Role of adiponectin and TNF-alpha in the pathogenesis and evolution of type 1 diabetes mellitus

Author

# Methods

## Abbreviations

* DM: diabetes mellitus
* AIT: autoimmune thyroiditis
* CD: celiac disease
* BMI: body-mass index (kg/m²)
* TNF-alpha: Tumor necrosis factor alpha
* HbA1C: glycosilated hemoglobin
* HDL: high-density lipoprotein cholesterol
* A1AT: Alpha-1 antitrypsin
* MW: Mann-Whitney test
* 95% CI: 95% confidence interval
* OR: odds-ratio
* SD: standard deviation
* SE: stadard error

## Study design

We performed a retrospective case-control study comparing children with type I DM to otherwise healthy controls. Patients were included between … from the electronic records of our institution (The First Pediatrics Clinic of the County Children’s Hospital in Cluj-Napoca, Romania).

## Patient data collection

We calculated Z-scores for BMI, Weight and Length / Height using the ‘anthro’ R package (<https://CRAN.R-project.org/package=anthro>) with 2006 references for patients aged 0 to 5 or using the R tools provided by WHO (<https://www.who.int/growthref/tools/>) with 2007 references for patients aged 5 to 18.

Based on our laboratory’s reference values, patients were classified as low risk of type 2 DM if adiponectin values were >10 μg/mL and medium or high risk otherwise. A similar classification was performed using TNF-alpha values: normal risk ≤8.1 pg/mL, high risk otherwise.

For all patients, legal caretakers signed an informed consent form at admission allowing anonymized research on data included in our hospital’s electronic database.

## Data analysis

Patient’s data was manually collected into a spreadsheet for prepossessing then imported into R 3.6.2 for statistical analysis. We used descriptive methods as appropriate: numeric and percent frequencies, means ± standard deviation and medians with extreme values. We also reported geometric means and geometric standard deviations for adiponectin and TNF-alpha values. We compared the DM group to the control group using univariate methods: odds-ratio (OR) with Fisher test for binary variables, Cramér’s V coefficient with Chi² test for other categorical variables, T and Mann-Whitney (MW) for normally and non-normally distributed numerical variables, respectively. Correlations between adiponectin or TNF-alpha and other numerical variables were studied using Spearman’s rho coefficients for all patients as well as separately for both groups. We used logistic models for OR (95% CIs) of DM by Adiponectin or TNF alpha, unadjusted (models 1, used as reference for deviance tests with the multivariate models) and adjusted for BMI Z score (models 2), Age at inclusion and Sex (models 3), and all three covariates combined (models 4). Both adiponectin and TNF-alpha values were transformed to base 2 logarithms prior to logistic regression, therefore odds ratios are referenced to every doubling of the original values.

# Results

We included 52 type I DM patients (mean age at inclusion 11.94 ±4.45, 57.7% girls) and 66 controls (mean age at inclusion 11.09 ±4.82, 48.5% girls). DM patients had significantly higher mean Z scores for weight compared to control patients (0.898 ±1.24 vs. -0.317 ±1.05, p<0.001) as well as for BMI (0.298 ±1.15 vs. -0.459 ±1.61, p=0.011).

Table 1: Demographic and anthropometric description of the sample comparing the two groups. Z-scores were calculated using the ‘anthro’ R package (<https://CRAN.R-project.org/package=anthro>) with 2006 references for ages 0 to 5 and using the R tools provided by WHO (<https://www.who.int/growthref/tools/>) with 2007 references for ages 5 to 18.

| **Variable** | **Details** | **DM** | **control** | **Total** | **Statistics** |
| --- | --- | --- | --- | --- | --- |
| **Group** |  | **52 (44.1%)** | **66 (55.9%)** | **118** |  |
| Age at inclusion (years) | μ ±SD | 11.94 ±4.45 | 11.09 ±4.82 | 11.47 ±4.66 | T-test: p=0.327 |
| Sex | F | 30 (57.7%) | 32 (48.5%) | 62 (52.5%) | OR=1.45 [0.70, 3.01] (p=0.357) |
| M | 22 (42.3%) | 34 (51.5%) | 56 (47.5%) |
| Place of living | rural | 24 (46.2%) | 26 (39.4%) | 50 (42.4%) | OR=1.32 [0.63, 2.75] (p=0.574) |
| urban | 28 (53.8%) | 40 (60.6%) | 68 (57.6%) |
| **Weight - Z score** | **μ ±SD** | **0.898 ±1.24** | **-0.317 ±1.05** | **0.158 ±1.27** | **T-test: p<0.001** |
| Height - Z score | μ ±SD | 0.426 ±1.27 | 0.409 ±1.26 | 0.417 ±1.26 | T-test: p=0.945 |
| **BMI - Z score** | **μ ±SD** | **0.298 ±1.15** | **-0.459 ±1.61** | **-0.125 ±1.47** | **Welch: p=0.004** |
| *μ ±SD = Mean (standard deviation); Welch = Welch T-Test (not assuming equal variances); OR/RR = odds-ratio / risk-ratio [95% CI] and p value from Fisher test);* | | | | | |

Both groups had statistically similar adiponectin levels (median: 13.57, range=6.82:26.61 vs. 13.85 range=7.05:22.31, p=0.774) and a similar proportion of high / medium risk patients based on adiponectin values (19.2% vs. 15.2%, OR=1.33, p=0.625). DM patients had significantly higher TNF-alpha levels compared to controls (median: 9.7, range=5.3:27.1 vs. 7.1, range=5.6:15.5, p<0.001) and a significantly higher proportion of high risk patients based on TNF-alpha values (80.8%, vs. 12.1%, OR=30.45, p<0.001).

Table 2: Adiponectin (μg/mL) and TNF-alpha (pg/mL) values by group, as well as risk of type 2 DM, based their values. Since both adiponectin and TNF-alpha distributions are skewed, we also provided geometric means and standard deviations.

| **Variable** | **Details** | **DM** | **control** | **Statistics** |
| --- | --- | --- | --- | --- |
| **Group** |  | **52 (44.1%)** | **66 (55.9%)** |  |
| Adiponectin (μg/mL) | μ ±SD | 14.07 ±4.69 | 13.78 ±3.39 | MW: p=0.774 |
| M (range) | 13.57 (6.82:26.61) | 13.85 (7.05:22.31) |
| Gμ ±SD | 13.33 ±1.4 | 13.34 ±1.3 |
| Adiponectin risk | medium-high | 10 (19.2%) | 10 (15.2%) | OR=1.33 [0.51, 3.49] (p=0.625) |
| low | 42 (80.8%) | 56 (84.8%) |
| **TNF-alpha (pg/mL)** | **μ ±SD** | **11.09 ±4.21** | **7.47 ±1.85** | **MW: p<0.001** |
| **M (range)** | **9.7 (5.3:27.1)** | **7.1 (5.6:15.5)** |
| **Gμ ±SD** | **10.46 ±1.4** | **7.30 ±1.22** |
| **TNF-alpha risk** | **high** | **42 (80.8%)** | **8 (12.1%)** | **OR=30.45 [11.08, 83.68] (p<0.001)** |
| **normal** | **10 (19.2%)** | **58 (87.9%)** |
| *μ ±SD = Mean (standard deviation); Gμ ±SD = Geometric mean (geometric standard deviation); M (range) = Median (min:max); MW = Mann-Whitney Test; OR/RR = odds-ratio / risk-ratio [95% CI] and p value from Fisher test);* | | | | |

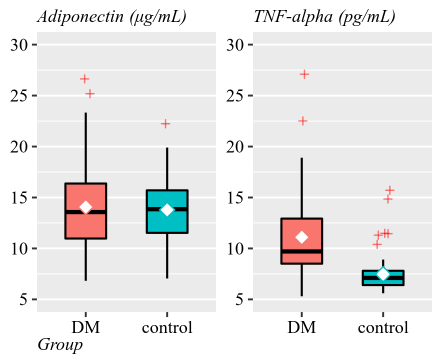


Figure 1: Adiponectin (μg/mL) and TNF-alpha (pg/mL) values by groups (◆ mean, — median, + outliers).

