

Table S1. Selected characteristic of the study subgroups depending on the drug.

Parameters with "1" mean the value before treatment and with "2" – after treatment.

| Parameter | Acitretin (<i>n</i> = 13) | Methotrexate (<i>n</i> = 18) |
|-----------------------|----------------------------|-------------------------------|
| PASI 1 | 20.3±7.54 | 14.6±7.05 * |
| PASI 2 | 6.42±3.65 ^^^ | 3.14±1.54 ** ^^ |
| Years | 19 (2 – 58) | 11 (1-63) |
| Current time (months) | 2 (1 – 24) | 3 (1 – 24) |
| Age | 50.7±18.5 | 57.6±14.1 |
| Body Weight [kg] | 85.1±19.5 | 86.1±23.2 |
| Height [cm] | 178±5.74 | 167.1±11.2** |
| BMI | 27±6.01 | 30.4±6.69 |
| Cigarette smoking | 8/5 | 7/11 |
| HGB 1 | 13.3±1.86 | 13.7±1.22 |
| HGB 2 | 13.3±1.99 | 13.1±1.18 |
| RBC 1 | 4.31±0.71 | 4.41±0.32 |
| RBC 2 | 4.42±0.68 | 4.15±0.31 ^ |
| WBC 1 | 7.09±1.11 | 8.07±2.11 |
| WBC 2 | 6.56±1.25 | 6.67±1.74 ^ |
| PLT 1 | 249±91.8 | 260±57.5 |
| PLT 2 | 221±58.3 | 240±58.6 |
| GLU 1 | 78 (53 – 125) | 92 (53 – 215) * |
| GLU 2 | 87 (55 – 110) | 90 (65 – 140) |
| CRP 1 | 6.35 (1 – 29.6) | 3.55 (1 – 34.7) |
| CRP 2 | 1.87 (1 – 15) ^ | 1.94 (0.5 – 5.8) ^ |
| ALT 1 | 19 (10 – 48) | 27 (12 – 46) |
| ALT 2 | 16 (9 – 42) | 23 (12 – 49) |
| AST 1 | 21 (14 – 86) | 21 (15 – 47) |
| AST 2 | 16 (12 – 39) | 20 (13 – 52) |
| CHOL 1 | 154±36.8 | 185±35.1 * |
| CHOL 2 | 174±47.2 | 168±30.9 |
| TG 1 | 122±51.1 | 143±62.8 |
| TG 2 | 112±48.5 | 126±46.1 |

*/**/*** - means the existence of statistically significant difference between ACY vs MTX subgroup

^/^^/^^^ - means statistical differences in each parameter before and after treatment

Table S2. Selected characteristic of the study subgroups depending on PASI.

Parameters with “1” mean the value before treatment and with “2” – after treatment.

