG             | 1.67  | 0.002    | 0.020   |
| CCL13             | 1.69  | 0.002    | 0.020   |
| EGFR              | 0.93  | 0.002    | 0.021   |
| SELP              | 1.10  | 0.002    | 0.021   |
| OAS1              | 1.25  | 0.002    | 0.022   |
| CMKLR1            | 1.00  | 0.003    | 0.026   |
| GHR               | 1.57  | 0.004    | 0.032   |
| CD34              | 1.31  | 0.004    | 0.032   |
| FLNB              | 0.75  | 0.005    | 0.033   |
| S100A4            | 1.12  | 0.005    | 0.038   |
| FAM124B           | 0.86  | 0.005    | 0.038   |
| SFRP1             | 1.98  | 0.006    | 0.038   |
| IL11RA            | 0.90  | 0.006    | 0.038   |
| PLA2G2A           | 1.96  | 0.006    | 0.038   |
| IFIT2             | 1.16  | 0.006    | 0.038   |
| PALMD             | 1.18  | 0.006    | 0.038   |
| EDN1              | 0.95  | 0.006    | 0.039   |
| ITGA6             | 1.06  | 0.007    | 0.043   |
| C2                | 0.75  | 0.008    | 0.047   |
Detlefsen et al., Pleura and Peritoneum: RNA expression profiling of peritoneal metastasis from pancreatic cancer treated with Pressurized Intraperitoneal Aerosol Chemotherapy (PIPAC)

| Genes   | logFC | P Value    | FDR     |
|---------|-------|------------|---------|
| CNTFR   | 1.51  | 0.008      | 0.048   |
| TLR3    | 1.01  | 0.009      | 0.049   |
| NT5E    | 0.84  | 0.009      | 0.049   |
| MICA    | 0.77  | 0.009      | 0.050   |
| **Downregulated genes** |       |            |         |
| AREG    | -5.77 | 5.63E-11   | 4.50E-08|
| DUSP1   | -3.53 | 2.44E-09   | 6.50E-07|
| EGR1    | -3.84 | 6.64E-09   | 1.33E-06|
| DUSP2   | -3.09 | 1.40E-08   | 2.24E-06|
| PTGS2   | -4.16 | 3.37E-08   | 4.50E-06|
| MYC     | -1.89 | 7.77E-08   | 8.87E-06|
| CEBPB   | -2.07 | 1.78E-07   | 1.78E-05|
| SGK1    | -2.58 | 2.45E-07   | 2.12E-05|
| INHBA   | -3.69 | 2.65E-07   | 2.12E-05|
| DUSP5   | -2.38 | 3.03E-07   | 2.20E-05|
| MAGEA3/A6 | -2.08 | 4.24E-07   | 2.83E-05|
| IER3    | -3.26 | 5.82E-07   | 3.33E-05|
| ATF3    | -3.38 | 5.83E-07   | 3.33E-05|
| CD69    | -2.39 | 1.20E-06   | 6.38E-05|
| THBS1   | -3.01 | 1.28E-06   | 6.38E-05|
| IL7R    | -2.47 | 1.73E-06   | 8.14E-05|
| CXCR4   | -2.58 | 2.39E-06   | 0.0001  |
| CXCL3   | -3.45 | 3.28E-06   | 0.0001  |
| FPR1    | -2.60 | 3.59E-06   | 0.0001  |
| CSAR1   | -2.25 | 4.53E-06   | 0.0002  |
| CXCL2   | -3.10 | 5.69E-06   | 0.0002  |
| VCAN    | -2.34 | 8.01E-06   | 0.0003  |
| COL11A1 | -3.43 | 8.38E-06   | 0.0003  |
| CXCL8   | -3.96 | 9.09E-06   | 0.0003  |
| NFIL3   | -1.85 | 1.11E-05   | 0.0003  |
| NLRP3   | -1.89 | 1.18E-05   | 0.0004  |
| CCL4    | -2.53 | 1.61E-05   | 0.0005  |
| FCGR2A  | -1.40 | 1.69E-05   | 0.0005  |
| SLC7A5  | -2.04 | 1.99E-05   | 0.0005  |
| TNFAIP3 | -2.29 | 2.07E-05   | 0.0005  |
| LIF     | -3.20 | 2.20E-05   | 0.0006  |
| IL1B    | -3.02 | 2.49E-05   | 0.0006  |
| ZC3H12A | -1.54 | 3.64E-05   | 0.0008  |
| IL6     | -3.69 | 4.90E-05   | 0.001   |
| IL1R2   | -1.97 | 5.93E-05   | 0.001   |
| THBD    | -1.57 | 6.41E-05   | 0.001   |
Detlefsen et al., Pleura and Peritoneum: RNA expression profiling of peritoneal metastasis from pancreatic cancer treated with Pressurized Intraperitoneal Aerosol Chemotherapy (PIPAC)