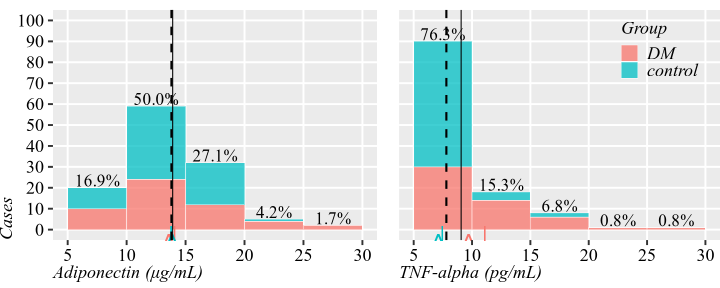


Figure 2: Adiponectin (μg/mL) and TNF-alpha (pg/mL) values by groups (│ mean, ┆ median).

DM patients also have significantly lower Alpha-1 antitrypsin levels compared to controls (median: 134, range=104:201 vs. 155.5, range=98:240, p<0.001) and higher Total cholesterol (median: 169, range=111:353 vs. 155, range=99:200, p<0.001) and HbA1C (median: 8.7, range=6.7:15.4 vs. 4.85, range=4:5.9, p<0.001).

Table 3: Other laboratory values by groups.

| **Variable** | **Details** | **DM** | **control** | **Statistics** |
| --- | --- | --- | --- | --- |
| **Group** |  | **52 (44.1%)** | **66 (55.9%)** |  |
| **Alpha-1 antitrypsin (mg/dL)** | **μ ±SD** | **133.50 ±18.2** | **156.61 ±27.2** | **MW: p<0.001** |
| **M (range)** | **134 (104:201)** | **155.5 (98:240)** |
| Triglycerides (mg/dL) | μ ±SD | 89.23 ±51.7 | 73.30 ±32.5 | MW: p=0.109 |
| M (range) | 72 (26:318) | 66.5 (24:187) |
| **Total cholesterol (mg/dL)** | **μ ±SD** | **177.71 ±42.7** | **155.59 ±23.1** | **MW: p=0.001** |
| **M (range)** | **169 (111:353)** | **155 (99:200)** |
| HDL cholesterol (mg/dL) | μ ±SD | 55.44 ±10.3 | 52.36 ±10.1 | MW: p=0.126 |
| M (range) | 54 (31:84) | 51.5 (31:78) |
| **HbA1C (%)** | **μ ±SD** | **9.03 ±1.79** | **4.83 ±0.477** | **MW: p<0.001** |
| **M (range)** | **8.7 (6.7:15.4)** | **4.85 (4:5.9)** |
| *μ ±SD = Mean (standard deviation); M (range) = Median (min:max); MW = Mann-Whitney Test;* | | | | |

With limited data avilable, none of the studied genes showed any significant differences in genotype distributions between cases and controls.

Table 4: Univariate statistics by groups of genotypes for several relevant genes, where available.

| **Variable** | **Details** | **DM** | **control** | **Statistics** |
| --- | --- | --- | --- | --- |
| **Group** |  | **52 (44.1%)** | **66 (55.9%)** |  |
| Adipo Q genotype 1 | GG | 8 (15.4%) | 3 (23.1%) | V=0.17 (p=0.390) |
| GT | 31 (59.6%) | 5 (38.5%) |
| TT | 13 (25.0%) | 5 (38.5%) |
| Adipo Q genotype 2 | mutant | 16 (47.1%) | 31 (49.2%) | V=0.07 (p=0.774) |
| heterozygote | 15 (44.1%) | 24 (38.1%) |
| wild-type | 3 (8.8%) | 8 (12.7%) |
| GSTM genotype | M- | 22 (42.3%) | 6 (46.2%) | OR=0.86 [0.25, 2.90], phi=0.03 (p>0.999) |
| M+ | 30 (57.7%) | 7 (53.8%) |
| GSTT genotype | T- | 17 (32.7%) | 4 (30.8%) | OR=1.09 [0.29, 4.06], phi=0.02 (p>0.999) |
| T+ | 35 (67.3%) | 9 (69.2%) |
| TNF-alfa genotype | A1A1 | 39 (75.0%) | 9 (69.2%) | V=0.09 (p=0.761) |
| A1A2 | 12 (23.1%) | 4 (30.8%) |
| A2A2 | 1 (1.9%) | 0 |
| *OR/RR = odds-ratio / risk-ratio [95% CI] and p value from Fisher test); V = Cramér V (p value from Chi² test);* | | | | |

Aside from a patient with positive ANA antibodies (measured at age 7), control patients did not show any autoimmune disease, while 32.7% of DM patients had either BC, TAI or both (p<0.001, with median age 9 at onset). Atopies were found in approximately 17% in both groups. Neuropathy, nephropathy and retinopathy were found only in DM patients (36.5%, 11.5% and 4% respectively).

Table 5: Autoimmune pathology by groups.

| **Variable** | **Details** | **DM** | **control** | **Statistics** |
| --- | --- | --- | --- | --- |
| **Group** |  | **52 (44.1%)** | **66 (55.9%)** |  |
| **Autoimmune disease** | **yes** | **17 (32.7%)** | **0** | **OR=64.58 [3.77, 1 106.01] (p<0.001)** |
| *AIT+CD* | *5 (9.6%)* |  |
| *AIT* | *10 (19.2%)* |  |
| CD | *2 (3.8%)* |  |
| **no** | **35 (67.3%)** | **65 (100%)** |
| Age at onset of  autoimmune disease (years) | μ ±SD | 9.18 ±4.03 | 7.00 | MW: p=0.493 |
| M (range) | 9 (2:16) | 7 |
| *μ ±SD = Mean (standard deviation); M (range) = Median (min:max); MW = Mann-Whitney Test; OR/RR = odds-ratio / risk-ratio [95% CI] and p value from Fisher test); CD: celiac disease; AIT: autoimmune thyroidis* | | | | |

Table 6: Comorbidities, by groups.

| **Variable** | **Details** | **DM** | **control** | **Statistics** |
| --- | --- | --- | --- | --- |
| **Group** |  | **52 (44.1%)** | **66 (55.9%)** |  |
| Atopies | | 9 (17.3%) | 11 (16.7%) | OR=1.05 [0.40, 2.75] (p>0.999) |
| Retinopathy | yes | 2 (4%) |  |  |
| no | 50 (96.2%) |  |
| Nephropathy | yes | 6 (11.5%) |  |  |
| no | 46 (88.5%) |  |
| Neuropathy | yes | 19 (136.5%) |  |  |
| no | 33 (63.5%) |  |

In DM patients, the most frequent complications were insulin lipodystrophies (67.3%), followed by Dawn phenomena (42.3%) and dyslipidemias (26.9%).

Table 7: Prevalence of DM complications.

| **Other complications** | **N (%)** |
| --- | --- |
| **N=** | **118** |
| cheilartropatie diabetica | 3 (5.8%) |
| dyslipidemias | 14 (26.9%) |
| Dawn phenomenon | 22 (42.3%) |
| hepatopathy | 2 (3.8%) |
| hipomagneziemie | 1 (1.9%) |
| insulin resistance | 2 (3.8%) |
| insulin lipodystrophies | 35 (67.3%) |
| lipoidic necrosis | 1 (1.9%) |
| severe growth retardation | 1 (1.9%) |
| cholestasis | 1 (1.9%) |
| eating disorders | 1 (1.9%) |
| none | 7 (13.5%) |

## Correlations

Adiponectin values were not significantly correlated to TNF-alpha values, in neither of the 2 groups. In DM patients, higher Adiponectin and TNF-alpha values were significantly correlated to lower Ages at inclusion and at onset of DM. In addition, TNF-alpha showed significant negative correlations with Age at onset of autoimmune disease and HDL cholesterol. These correlations decreased to statistical insignificance in controls, with the exception of Adiponectin to Age at inclusion which decreased but remained statistically significant. Overall, HbA1C (%) was significantly correlated to TNF-alpha, but not in separate groups because HbA1C values formed clusters with weaker intra-cluster correlations compared to between-clusters.