| Parameter | PASI I (n = 8) | PASI II (n = 12) | PASI III (n = 11) |
|-------------------------|------------------------|----------------------------|----------------------------------|
| Family history | 3/5 | 6/6 | 7/4 |
| Sun's impact | 6/2 | 6/6 | 4/7 |
| PASI 1 | 8.75±1.92 | 14.3±2.67 *** | 26.1±4.24 *** ### |
| PASI 2 | 2.95±1.9 ^^^ | 4.01±2.88 * ^^^ | 6.48±3.67 * # ^^^ |
| Psoriasis history [yrs] | 24.5 (2 – 52) | 8 (1 – 63) * | 24 (6 – 58) |
| Current time [months] | 2.5 (1 – 10) | 3 (1 – 24) | 2.1 (1 – 20) |
| City/village | 3/5 | 2/10 | 6/5 |
| Age [yrs] | 55.9±5.33 | 51.1±21.1 | 56.2±15.9 |
| Body Weight [kg] | 87.1±19.8 | 47.8±12 * | 95.9±25 * ## |
| Height [cm] | 170±10.3 | 170±11.9 | 175±7.58 |
| BMI | 30.1±6.1 | 25.9±4.14 * | 31.3±7.86 # |
| Cigarette smoking | 4/4 | 6/6 | 4/7 |
| HGB 1 | 14.4±1.34 | 13.8±1.53 | 12.95±1.92 |
| HGB 2 | 13.5±0.92 | 13.4±1.99 | 12.8±1.08 |
| RBC 1 | 4.61±0.48 | 4.35±0.63 | 4.29±0.54 |
| RBC 2 | 4.33±0.32 | 4.28±0.65 | 4.31±0.38 |
| WBC 1 | 7.62±2.24 | 7.55±1.91 | 7.68±1.7 |
| WBC 2 | 6.64±1.65 | 6.48±1.38 | 7.05±1.83 |
| PLT 1 | 230±41.6 | 259±71.4 | 260±98.8 |
| PLT 2 | 226±59.7 | 241±65.7 | 224±62.1 |
| GLU 1 | 94.5 (78 – 135) | 83.5 (69 – 215) | 84.3 (53 – 129) |
| GLU 2 | 88.5 (81 – 125) | 88 (65 – 120) | 87 (55 – 142) |
| CRP 1 | 2.08 (1 – 7.3) | 4.04 (1 – 7.2) | 16.1 (6.22 – 34.7) *** ## |
| CRP 2 | 1.45 (1 – 2.46) | 1.59 (0.5 – 13.9) ^ | 4.42 (1.2 – 15) * # ^^^ |
| ALT 1 | 26±13.3 | 18.8±5.96 | 29.8±13.9 |
| ALT 2 | 20.3±6.92 | 19.6±4.74 | 23.2±14.1 |
| AST 1 | 21.1±4.36 | 21.1±4.8 | 31.3±20.6 |
| AST 2 | 20.1±5.91 | 20±4.55 | 24.8±13.3 |
| CHOL 1 | 177±43.4 | 175±47.8 | 161±28.9 |
| CHOL 2 | 159±35.6 | 171±53.4 | 174±23.2 |
| TG 1 | 168±73.5 | 138±71.4 | 116±40.9 |
| TG 2 | 135±54.3 | 124±71.1 | 106±35.9 |

*** - means the existence of statistically significant difference between PASI I vs PASI II / III

- statistical differences between PASI II vs PASI III

^/^^/^^^ - means statistical differences in each parameter before and after treatment

Table S3. Selected characteristic of the study subgroups depending on BMI.

Parameters with "1" mean the value before treatment and with "2" – after treatment.

| Parameter | BMI I (<i>n</i> = 10) | BMI II (<i>n</i> = 10) | BMI III (<i>n</i> = 11) |
|-------------------------|------------------------|-------------------------|--------------------------|
| PASI 1 | 15.1±6.53 | 17.3±7.83 | 18±7.55 |
| PASI 2 | 2.5 (1.8 – 15) | 4.6 (1.8 – 8) | 3.6 (0.7 – 8.1) |
| Psoriasis history [yrs] | 7 (2 – 63) | 20.5 (5 – 30) * | 33 (1 – 58) * |
| Current time (months) | 3 (1 – 24) | 3 (1 – 24) | 2 (1 – 20) |
| Age [yrs] | 48.4±19.7 | 54.7±20.5 | 56.7±6.12 |
| Body Weight [kg] | 63.9±5.24 | 81.4±9.99 *** | 105±17.1 *** ### |
| Height [cm] | 171±10.2 | 173±10.9 | 171±9.75 |
| BMI | 22.2±2.23 | 27.2±1.87 *** | 36±3.74 *** ### |
| Cigarette smoking | 5/5 | 7/4 | 3/9 # |
| HGB 1 | 13.7±1.53 | 13.2±1.87 | 13.8±1.62 |
| HGB 2 | 13.1±1.7 | 13.2±1.73 | 13.2±1.01 |
| RBC 1 | 4.3±0.49 | 4.29±0.64 | 4.52±0.56 |
| RBC 2 | 4.17±0.43 | 4.34±0.6 | 4.33±0.39 |
| WBC 1 | 7.18±2.12 | 6.87±1.4 | 8.33±1.87 |
| WBC 2 | 6.1±1.42 | 6.6±1.32 | 7.08±1.94 |
| PLT 1 | 249±83.8 | 257±76.5 | 247±66.8 |
| PLT 2 | 222±75.9 | 246±47.8 | 225±56.5 |
| GLU 1 | 80 (53 – 215) | 81 (69 – 97) | 103 (53 – 135) * |
| GLU 2 | 86 (55 – 112) | 88.5 (78 – 95) | 101 (67 – 140) |
| CRP 1 | 3.67 (1 – 16.1) | 4.14 (1 – 28.1) | 7.30 (1.48 – 34.7) |
| CRP 2 | 1.2 (0.5 – 2.4) | 2.59 (1 – 13.6) | 2.48 (1 – 6) ^^ |
| ALT 1 | 19.9±9.87 | 18.2±7.11 | 33.5±11.1 ** |
| ALT 2 | 17.1±4.07 | 16.1±6.19 | 28.3±11.2 ** |
| AST 1 | 20 (15 – 86) | 18 (14 – 29) | 25 (15 – 47) |
| AST 2 | 18.5 (14 – 39) | 16 (13 – 27) | 22 (13 – 52) |
| CHOL 1 | 158±47.5 | 171.2±31.4 | 182±38.9 |
| CHOL 2 | 156±43.5 | 186±38.9 | 167±32.6 |
| TG 1 | 110±76.8 | 131±45.7 | 167±55.2 * |
| TG 2 | 101±64.7 | 126±56.8 | 131±38.6 ^ |