| Gene       | Change | p-value  | q-value |
|------------|--------|----------|---------|
| SNAI1      | -1.83  | 7.70E-05 | 0.002   |
| CCL3/L1    | -2.68  | 7.81E-05 | 0.002   |
| COMP       | -3.06  | 7.90E-05 | 0.002   |
| FCAR       | -2.80  | 0.0001   | 0.002   |
| JAK3       | -1.30  | 0.0002   | 0.003   |
| CTLA4      | -1.69  | 0.0002   | 0.004   |
| TPM1       | -1.38  | 0.0003   | 0.005   |
| SERPINA1   | -1.91  | 0.0003   | 0.005   |
| CCL20      | -3.04  | 0.0004   | 0.005   |
| TLR2       | -1.32  | 0.0004   | 0.006   |
| SLC16A3    | -1.75  | 0.0005   | 0.007   |
| CSF3R      | -1.48  | 0.0005   | 0.007   |
| TREM1      | -1.98  | 0.0005   | 0.007   |
| FSTL3      | -1.48  | 0.0006   | 0.008   |
| FCGR1A     | -1.30  | 0.0007   | 0.009   |
| CD40LG     | -1.58  | 0.0008   | 0.010   |
| IL10       | -1.81  | 0.0008   | 0.010   |
| CCL2       | -1.80  | 0.0008   | 0.010   |
| PNOC       | -1.56  | 0.001    | 0.011   |
| IL1RA5     | -1.70  | 0.001    | 0.012   |
| TNFSF8     | -1.08  | 0.001    | 0.013   |
| KLRB1      | -1.30  | 0.001    | 0.014   |
| ITGA4      | -1.16  | 0.002    | 0.016   |
| IL24       | -1.41  | 0.002    | 0.018   |
| VEGFA      | -1.39  | 0.002    | 0.020   |
| STC1       | -1.35  | 0.002    | 0.020   |
| HSD11B1    | -1.58  | 0.002    | 0.022   |
| SLC11A1    | -2.02  | 0.003    | 0.025   |
| SELE       | -1.57  | 0.003    | 0.025   |
| ACTA2      | -1.14  | 0.003    | 0.026   |
| CCND3      | -0.86  | 0.003    | 0.026   |
| LILRA1     | -1.10  | 0.003    | 0.026   |
| CXCL5      | -2.10  | 0.003    | 0.026   |
| CD3D       | -1.41  | 0.003    | 0.026   |
| IL18R1     | -1.09  | 0.003    | 0.026   |
| ARG1       | -1.24  | 0.003    | 0.027   |
| HCK        | -0.96  | 0.004    | 0.028   |
| MMP1       | -2.68  | 0.004    | 0.028   |
| CDH11      | -1.21  | 0.004    | 0.028   |
| CCL8       | -1.22  | 0.004    | 0.029   |
| CLEC5A     | -1.42  | 0.004    | 0.032   |
| IDO1       | -1.20  | 0.004    | 0.032   |
Detlefsen et al., Pleura and Peritoneum: RNA expression profiling of peritoneal metastasis from pancreatic cancer treated with Pressurized Intraperitoneal Aerosol Chemotherapy (PIPAC)

| Gene | log2 Fold Change | p-Value | q-Value |
|------|-----------------|---------|---------|
| IL11 | -2.60           | 0.004   | 0.032   |
| GLUL | -1.08           | 0.005   | 0.033   |
| CD2  | -1.12           | 0.005   | 0.033   |
| SAMS1N | -1.23         | 0.005   | 0.034   |
| FOSL1 | -1.34           | 0.005   | 0.034   |
| CCR4 | -1.17           | 0.005   | 0.038   |
| NFKB1A | -1.03         | 0.006   | 0.038   |
| CD247 | -0.98           | 0.006   | 0.038   |
| MAP3K8 | -0.92          | 0.006   | 0.038   |
| CD3E  | -1.00           | 0.006   | 0.039   |
| ICAM3 | -0.86           | 0.006   | 0.039   |
| GZMB  | -1.10           | 0.006   | 0.039   |
| ZAP70 | -1.16           | 0.006   | 0.039   |
| ITGAX | -1.26           | 0.006   | 0.039   |
| CCL7  | -1.79           | 0.006   | 0.039   |
| CD5   | -1.02           | 0.006   | 0.039   |
| CD48  | -1.03           | 0.008   | 0.047   |
| CD45RO | -0.88          | 0.008   | 0.047   |
| IL32  | -0.99           | 0.008   | 0.048   |
| ICOS  | -0.84           | 0.009   | 0.049   |
| ICAM1 | -1.12           | 0.009   | 0.049   |