Table 8: Correlation matrix of Adiponectin and TNF-alpha values with several other parameters (Spearman’s R coefficients).

| **VS. (Spearman R)** | **Adiponectin (μg/mL)** | | | **TNF-alpha (pg/mL)** | | |
| --- | --- | --- | --- | --- | --- | --- |
| Overall | DM | control | Overall | DM | control |
| Adiponectin (μg/mL) |  |  |  | -0.007 | 0.173 | -0.119 |
| TNF-alpha (pg/mL) | -0.007 | 0.173 | -0.119 |  |  |  |
| Weight - Z score | 0.207 | 0.240 | 0.110 | 0.395\*\* | 0.139 | 0.101 |
| Height - Z score | 0.153⁺ | 0.112 | 0.201 | -0.016 | 0.236⁺ | -0.136 |
| BMI - Z score | -0.038 | 0.159 | -0.171 | 0.207\* | 0.213 | 0.052 |
| Age at inclusion (years) | -0.290\*\* | -0.305\* | -0.285\* | -0.181\* | -0.493\*\*\* | -0.154 |
| Age at onset (years) | -0.455\*\*\* | -0.455\*\*\* | NA | -0.345\* | -0.345\* | NA |
| Age at onset of autoimmune disease (years) | -0.223 | -0.264 | NA | -0.667\*\* | -0.700\*\* | NA |
| Glycaemia (mg/dL) | 0.173 | NA | 0.173 | -0.154 | NA | -0.154 |
| HbA1C (%) | 0.031 | 0.095 | 0.119 | 0.569\*\*\* | 0.196 | 0.026 |
| Insulin necessity | -0.179 | -0.179 | NA | -0.047 | -0.047 | NA |
| Alpha-1 antitrypsin (mg/dL) | 0.036 | -0.031 | 0.097 | -0.225\* | -0.127 | 0.169 |
| Total cholesterol (mg/dL) | 0.061 | 0.148 | -0.027 | 0.139 | -0.217 | 0.061 |
| HDL cholesterol (mg/dL) | 0.079 | 0.135 | 0.018 | 0.041 | -0.382\*\* | 0.117 |
| Triglycerides (mg/dL) | 0.027 | 0.069 | 0.063 | 0.040 | 0.119 | -0.203 |
| *p-value = ⁺: <0.10, < \*: <0.05\*, \*\*: < 0.01, \*\*\*: <0.001* |  |  |  |  |  |  |

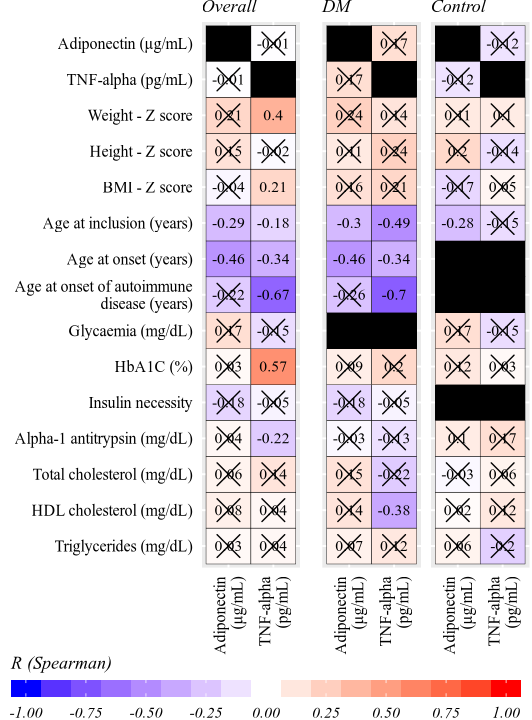


Figure 3: Correlation matrix of Adiponectin and TNF-alpha values with several other parameters (Spearman’s R coefficients, statistically insignifficant values crossed out).

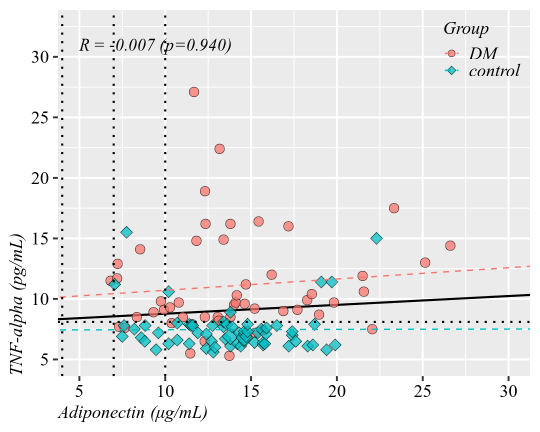


Figure 4: Correlation between Adiponectin and TNF-alpha (Spearman’s R coefficient). Reference values marked by dotted lines at 8.1 pg/mL for TNF-alpha and at 4, 7, an 10 μg/mL for adiponectin.

## Multivariate models

Odds of DM significantly increased with every doubling of TNF-alpha vales, unadjusted (OR=42.40 \*\*\*, 11.04 – 221.00) as well as adjusted for BMI Z scores (OR=36.36 \*\*\*, 9.52 – 187.95), Age & Sex (OR=129.30 \*\*\*, 24.7 to 999.2) and BMI, Age and Sex (OR = 118.16 \*\*\*, 22.13 to 934.82).

Odds of DM did not increase with every doubling of Adiponectin vales, unadjusted (OR=0.99, 0.42 – 2.36) or adjusted for BMI Z scores (OR=1.07, 0.44 to 2.62), Age & Sex (OR=1.13, 0.46 to 2.82) or BMI, Age and Sex (OR = 1.18, 0.471to 2.991).

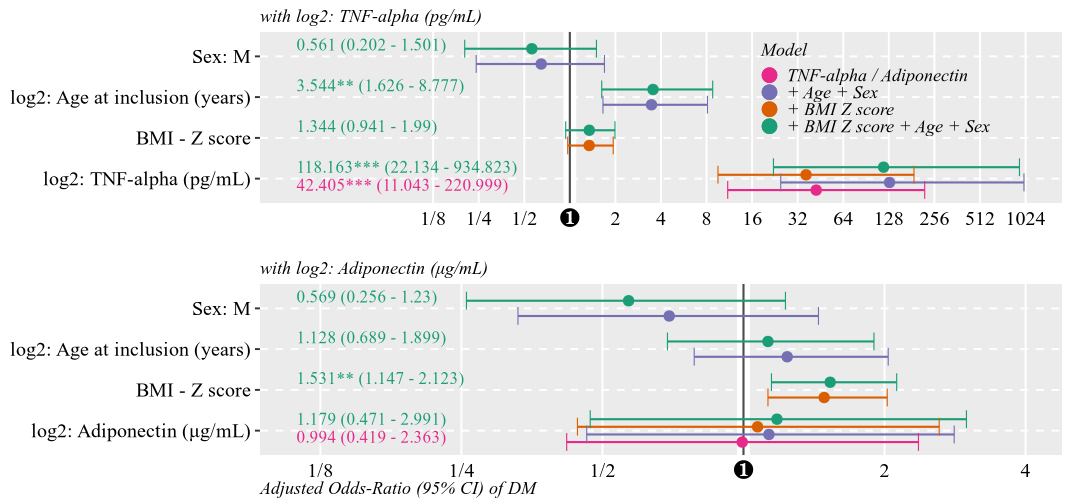


Figure 5: Logistic models for odds-ratios of DM by Adiponectin or TNF-alpha, unadjusted (purple) and adjusted for BMI Z score (orange), Age at inclusion and Sex (blue) and all three covariates combined (green). Adiponectin, TNF-alpha and age were transformed to base 2 logarithms, therefore odds ratios are referenced to every doubling of original values.