*** - means the existence of statistically significant difference between BMI I vs BMI II / III

- statistical differences? between BMI II vs BMI III

^/^^/^^^ - mean statistical differences in each parameter before and after treatment

Table S4. Selected characteristic of the study subgroups depending on galectin level.

Parameters with “1” mean the value before treatment and with “2” – after treatment.

| Parameter | Galectin Low | Galectin High |
|-------------------------|--------------------|----------------------|
| PASI 1 | 17.69±9.11 | 16.5±6.58 |
| PASI 2 | 5.07±2.88 | 3.55±1.95 |
| Psoriasis history [yrs] | 23 (2 – 40) | 10 (1.8 – 63) |
| Age [yrs] | 51.53±16.04 | 58.8±14.7 |
| Body Weight [kg] | 88.37±18.99 | 82.87±23.69 |
| Height [cm] | 174.5±7.24 | 169.6±12.45 |
| BMI | 29±5.69 | 28.89±7.47 |
| Cigarette smoking | 8/7 | 7/8 |
| HGB 1 | 13.6±1.98 | 13.5±1.46 |
| HGB 2 | 13.47±1.51 | 12.95±1.47 |
| RBC 1 | 4.47±0.61 | 4.26±0.53 |
| RBC 2 | 4.47±0.47 | 4.12±0.44 |
| WBC 1 | 7.56±1.63 | 7.74±2.16 |
| WBC 2 | 7.09±1.39 | 6.17±1.72 |
| PLT 1 | 263.1±66.52 | 246.9±83.41 |
| PLT 2 | 237.7±54.3 | 225.8±70.98 |
| GLU 1 | 80 (69 – 135) | 86 (53 - 215) |
| GLU 2 | 91 (78 – 125) | 86 (55 – 215) |
| CRP 1 | 4 (1 – 29.6) | 7 (1 – 34.7) |
| CRP 2 | 1.87 (1 – 15) | 1.94 (0.5 – 6) |
| ALT 1 | 24.13±12.4 | 25.6±11.93 |
| ALT 2 | 19.53±10.12 | 22.53±9.05 |
| AST 1 | 23 (14 - 34) | 20 (17 – 86) |
| AST 2 | 17 (12 – 29) | 19 (13 – 52) |
| CHOL 1 | 175.6±34.5 | 167.7±46.14 |
| CHOL 2 | 183.4±36.11 | 157.4±39.12 |
| TG 1 | 157.5±59.83 | 116.7±65.63 * |
| TG 2 | 135.8±48.26 | 104.3±32.12 * |

* - means the existence of statistically significant difference

Table. S5. Characteristic of the study subgroups depending on the length of psoriasis history.

Parameters with "1" mean the value before treatment and with "2" – after treatment.