FDR: False discovery rate.
Detlefsen et al., Pleura and Peritoneum: RNA expression profiling of peritoneal metastasis from pancreatic cancer treated with Pressurized Intraperitoneal Aerosol Chemotherapy (PIPAC)

**Supplementary Table 4.** Hallmark gene sets significantly up- and downregulated in Regression compared to Controls

| Upregulated gene set                  | Size | Leading edge genes                                                                 | p-Value | FDR  |
|---------------------------------------|------|-------------------------------------------------------------------------------------|---------|------|
| Interferon-α response                 | 42   | IFI27, OAS1, IFIT2, IFIT3, CXCL11, MX1, GBP4, SAMD9, IL15, CXCL10, PARP12, IFIH1, TMEM140, PARP9, EIF2AK2, HERC6, OASL | 0.001   | 0.006|

| Downregulated gene set                | Size | Leading edge genes                                                                 | p-Value | FDR  |
|---------------------------------------|------|-------------------------------------------------------------------------------------|---------|------|
| TNFα signaling via NF-κB              | 73   | AREG, PTGS2, EGR1, IL6, INHBA, DUSP1, CXCL3, ATF3, IER3, LIF, CXCL2, DUSP2, CCL20, IL1B, SGK1, CCL4, IL7R, CD69, DUSP5, TNFAIP3, CEBPB, MYC, NFI3, CCL2, ZC3H12A, VEGFA, FOSL1, OLR1, TLR2, CXCL1 | 1.88E-11 | 5.44E-10 |
| Inflammatory response                 | 82   | CXCL8, IL6, INHBA, LIF, CCL20, IL1B, FPR1, IL7R, CD69, C5AR1, MYC, NLRP3, IL10, CCL2, CCL7, SELE, CSF3R, CLEC5A, OLR1, ADM, TLR2, SELL, ICAM1, HAS2, IL18R1, CXCR6, PDPN, NFκBIA, CD48, HIF1A | 0.0004 | 0.005 |
| Epithelial-mesenchymal transition     | 63   | AREG, CXCL8, IL6, INHBA, COL11A1, COMP, THBS1, MMP1, VCAN, TNFAIP3, FSTL3, VEGFA, TPM1, COL5A1, CXCL1, CDH11, ACTA2, COL3A1, CDH2, IL32, PLOD2 | 0.0006 | 0.006 |
| KRAS signaling up                     | 39   | PTGS2, INHBA, LIF, CCL20, IL1B, CXCR4, IL7R, TNFAIP3, HSD11B1 | 0.001   | 0.006 |
| Hypoxia                               | 39   | IL6, DUSP1, ATF3, IER3, CXCR4, TNFAIP3, NFI3, VEGFA, COL5A1, STC1, ADM | 0.001   | 0.006 |

FDR: False discovery rate
Supplementary Figure 1.

Gene set enrichment analysis curves of selected significantly differentially expressed hallmark gene sets comparing Regression vs. treatment-naïve peritoneal metastasis from pancreatic cancer (PM-PC).

A. TNFα signaling via NF-kB (NES=-1.66, p=1.58E-05, FDR=0.0005).
B. G2M checkpoint (NES=-1.74 p=0.0007, FDR=0.007).
C. Epithelial-mesenchymal transition (NES=-1.52, p=0.001, FDR=0.008).
D. Coagulation (NES=-1.63, p=0.003, FDR=0.014).
Gene set enrichment analysis curves of selected significantly differentially expressed hallmark gene sets comparing Regression vs. Controls. A) Interferon-α response (NES=1.83, p=0.001, FDR=0.006). B) TNFα signaling via NF-κB (NES=-2.22, p=1.88E-11, FDR=5.44E-10). C) Inflammatory response (NES=-1.69, p=0.0004, FDR=0.005). D) Epithelial-mesenchymal transition (NES=-1.70, p=0.0006, FDR=0.006).