# Extra

## Adiponectin

| **Subset** | **N** | **Media ±SD** | **Med (Min:Max)** | **Media geom, SD** |
| --- | --- | --- | --- | --- |
| ***Adiponectin (μg/mL) (Shapiro-Wilk normality test: p=0.020)*** | | | | |
| (total) | 118 (100.0%) | 13.91 ±4.0 | 13.8 (6.8:26.6) | 13.34, 1.3 |
| ***Group (Wilcoxon rank sum test with continuity correction: p=0.774)*** | | | | |
| DM | 52 (44.1%) | 14.07 ±4.7 | 13.6 (6.8:26.6) | 13.33, 1.4 |
| control | 66 (55.9%) | 13.78 ±3.4 | 13.8 (7.0:22.3) | 13.34, 1.3 |
| ***Sex (Wilcoxon rank sum test with continuity correction: p=0.620)*** | | | | |
| F | 62 (52.5%) | 13.64 ±3.9 | 13.8 (7.0:26.6) | 13.08, 1.3 |
| M | 56 (47.5%) | 14.20 ±4.1 | 13.8 (6.8:25.1) | 13.63, 1.3 |
| ***Place of living (Wilcoxon rank sum test with continuity correction: p=0.419)*** | | | | |
| rural | 50 (42.4%) | 13.45 ±3.5 | 13.6 (6.8:21.6) | 12.97, 1.3 |
| urban | 68 (57.6%) | 14.24 ±4.3 | 13.8 (7.0:26.6) | 13.61, 1.4 |
| ***Form of onset (Wilcoxon rank sum test with continuity correction: p=0.367)*** | | | | |
| insidious | 46 (88.5%) | 13.91 ±4.8 | 13.1 (6.8:26.6) | 13.16, 1.4 |
| sudden | 6 (11.5%) | 15.24 ±4.4 | 14.4 (9.9:23.3) | 14.76, 1.3 |
| ***Decompensation stage (Kruskal-Wallis rank sum test: p=0.547)*** | | | | |
| compensat | 9 (17.3%) | 13.42 ±5.2 | 13.7 (6.8:21.5) | 12.52, 1.5 |
| compensat, instabil | 3 (5.8%) | 15.45 ±6.0 | 14.0 (10.3:22.1) | 14.70, 1.5 |
| decompensat I | 14 (26.9%) | 12.71 ±3.8 | 12.7 (7.2:21.6) | 12.18, 1.4 |
| decompensat I, instabil | 11 (21.2%) | 14.17 ±6.2 | 12.3 (7.3:26.6) | 13.11, 1.5 |
| decompensat II | 8 (15.4%) | 16.29 ±4.2 | 15.0 (11.7:25.1) | 15.88, 1.3 |
| decompensat III | 2 (3.8%) | 15.70 ±0.7 | 15.7 (15.2:16.2) | 15.70, 1.0 |
| instabil | 5 (9.6%) | 13.75 ±3.9 | 11.8 (9.8:18.5) | 13.33, 1.3 |
| ***Insulin injections/day (Kruskal-Wallis rank sum test: p=0.070)*** | | | | |
| 4 | 25 (48.1%) | 14.78 ±5.1 | 14.1 (7.2:26.6) | 13.93, 1.4 |
| 5 | 23 (44.2%) | 12.78 ±4.1 | 12.3 (6.8:25.1) | 12.21, 1.4 |
| insulin pump | 4 (7.7%) | 17.00 ±3.5 | 16.0 (14.0:22.1) | 16.75, 1.2 |
| ***Autoimmune disease (Kruskal-Wallis rank sum test: p=0.707)*** | | | | |
| no | 100 (85.5%) | 14.01 ±3.9 | 13.8 (6.8:26.6) | 13.49, 1.3 |
| BC | 2 (1.7%) | 15.38 ±3.3 | 15.4 (13.1:17.7) | 15.21, 1.2 |
| TAI | 10 (8.5%) | 13.81 ±5.7 | 13.9 (7.2:21.6) | 12.68, 1.6 |
| TAI+BC | 5 (4.3%) | 12.12 ±3.0 | 11.7 (8.5:16.2) | 11.83, 1.3 |
| ***Acute complications (Kruskal-Wallis rank sum test: p=0.660)*** | | | | |
| cetoacidoza diabetica | 3 (5.8%) | 13.24 ±5.7 | 15.2 (6.8:17.7) | 12.25, 1.7 |
| hipoglicemii diurne | 3 (5.8%) | 10.11 ±3.0 | 9.9 (7.2:13.2) | 9.82, 1.3 |
| hipoglicemii frecvente | 2 (3.8%) | 11.58 ±4.3 | 11.6 (8.5:14.6) | 11.18, 1.5 |
| hipoglicemii recurente | 7 (13.5%) | 13.77 ±2.3 | 13.1 (11.8:18.5) | 13.62, 1.2 |
| hipoglicemii severe | 1 (1.9%) | 13.12 ±NA | 13.1 (13.1:13.1) | 13.12, NA |
| no | 36 (69.2%) | 14.69 ±5.1 | 13.8 (7.2:26.6) | 13.86, 1.4 |
| ***Neuropathy (Kruskal-Wallis rank sum test: p=0.315)*** | | | | |
| neuropatie diabetica senzitiva | 1 (1.9%) | 18.96 ±NA | 19.0 (19.0:19.0) | 18.96, NA |
| neuropatie senitiva subclinica | 3 (5.8%) | 12.59 ±3.0 | 12.3 (9.8:15.7) | 12.36, 1.3 |
| neuropatie senzitiva | 3 (5.8%) | 13.53 ±1.8 | 13.8 (11.6:15.2) | 13.45, 1.1 |
| neuropatie senzitiva agravata | 1 (1.9%) | 25.14 ±NA | 25.1 (25.1:25.1) | 25.14, NA |
| neuropatie senzitiva subclinica | 11 (21.2%) | 12.27 ±2.7 | 12.3 (7.3:16.9) | 11.98, 1.3 |
| no | 33 (63.5%) | 14.37 ±5.1 | 14.0 (6.8:26.6) | 13.49, 1.4 |
| ***Nephropathy (Kruskal-Wallis rank sum test: p=0.379)*** | | | | |
| microalbuminurie tranzitorie | 4 (7.7%) | 15.16 ±1.9 | 14.9 (13.1:17.7) | 15.08, 1.1 |
| nefropatie diabetica incipienta | 2 (3.8%) | 18.74 ±9.0 | 18.7 (12.3:25.1) | 17.62, 1.7 |
| no | 46 (88.5%) | 13.77 ±4.7 | 13.3 (6.8:26.6) | 13.03, 1.4 |
| ***Retinopathy (Kruskal-Wallis rank sum test: p=0.150)*** | | | | |
| minime modificari retiniene | 1 (1.9%) | 17.70 ±NA | 17.7 (17.7:17.7) | 17.70, NA |
| no | 50 (96.2%) | 13.77 ±4.5 | 13.3 (6.8:26.6) | 13.09, 1.4 |
| retinopatia diabetica neproliferativa usoara | 1 (1.9%) | 25.14 ±NA | 25.1 (25.1:25.1) | 25.14, NA |
| ***Atopies (Wilcoxon rank sum test with continuity correction: p=0.277)*** | | | | |
| yes | 20 (16.9%) | 14.62 ±4.3 | 14.8 (7.0:22.3) | 13.95, 1.4 |
| no | 98 (83.1%) | 13.76 ±3.9 | 13.8 (6.8:26.6) | 13.21, 1.3 |
| ***Adipo Q genotype 1 (ANOVA: p=0.309)*** | | | | |
| GG | 11 (16.9%) | 12.79 ±3.1 | 12.3 (7.2:19.8) | 12.46, 1.3 |
| GT | 36 (55.4%) | 14.89 ±4.9 | 14.5 (6.8:26.6) | 14.11, 1.4 |
| TT | 18 (27.7%) | 13.51 ±4.3 | 13.5 (7.5:21.5) | 12.87, 1.4 |
| ***Adipo Q genotype 2 (Kruskal-Wallis rank sum test: p=0.488)*** | | | | |
| mutant | 47 (48.5%) | 13.55 ±4.0 | 13.8 (7.0:23.3) | 12.95, 1.4 |
| heterozygote | 39 (40.2%) | 14.63 ±4.2 | 14.0 (6.8:26.6) | 14.06, 1.3 |
| wild-type | 11 (11.3%) | 13.63 ±4.0 | 12.3 (9.6:22.3) | 13.18, 1.3 |
| ***GSTM genotype (Welch Two Sample t-test: p=0.123)*** | | | | |
| M- | 28 (43.1%) | 15.14 ±4.4 | 15.0 (7.2:25.1) | 14.49, 1.4 |
| M+ | 37 (56.9%) | 13.41 ±4.5 | 12.4 (6.8:26.6) | 12.75, 1.4 |
| ***GSTT genotype (Welch Two Sample t-test: p=0.069)*** | | | | |
| T- | 21 (32.3%) | 15.66 ±4.6 | 15.2 (7.6:25.1) | 15.00, 1.4 |
| T+ | 44 (67.7%) | 13.43 ±4.3 | 12.9 (6.8:26.6) | 12.79, 1.4 |
| ***TNF-alfa genotype (ANOVA: p=0.876)*** | | | | |
| A1A1 | 48 (73.8%) | 14.31 ±4.0 | 13.9 (7.2:23.3) | 13.75, 1.3 |
| A1A2 | 16 (24.6%) | 13.65 ±5.9 | 12.3 (6.8:26.6) | 12.59, 1.5 |
| A2A2 | 1 (1.5%) | 14.63 ±NA | 14.6 (14.6:14.6) | 14.63, NA |
| ***Adiponectin risk (Wilcoxon rank sum test with continuity correction: p<0.001)*** | | | | |
| medium-high | 20 (16.9%) | 8.28 ±1.0 | 8.3 (6.8:9.9) | 8.22, 1.1 |
| low | 98 (83.1%) | 15.06 ±3.4 | 14.5 (10.2:26.6) | 14.72, 1.2 |
| ***TNF-alpha risk (Wilcoxon rank sum test with continuity correction: p=0.740)*** | | | | |
| high | 50 (42.4%) | 14.35 ±4.9 | 13.8 (6.8:26.6) | 13.55, 1.4 |
| normal | 68 (57.6%) | 13.58 ±3.2 | 13.8 (7.3:22.1) | 13.18, 1.3 |
| ***Group : Adiponectin (Kruskal-Wallis rank sum test: p<0.001)*** | | | | |
| DM, medium-high risk | 10 (8.5%) | 8.21 ±1.1 | 8.0 (6.8:9.9) | 8.14, 1.1 |
| DM, low risk | 42 (35.6%) | 15.46 ±4.1 | 14.1 (10.3:26.6) | 14.99, 1.3 |