| Parameter | Short history: <20 yrs (<i>n</i> = 15) | Long history: >20 yrs (<i>n</i> = 16) |
|-------------------|---|--|
| PASI I | 16.07±6.55 | 18.13±6.87 |
| PASI II | 2.6 (1.8 – 15) | 3.6 (0.7 – 8.4) |
| Years | 6 (1 – 20) | 33 (21 – 63) *** |
| Age [years] | 52.07±18.73 | 58.27±11.42 |
| Body Weight [kg] | 81.17±21.2 | 90.07±20.51 |
| Height [cm] | 172.2±10.19 | 171.9±10.78 |
| BMI | 27.39±6.62 | 30.49±6.27 |
| Cigarette smoking | 8/7 | 7/9 |
| HGB 1 | 13.74±2 | 13.36±1.41 |
| HGB 2 | 13.38±1.94 | 13.04±0.86 |
| RBC 1 | 4.4±0.7 | 4.33±0.43 |
| RBC 2 | 4.32±0.63 | 4.26±0.29 |
| WBC 1 | 7.68±1.77 | 7.62±2.06 |
| WBC 2 | 6.93±1.44 | 6.87±1.77 |
| PLT 1 | 274.8±55.15 | 235.2±70.22 |
| PLT 2 | 228.3±60.4 | 235.1±45.51 |
| GLU 1 | 83 (69 – 215) | 92 (53 – 135) |
| GLU 2 | 87 (78 – 140) | 91 (55 – 125) |
| CRP 1 | 5.14 (1 – 34.7) | 5.13 (1 – 29.6) |
| CRP 2 | 1.87 (0.5 – 15) | 2.37 (1 – 6) |
| ALT 1 | 22.93±11.11 | 26.8±12.83 |
| ALT 2 | 19.87±7.77 | 22.2±10.22 |
| AST 1 | 22.93±8.74 | 26.47±12.95 |
| AST 2 | 21.33±8.82 | 22±8.67 |
| CHOL 1 | 172.8±43.32 | 170.5±38.38 |
| CHOL 2 | 168.7±37.27 | 172.1±38.98 |
| TG 1 | 134.6±57.86 | 139.7±54.61 |
| TG 2 | 118.3±56.38 | 121.8±37.21 |

***- means the existence of statistically significant difference ($p < 0.001$)

Table S6. Selected correlations before and after treatment with reference to duration of psoriasis (a) and the galectin-3 concentration threshold (b)

a)

| | Short Length <20 yrs (<i>n</i> =15) | | Long Length >20 yrs (<i>n</i> = 16) | | |
|------------------------|--------------------------------------|----------|--------------------------------------|------------|-------------|
| | Disease Length | Glucose | Disease Length | Chol Total | TG |
| Galectin Before | -0.576/* | 0.619/** | 0.608/* | -0.618/** | -0.725/** |
| Galectin After | -0.571/* | 0.195/NS | 0.46/0.062 | -0.626/** | -0.385/0.11 |

b)

| | Galectin Low | | | Galectin High | | |
|------------------------|----------------|-----------------|-----------------|---------------|----------|-----------|
| | Body weight | BMI | Glucose | Body weight | BMI | Glucose |
| Galectin Before | 0.488/* | 0.662/** | 0.693/** | - 0.067/NS | 0.041/NS | 0.082/NS |
| Galectin After | 0.130/NS | 0.246/NS | 0.124/NS | 0.242/NS | 0.211/NS | -0.109/NS |

*/**- means the existence of statistically significant difference between the parameters with $p < 0.05$; <

0.01, respectively

NS- non-significant

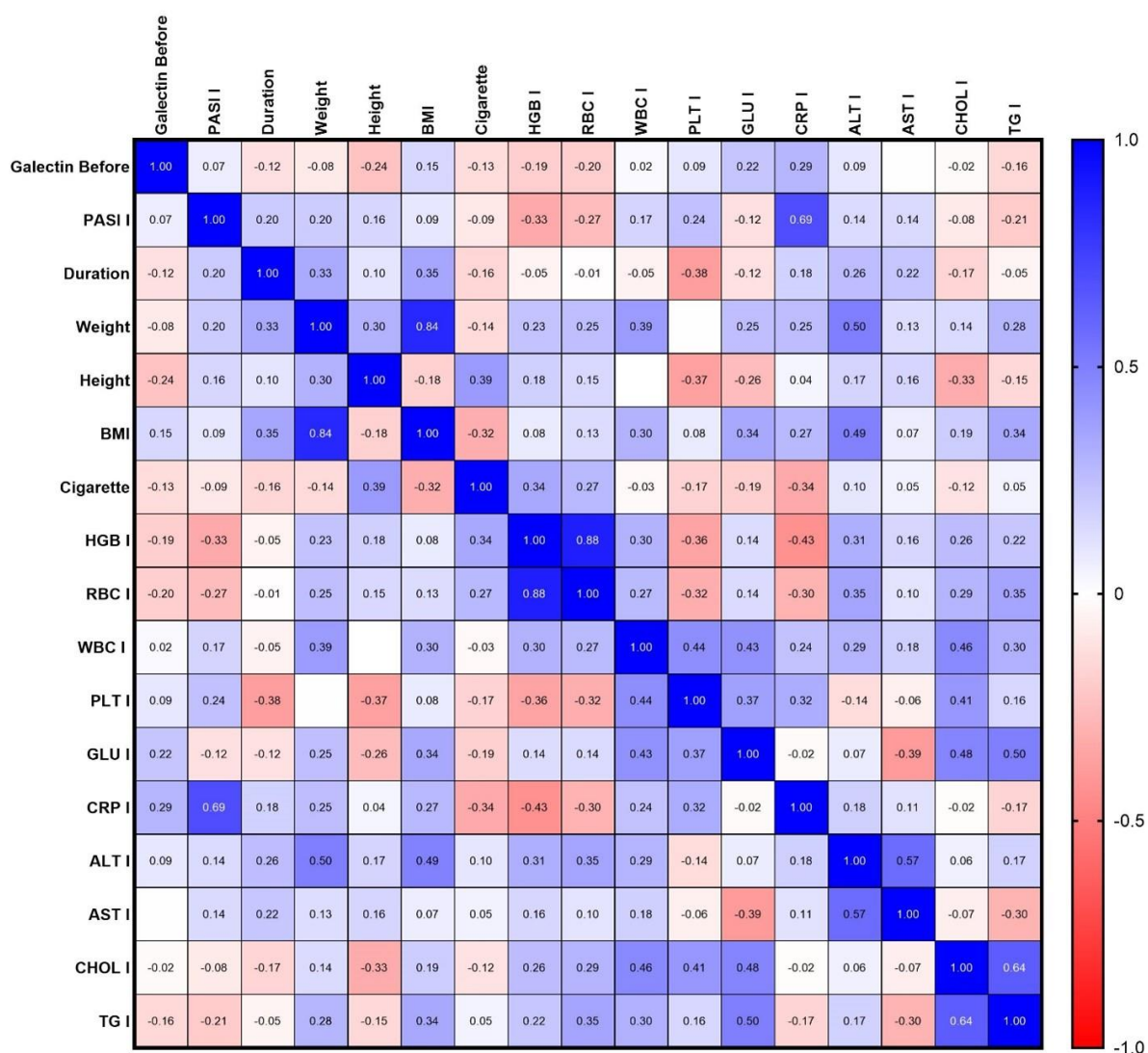


Figure S1. Correlations between gal-3 level and selected parameters before treatment with use of Spearman's rank correlation.