| control, medium-high risk | 10 (8.5%) | 8.34 ±0.9 | 8.4 (7.0:9.6) | 8.30, 1.1 |
| control, low risk | 56 (47.5%) | 14.75 ±2.7 | 14.6 (10.2:22.3) | 14.52, 1.2 |
| ***Group : TNF-alpha (Kruskal-Wallis rank sum test: p=0.735)*** | | | | |
| DM, high risk | 42 (35.6%) | 14.38 ±4.8 | 13.8 (6.8:26.6) | 13.64, 1.4 |
| DM, normal risk | 10 (8.5%) | 12.74 ±4.3 | 11.9 (7.3:22.1) | 12.13, 1.4 |
| control, high risk | 8 (6.8%) | 14.16 ±5.7 | 13.6 (7.0:22.3) | 13.10, 1.5 |
| control, normal risk | 58 (49.2%) | 13.73 ±3.0 | 14.0 (7.5:19.9) | 13.38, 1.3 |
| ***ameteala (Wilcoxon rank sum test with continuity correction: p=0.257)*** | | | | |
| da | 1 (1.9%) | 18.54 ±NA | 18.5 (18.5:18.5) | 18.54, NA |
| nu | 51 (98.1%) | 13.98 ±4.7 | 13.4 (6.8:26.6) | 13.25, 1.4 |
| ***cetoacidoza inaugurala (Wilcoxon rank sum test with continuity correction: p=0.286)*** | | | | |
| da | 1 (1.9%) | 9.93 ±NA | 9.9 (9.9:9.9) | 9.93, NA |
| nu | 51 (98.1%) | 14.15 ±4.7 | 13.7 (6.8:26.6) | 13.41, 1.4 |
| ***dureri abdominale (Wilcoxon rank sum test with continuity correction: p=0.270)*** | | | | |
| da | 5 (9.6%) | 15.63 ±3.4 | 14.0 (13.4:21.5) | 15.38, 1.2 |
| nu | 47 (90.4%) | 13.90 ±4.8 | 13.1 (6.8:26.6) | 13.13, 1.4 |
| ***fatigabilitate (Wilcoxon rank sum test with continuity correction: p=0.111)*** | | | | |
| da | 2 (3.8%) | 18.88 ±4.5 | 18.9 (15.7:22.1) | 18.62, 1.3 |
| nu | 50 (96.2%) | 13.87 ±4.6 | 13.3 (6.8:26.6) | 13.15, 1.4 |
| ***lipotimie (Wilcoxon rank sum test with continuity correction: p=0.257)*** | | | | |
| da | 1 (1.9%) | 18.54 ±NA | 18.5 (18.5:18.5) | 18.54, NA |
| nu | 51 (98.1%) | 13.98 ±4.7 | 13.4 (6.8:26.6) | 13.25, 1.4 |
| ***nicturie (Wilcoxon rank sum test with continuity correction: p=0.626)*** | | | | |
| da | 6 (11.5%) | 12.89 ±3.4 | 12.6 (8.5:17.7) | 12.51, 1.3 |
| nu | 46 (88.5%) | 14.22 ±4.8 | 13.6 (6.8:26.6) | 13.44, 1.4 |
| ***obnubilare (Wilcoxon rank sum test with continuity correction: p=0.295)*** | | | | |
| da | 2 (3.8%) | 17.65 ±5.4 | 17.6 (13.8:21.5) | 17.23, 1.4 |
| nu | 50 (96.2%) | 13.92 ±4.7 | 13.3 (6.8:26.6) | 13.20, 1.4 |
| ***polidipsie (Wilcoxon rank sum test with continuity correction: p=0.784)*** | | | | |
| da | 49 (94.2%) | 14.05 ±4.8 | 13.4 (6.8:26.6) | 13.30, 1.4 |
| nu | 3 (5.8%) | 14.37 ±4.3 | 14.6 (9.9:18.5) | 13.91, 1.4 |
| ***polifagie (Wilcoxon rank sum test with continuity correction: p=0.453)*** | | | | |
| da | 9 (17.3%) | 14.94 ±3.8 | 13.8 (10.4:21.5) | 14.54, 1.3 |
| nu | 43 (82.7%) | 13.88 ±4.9 | 13.2 (6.8:26.6) | 13.09, 1.4 |
| ***poliurie (Wilcoxon rank sum test with continuity correction: p=0.784)*** | | | | |
| da | 49 (94.2%) | 14.05 ±4.8 | 13.4 (6.8:26.6) | 13.30, 1.4 |
| nu | 3 (5.8%) | 14.37 ±4.3 | 14.6 (9.9:18.5) | 13.91, 1.4 |
| ***scadere in greutate (Wilcoxon rank sum test with continuity correction: p=0.592)*** | | | | |
| da | 37 (71.2%) | 13.70 ±4.3 | 13.4 (6.8:25.1) | 13.05, 1.4 |
| nu | 15 (28.8%) | 14.98 ±5.6 | 13.8 (7.2:26.6) | 14.05, 1.5 |
| ***hiperglicemie (Wilcoxon rank sum test with continuity correction: p=0.666)*** | | | | |
| da | 3 (5.8%) | 16.10 ±8.4 | 14.6 (8.5:25.1) | 14.65, 1.7 |
| nu | 49 (94.2%) | 13.94 ±4.5 | 13.4 (6.8:26.6) | 13.25, 1.4 |
| ***somnolenta (Wilcoxon rank sum test with continuity correction: p=0.067)*** | | | | |
| da | 2 (3.8%) | 20.23 ±1.8 | 20.2 (19.0:21.5) | 20.19, 1.1 |
| nu | 50 (96.2%) | 13.82 ±4.6 | 13.3 (6.8:26.6) | 13.11, 1.4 |
| ***varsaturi (Wilcoxon rank sum test with continuity correction: p=0.391)*** | | | | |
| da | 4 (7.7%) | 15.68 ±3.9 | 13.9 (13.4:21.5) | 15.36, 1.3 |
| nu | 48 (92.3%) | 13.93 ±4.8 | 13.1 (6.8:26.6) | 13.17, 1.4 |
| ***cheilartropatie diabetica (Wilcoxon rank sum test with continuity correction: p=0.289)*** | | | | |
| da | 3 (5.8%) | 16.06 ±3.4 | 16.9 (12.3:19.0) | 15.81, 1.2 |
| nu | 49 (94.2%) | 13.94 ±4.8 | 13.4 (6.8:26.6) | 13.19, 1.4 |
| ***dyslipidemias (Wilcoxon rank sum test with continuity correction: p=0.550)*** | | | | |
| da | 14 (26.9%) | 14.82 ±4.8 | 13.5 (8.3:25.1) | 14.16, 1.4 |
| nu | 38 (73.1%) | 13.79 ±4.7 | 13.6 (6.8:26.6) | 13.04, 1.4 |
| ***Dawn phenomenon (Wilcoxon rank sum test with continuity correction: p=0.138)*** | | | | |
| da | 22 (42.3%) | 12.99 ±4.7 | 12.7 (7.2:22.1) | 12.22, 1.4 |
| nu | 30 (57.7%) | 14.86 ±4.6 | 13.9 (6.8:26.6) | 14.21, 1.4 |
| ***hepatopathy (Wilcoxon rank sum test with continuity correction: p=0.521)*** | | | | |
| da | 2 (3.8%) | 15.66 ±4.7 | 15.7 (12.3:19.0) | 15.30, 1.4 |
| nu | 50 (96.2%) | 14.00 ±4.7 | 13.6 (6.8:26.6) | 13.26, 1.4 |
| ***hipomagneziemie (Wilcoxon rank sum test with continuity correction: p=0.894)*** | | | | |
| da | 1 (1.9%) | 13.12 ±NA | 13.1 (13.1:13.1) | 13.12, NA |
| nu | 51 (98.1%) | 14.09 ±4.7 | 13.7 (6.8:26.6) | 13.34, 1.4 |
| ***insulin resistance (Wilcoxon rank sum test with continuity correction: p=0.651)*** | | | | |
| da | 2 (3.8%) | 11.90 ±5.0 | 11.9 (8.3:15.4) | 11.36, 1.5 |
| nu | 50 (96.2%) | 14.15 ±4.7 | 13.6 (6.8:26.6) | 13.42, 1.4 |
| ***insulin lipodystrophies (Wilcoxon rank sum test with continuity correction: p=0.815)*** | | | | |
| da | 35 (67.3%) | 14.17 ±4.9 | 13.8 (7.2:26.6) | 13.37, 1.4 |
| nu | 17 (32.7%) | 13.86 ±4.4 | 13.2 (6.8:23.3) | 13.25, 1.4 |
| ***lipoidic necrosis (Wilcoxon rank sum test with continuity correction: p=0.143)*** | | | | |
| da | 1 (1.9%) | 7.31 ±NA | 7.3 (7.3:7.3) | 7.31, NA |
| nu | 51 (98.1%) | 14.20 ±4.6 | 13.7 (6.8:26.6) | 13.49, 1.4 |
| ***severe growth retardation (Wilcoxon rank sum test with continuity correction: p=0.230)*** | | | | |
| da | 1 (1.9%) | 18.96 ±NA | 19.0 (19.0:19.0) | 18.96, NA |
| nu | 51 (98.1%) | 13.97 ±4.7 | 13.4 (6.8:26.6) | 13.24, 1.4 |
| ***cholestasis (Wilcoxon rank sum test with continuity correction: p=0.183)*** | | | | |
| da | 1 (1.9%) | 8.35 ±NA | 8.3 (8.3:8.3) | 8.35, NA |
| nu | 51 (98.1%) | 14.18 ±4.7 | 13.7 (6.8:26.6) | 13.45, 1.4 |
| ***eating disorders (Wilcoxon rank sum test with continuity correction: p=0.096)*** | | | | |
| da | 1 (1.9%) | 26.61 ±NA | 26.6 (26.6:26.6) | 26.61, NA |
| nu | 51 (98.1%) | 13.82 ±4.4 | 13.4 (6.8:25.1) | 13.15, 1.4 |
| ***none (Wilcoxon rank sum test with continuity correction: p=0.362)*** | | | | |
| da | 7 (13.5%) | 12.31 ±3.1 | 13.2 (6.8:16.2) | 11.92, 1.3 |
| nu | 45 (86.5%) | 14.34 ±4.9 | 13.8 (7.2:26.6) | 13.56, 1.4 |