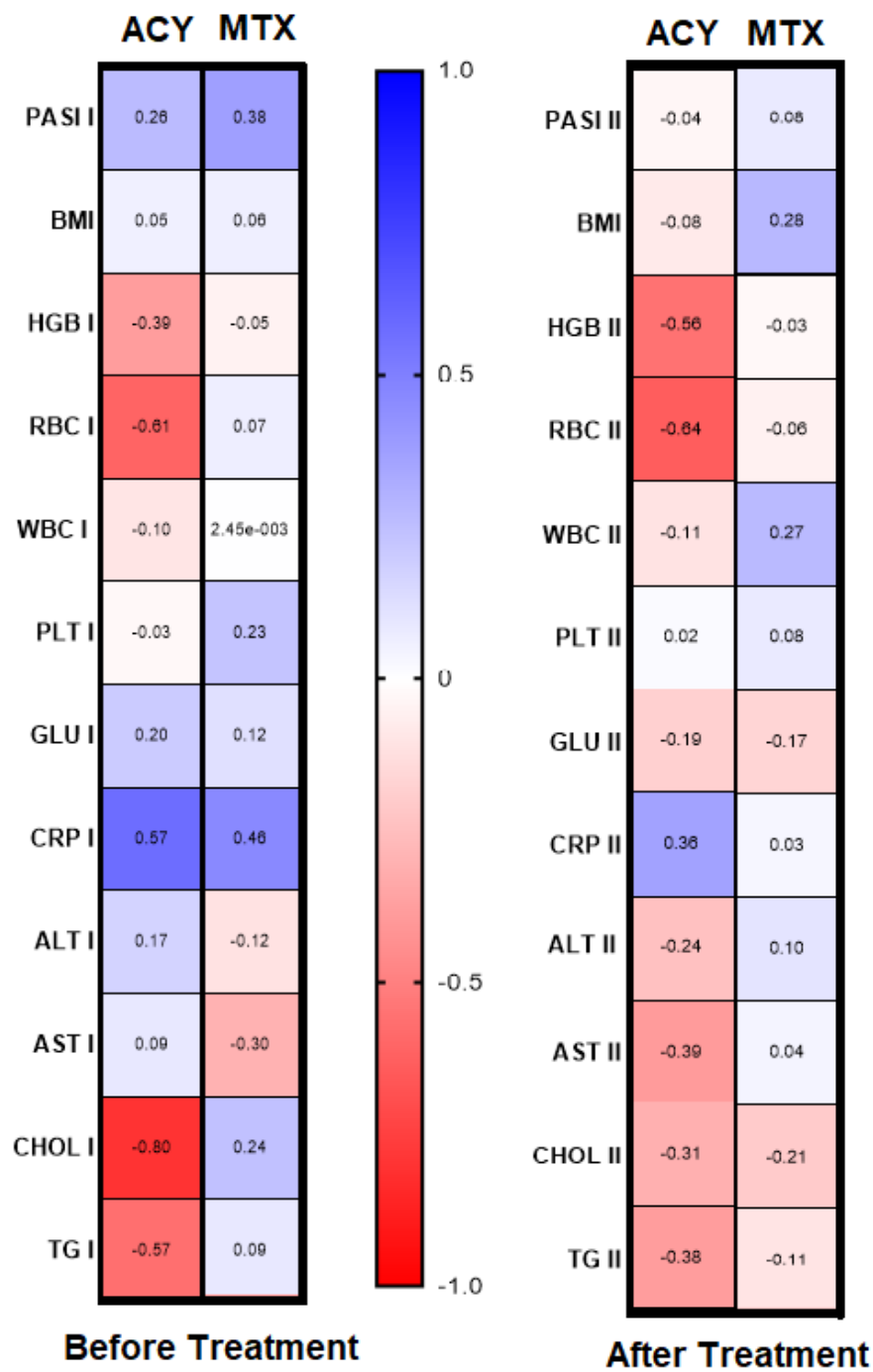


Figure S2. Correlations between selected parameters and serum galectin-3 level in patients before and after treatment with acitretin (ACY) and methotrexate (MTX) with use of Spearman's rank correlation.

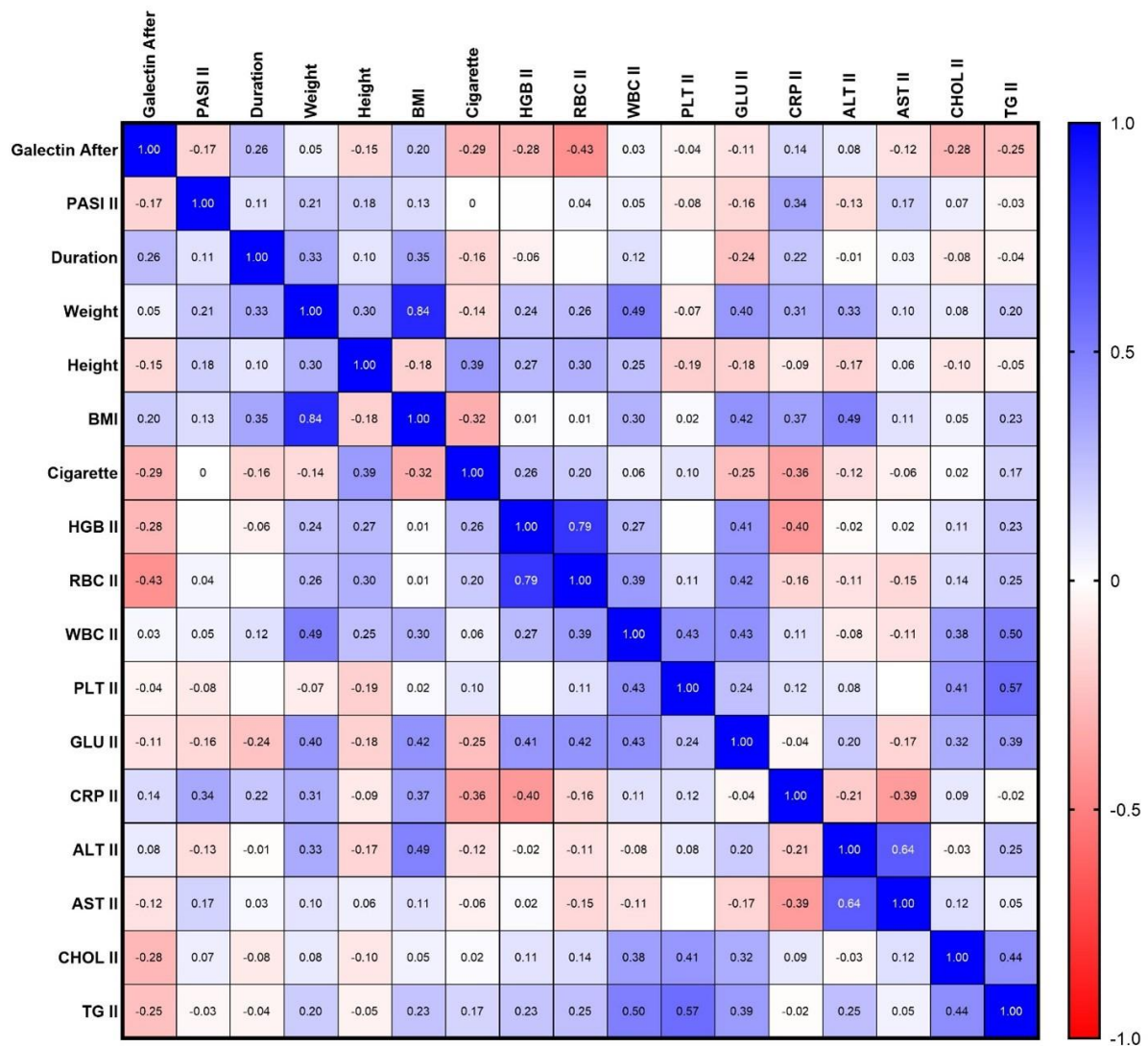


Figure S3. Correlations between gal-3 level and selected parameters after treatment with use of Spearman's rank correlation.

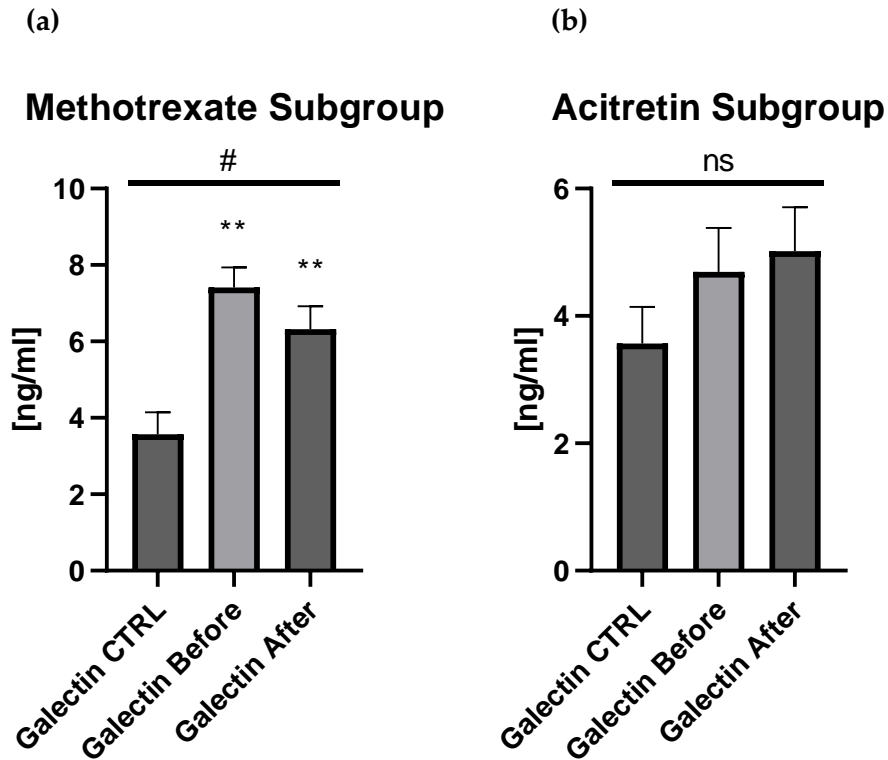


Figure S4. Gal-3 concentrations in controls and patients before and after the treatment with methotrexate (a) and acitretin (b). */**/ - means the existence of statistically significant difference between patients single group compared to control group with $p < 0.05$; < 0.01 , respectively. # - shows the statistical significance between control group and marked patients' subgroups when compared using ANOVA with $p < 0.05$.

NS, non-significant