### log2: Adiponectin

| **Subset** | **N** | **Media ±SD** | **Med (Min:Max)** |
| --- | --- | --- | --- |
| ***Adiponectin (μg/mL) (Shapiro-Wilk normality test: p=0.072)*** | | | |
| (total) | 118 (100.0%) | 3.74 ±0.4 | 3.8 (2.8:4.7) |
| ***Group (Welch Two Sample t-test: p=0.989)*** | | | |
| DM | 52 (44.1%) | 3.74 ±0.5 | 3.8 (2.8:4.7) |
| control | 66 (55.9%) | 3.74 ±0.4 | 3.8 (2.8:4.5) |
| ***Sex (Welch Two Sample t-test: p=0.457)*** | | | |
| F | 62 (52.5%) | 3.71 ±0.4 | 3.8 (2.8:4.7) |
| M | 56 (47.5%) | 3.77 ±0.4 | 3.8 (2.8:4.7) |
| ***Place of living (Welch Two Sample t-test: p=0.376)*** | | | |
| rural | 50 (42.4%) | 3.70 ±0.4 | 3.8 (2.8:4.4) |
| urban | 68 (57.6%) | 3.77 ±0.4 | 3.8 (2.8:4.7) |
| ***Form of onset (Welch Two Sample t-test: p=0.377)*** | | | |
| insidious | 46 (88.5%) | 3.72 ±0.5 | 3.7 (2.8:4.7) |
| sudden | 6 (11.5%) | 3.88 ±0.4 | 3.8 (3.3:4.5) |
| ***Decompensation stage (ANOVA: p=0.655)*** | | | |
| compensat | 9 (17.3%) | 3.65 ±0.6 | 3.8 (2.8:4.4) |
| compensat, instabil | 3 (5.8%) | 3.88 ±0.6 | 3.8 (3.4:4.5) |
| decompensat I | 14 (26.9%) | 3.61 ±0.4 | 3.7 (2.8:4.4) |
| decompensat I, instabil | 11 (21.2%) | 3.71 ±0.6 | 3.6 (2.9:4.7) |
| decompensat II | 8 (15.4%) | 3.99 ±0.3 | 3.9 (3.5:4.7) |
| decompensat III | 2 (3.8%) | 3.97 ±0.1 | 4.0 (3.9:4.0) |
| instabil | 5 (9.6%) | 3.74 ±0.4 | 3.6 (3.3:4.2) |
| ***Insulin injections/day (ANOVA: p=0.141)*** | | | |
| 4 | 25 (48.1%) | 3.80 ±0.5 | 3.8 (2.8:4.7) |
| 5 | 23 (44.2%) | 3.61 ±0.4 | 3.6 (2.8:4.7) |
| insulin pump | 4 (7.7%) | 4.07 ±0.3 | 4.0 (3.8:4.5) |
| ***Autoimmune disease (ANOVA: p=0.655)*** | | | |
| no | 100 (85.5%) | 3.75 ±0.4 | 3.8 (2.8:4.7) |
| BC | 2 (1.7%) | 3.93 ±0.3 | 3.9 (3.7:4.1) |
| TAI | 10 (8.5%) | 3.66 ±0.6 | 3.8 (2.8:4.4) |
| TAI+BC | 5 (4.3%) | 3.56 ±0.4 | 3.5 (3.1:4.0) |
| ***Acute complications (ANOVA: p=0.597)*** | | | |
| cetoacidoza diabetica | 3 (5.8%) | 3.61 ±0.7 | 3.9 (2.8:4.1) |
| hipoglicemii diurne | 3 (5.8%) | 3.29 ±0.4 | 3.3 (2.9:3.7) |
| hipoglicemii frecvente | 2 (3.8%) | 3.48 ±0.5 | 3.5 (3.1:3.9) |
| hipoglicemii recurente | 7 (13.5%) | 3.77 ±0.2 | 3.7 (3.6:4.2) |
| hipoglicemii severe | 1 (1.9%) | 3.71 ±NA | 3.7 (3.7:3.7) |
| no | 36 (69.2%) | 3.79 ±0.5 | 3.8 (2.8:4.7) |
| ***Neuropathy (ANOVA: p=0.305)*** | | | |
| neuropatie diabetica senzitiva | 1 (1.9%) | 4.24 ±NA | 4.2 (4.2:4.2) |
| neuropatie senitiva subclinica | 3 (5.8%) | 3.63 ±0.3 | 3.6 (3.3:4.0) |
| neuropatie senzitiva | 3 (5.8%) | 3.75 ±0.2 | 3.8 (3.5:3.9) |
| neuropatie senzitiva agravata | 1 (1.9%) | 4.65 ±NA | 4.7 (4.7:4.7) |
| neuropatie senzitiva subclinica | 11 (21.2%) | 3.58 ±0.3 | 3.6 (2.9:4.1) |
| no | 33 (63.5%) | 3.75 ±0.5 | 3.8 (2.8:4.7) |
| ***Nephropathy (ANOVA: p=0.346)*** | | | |
| microalbuminurie tranzitorie | 4 (7.7%) | 3.91 ±0.2 | 3.9 (3.7:4.1) |
| nefropatie diabetica incipienta | 2 (3.8%) | 4.14 ±0.7 | 4.1 (3.6:4.7) |
| no | 46 (88.5%) | 3.70 ±0.5 | 3.7 (2.8:4.7) |
| ***Retinopathy (ANOVA: p=0.104)*** | | | |
| minime modificari retiniene | 1 (1.9%) | 4.15 ±NA | 4.1 (4.1:4.1) |
| no | 50 (96.2%) | 3.71 ±0.5 | 3.7 (2.8:4.7) |
| retinopatia diabetica neproliferativa usoara | 1 (1.9%) | 4.65 ±NA | 4.7 (4.7:4.7) |
| ***Atopies (Welch Two Sample t-test: p=0.495)*** | | | |
| yes | 20 (16.9%) | 3.80 ±0.5 | 3.9 (2.8:4.5) |
| no | 98 (83.1%) | 3.72 ±0.4 | 3.8 (2.8:4.7) |
| ***Adipo Q genotype 1 (ANOVA: p=0.421)*** | | | |
| GG | 11 (16.9%) | 3.64 ±0.3 | 3.6 (2.9:4.3) |
| GT | 36 (55.4%) | 3.82 ±0.5 | 3.9 (2.8:4.7) |
| TT | 18 (27.7%) | 3.69 ±0.5 | 3.8 (2.9:4.4) |
| ***Adipo Q genotype 2 (ANOVA: p=0.443)*** | | | |
| mutant | 47 (48.5%) | 3.70 ±0.5 | 3.8 (2.8:4.5) |
| heterozygote | 39 (40.2%) | 3.81 ±0.4 | 3.8 (2.8:4.7) |
| wild-type | 11 (11.3%) | 3.72 ±0.4 | 3.6 (3.3:4.5) |
| ***GSTM genotype (Welch Two Sample t-test: p=0.111)*** | | | |
| M- | 28 (43.1%) | 3.86 ±0.4 | 3.9 (2.9:4.7) |
| M+ | 37 (56.9%) | 3.67 ±0.5 | 3.6 (2.8:4.7) |
| ***GSTT genotype (Welch Two Sample t-test: p=0.060)*** | | | |
| T- | 21 (32.3%) | 3.91 ±0.4 | 3.9 (2.9:4.7) |
| T+ | 44 (67.7%) | 3.68 ±0.5 | 3.7 (2.8:4.7) |
| ***TNF-alfa genotype (ANOVA: p=0.619)*** | | | |
| A1A1 | 48 (73.8%) | 3.78 ±0.4 | 3.8 (2.8:4.5) |
| A1A2 | 16 (24.6%) | 3.65 ±0.6 | 3.6 (2.8:4.7) |
| A2A2 | 1 (1.5%) | 3.87 ±NA | 3.9 (3.9:3.9) |
| ***Adiponectin risk (Welch Two Sample t-test: p<0.001)*** | | | |
| medium-high | 20 (16.9%) | 3.04 ±0.2 | 3.0 (2.8:3.3) |
| low | 98 (83.1%) | 3.88 ±0.3 | 3.9 (3.4:4.7) |
| ***TNF-alpha risk (Welch Two Sample t-test: p=0.639)*** | | | |
| high | 50 (42.4%) | 3.76 ±0.5 | 3.8 (2.8:4.7) |
| normal | 68 (57.6%) | 3.72 ±0.4 | 3.8 (2.9:4.5) |
| ***Group : Adiponectin (ANOVA: p<0.001)*** | | | |
| DM, medium-high risk | 10 (8.5%) | 3.02 ±0.2 | 3.0 (2.8:3.3) |
| DM, low risk | 42 (35.6%) | 3.91 ±0.4 | 3.8 (3.4:4.7) |
| control, medium-high risk | 10 (8.5%) | 3.05 ±0.1 | 3.1 (2.8:3.3) |
| control, low risk | 56 (47.5%) | 3.86 ±0.3 | 3.9 (3.4:4.5) |
| ***Group : TNF-alpha (ANOVA: p=0.731)*** | | | |
| DM, high risk | 42 (35.6%) | 3.77 ±0.5 | 3.8 (2.8:4.7) |
| DM, normal risk | 10 (8.5%) | 3.60 ±0.5 | 3.6 (2.9:4.5) |
| control, high risk | 8 (6.8%) | 3.71 ±0.6 | 3.8 (2.8:4.5) |
| control, normal risk | 58 (49.2%) | 3.74 ±0.3 | 3.8 (2.9:4.3) |
| ***ameteala (T test ?: NA)*** | | | |
| da | 1 (1.9%) | 4.21 ±NA | 4.2 (4.2:4.2) |
| nu | 51 (98.1%) | 3.73 ±0.5 | 3.7 (2.8:4.7) |
| ***cetoacidoza inaugurala (T test ?: NA)*** | | | |
| da | 1 (1.9%) | 3.31 ±NA | 3.3 (3.3:3.3) |
| nu | 51 (98.1%) | 3.74 ±0.5 | 3.8 (2.8:4.7) |
| ***dureri abdominale (Welch Two Sample t-test: p=0.159)*** | | | |
| da | 5 (9.6%) | 3.94 ±0.3 | 3.8 (3.7:4.4) |
| nu | 47 (90.4%) | 3.71 ±0.5 | 3.7 (2.8:4.7) |
| ***fatigabilitate (Welch Two Sample t-test: p=0.271)*** | | | |
| da | 2 (3.8%) | 4.22 ±0.3 | 4.2 (4.0:4.5) |
| nu | 50 (96.2%) | 3.72 ±0.5 | 3.7 (2.8:4.7) |
| ***lipotimie (T test ?: NA)*** | | | |
| da | 1 (1.9%) | 4.21 ±NA | 4.2 (4.2:4.2) |
| nu | 51 (98.1%) | 3.73 ±0.5 | 3.7 (2.8:4.7) |
| ***nicturie (Welch Two Sample t-test: p=0.570)*** | | | |
| da | 6 (11.5%) | 3.64 ±0.4 | 3.7 (3.1:4.1) |
| nu | 46 (88.5%) | 3.75 ±0.5 | 3.8 (2.8:4.7) |
| ***obnubilare (Welch Two Sample t-test: p=0.436)*** | | | |
| da | 2 (3.8%) | 4.11 ±0.5 | 4.1 (3.8:4.4) |
| nu | 50 (96.2%) | 3.72 ±0.5 | 3.7 (2.8:4.7) |
| ***polidipsie (Welch Two Sample t-test: p=0.829)*** | | | |
| da | 49 (94.2%) | 3.73 ±0.5 | 3.7 (2.8:4.7) |
| nu | 3 (5.8%) | 3.80 ±0.5 | 3.9 (3.3:4.2) |
| ***polifagie (Welch Two Sample t-test: p=0.300)*** | | | |
| da | 9 (17.3%) | 3.86 ±0.4 | 3.8 (3.4:4.4) |
| nu | 43 (82.7%) | 3.71 ±0.5 | 3.7 (2.8:4.7) |
| ***poliurie (Welch Two Sample t-test: p=0.829)*** | | | |
| da | 49 (94.2%) | 3.73 ±0.5 | 3.7 (2.8:4.7) |
| nu | 3 (5.8%) | 3.80 ±0.5 | 3.9 (3.3:4.2) |
| ***scadere in greutate (Welch Two Sample t-test: p=0.507)*** | | | |
| da | 37 (71.2%) | 3.71 ±0.5 | 3.7 (2.8:4.7) |
| nu | 15 (28.8%) | 3.81 ±0.5 | 3.8 (2.9:4.7) |
| ***hiperglicemie (Welch Two Sample t-test: p=0.780)*** | | | |
| da | 3 (5.8%) | 3.87 ±0.8 | 3.9 (3.1:4.7) |
| nu | 49 (94.2%) | 3.73 ±0.5 | 3.7 (2.8:4.7) |
| ***somnolenta (Welch Two Sample t-test: p=0.021)*** | | | |
| da | 2 (3.8%) | 4.34 ±0.1 | 4.3 (4.2:4.4) |
| nu | 50 (96.2%) | 3.71 ±0.5 | 3.7 (2.8:4.7) |
| ***varsaturi (Welch Two Sample t-test: p=0.275)*** | | | |
| da | 4 (7.7%) | 3.94 ±0.3 | 3.8 (3.7:4.4) |
| nu | 48 (92.3%) | 3.72 ±0.5 | 3.7 (2.8:4.7) |
| ***cheilartropatie diabetica (Welch Two Sample t-test: p=0.290)*** | | | |
| da | 3 (5.8%) | 3.98 ±0.3 | 4.1 (3.6:4.2) |
| nu | 49 (94.2%) | 3.72 ±0.5 | 3.7 (2.8:4.7) |
| ***dyslipidemias (Welch Two Sample t-test: p=0.414)*** | | | |
| da | 14 (26.9%) | 3.82 ±0.4 | 3.8 (3.1:4.7) |
| nu | 38 (73.1%) | 3.70 ±0.5 | 3.8 (2.8:4.7) |
| ***Dawn phenomenon (Welch Two Sample t-test: p=0.117)*** | | | |
| da | 22 (42.3%) | 3.61 ±0.5 | 3.7 (2.8:4.5) |
| nu | 30 (57.7%) | 3.83 ±0.4 | 3.8 (2.8:4.7) |
| ***hepatopathy (Welch Two Sample t-test: p=0.623)*** | | | |
| da | 2 (3.8%) | 3.94 ±0.4 | 3.9 (3.6:4.2) |
| nu | 50 (96.2%) | 3.73 ±0.5 | 3.8 (2.8:4.7) |
| ***hipomagneziemie (T test ?: NA)*** | | | |
| da | 1 (1.9%) | 3.71 ±NA | 3.7 (3.7:3.7) |
| nu | 51 (98.1%) | 3.74 ±0.5 | 3.8 (2.8:4.7) |
| ***insulin resistance (Welch Two Sample t-test: p=0.683)*** | | | |
| da | 2 (3.8%) | 3.51 ±0.6 | 3.5 (3.1:3.9) |
| nu | 50 (96.2%) | 3.75 ±0.5 | 3.8 (2.8:4.7) |
| ***insulin lipodystrophies (Welch Two Sample t-test: p=0.926)*** | | | |
| da | 35 (67.3%) | 3.74 ±0.5 | 3.8 (2.8:4.7) |
| nu | 17 (32.7%) | 3.73 ±0.4 | 3.7 (2.8:4.5) |
| ***lipoidic necrosis (T test ?: NA)*** | | | |
| da | 1 (1.9%) | 2.87 ±NA | 2.9 (2.9:2.9) |
| nu | 51 (98.1%) | 3.75 ±0.5 | 3.8 (2.8:4.7) |
| ***severe growth retardation (T test ?: NA)*** | | | |
| da | 1 (1.9%) | 4.24 ±NA | 4.2 (4.2:4.2) |
| nu | 51 (98.1%) | 3.73 ±0.5 | 3.7 (2.8:4.7) |
| ***cholestasis (T test ?: NA)*** | | | |
| da | 1 (1.9%) | 3.06 ±NA | 3.1 (3.1:3.1) |
| nu | 51 (98.1%) | 3.75 ±0.5 | 3.8 (2.8:4.7) |
| ***eating disorders (T test ?: NA)*** | | | |
| da | 1 (1.9%) | 4.73 ±NA | 4.7 (4.7:4.7) |
| nu | 51 (98.1%) | 3.72 ±0.5 | 3.7 (2.8:4.7) |
| ***none (Welch Two Sample t-test: p=0.310)*** | | | |
| da | 7 (13.5%) | 3.58 ±0.4 | 3.7 (2.8:4.0) |
| nu | 45 (86.5%) | 3.76 ±0.5 | 3.8 (2.8:4.7) |

### Adiponectin risk

Patients with high or medium risk based on andiponectin values had significantly higer BMI Z-scores, Age at onset and lower HDL values compared to low risk patients.

| **Variable** | **Details** | **medium-high** | **low** | **Total** | **Statistics** |
| --- | --- | --- | --- | --- | --- |
| **Adiponectin risk** |  | **20 (16.9%)** | **98 (83.1%)** | **118** |  |
| Sex | F | 13 (65.0%) | 49 (50.0%) | 62 (52.5%) | OR=1.86 [0.68, 5.05] (p=0.326) |
| M | 7 (35.0%) | 49 (50.0%) | 56 (47.5%) |
| Place of living | rural | 7 (35.0%) | 43 (43.9%) | 50 (42.4%) | OR=0.69 [0.25, 1.88] (p=0.621) |
| urban | 13 (65.0%) | 55 (56.1%) | 68 (57.6%) |
| Age at inclusion (years) | M (min:max) | 13 (2:17) | 12 (1:18) | 12 (1:18) | MW: p=0.458 |
| μ ±SD | 12.35 ±3.95 | 11.29 ±4.79 | 11.47 ±4.66 |
| **Weight (kg)** | **M (min:max)** | **54.5 (11:84)** | **41 (6.5:80.5)** | **42.5 (6.5:84)** | **MW: p=0.049** |
| **μ ±SD** | **50.10 ±19.1** | **40.68 ±19.0** | **42.28 ±19.3** |
| Weight - Z score | M (min:max) | -0.11 (-1.1:1.36) | -0.08 (-3.52:3.04) | -0.1 (-3.52:3.04) | T-test: p=0.822 |
| μ ±SD | 0.036 ±0.911 | 0.173 ±1.31 | 0.158 ±1.27 |
| Height (cm) | M (min:max) | 161.65 (85.92:181.07) | 150.05 (72.11:190.42) | 151.85 (72.11:190.42) | MW: p=0.268 |
| μ ±SD | 152.09 ±22.2 | 145.08 ±25.5 | 146.27 ±25.0 |
| Height - Z score | M (min:max) | 0.4 (-1.88:3.07) | 0.48 (-3.4:3.81) | 0.45 (-3.4:3.81) | T-test: p=0.815 |
| μ ±SD | 0.477 ±1.22 | 0.404 ±1.27 | 0.417 ±1.26 |
| **BMI (kg/m²)** | **M (min:max)** | **20.16 (13.3:30.9)** | **17.79 (10.7:26.76)** | **18.21 (10.7:30.9)** | **T-test: p=0.006** |
| **μ ±SD** | **20.61 ±4.62** | **17.99 ±3.67** | **18.43 ±3.95** |
| BMI - Z score | M (min:max) | 0.22 (-1.5:2.57) | -0.12 (-4.85:4.54) | -0.02 (-4.85:4.54) | MW: p=0.056 |
| μ ±SD | 0.531 ±1.24 | -0.259 ±1.48 | -0.125 ±1.47 |
| **Adiponectin (μg/mL)** | **M (min:max)** | **8.27 (6.82:9.93)** | **14.5 (10.2:26.61)** | **13.8 (6.82:26.61)** | **MW: p<0.001** |
| **μ ±SD** | **8.28 ±0.987** | **15.06 ±3.35** | **13.91 ±4.0** |
| TNF-alpha (pg/mL) | M (min:max) | 8.15 (5.8:15.5) | 7.8 (5.3:27.1) | 7.8 (5.3:27.1) | MW: p=0.303 |
| μ ±SD | 9.24 ±2.71 | 9.03 ±3.76 | 9.07 ±3.59 |
| Alpha-1 antitrypsin (mg/dL) | M (min:max) | 143.5 (116:240) | 142.5 (98:201) | 142.5 (98:240) | MW: p=0.698 |
| μ ±SD | 150.85 ±30.7 | 145.52 ±25.3 | 146.42 ±26.2 |
| Total cholesterol (mg/dL) | M (min:max) | 159.5 (112:194) | 159 (99:353) | 159 (99:353) | MW: p=0.500 |
| μ ±SD | 157.90 ±21.4 | 166.86 ±36.9 | 165.34 ±34.8 |
| Triglycerides (mg/dL) | M (min:max) | 63.5 (24:187) | 69.5 (26:318) | 69 (24:318) | MW: p=0.818 |
| μ ±SD | 82.25 ±45.5 | 79.93 ±42.2 | 80.32 ±42.6 |
| **HDL cholesterol (mg/dL)** | **M (min:max)** | **48 (36:63)** | **54 (31:84)** | **53 (31:84)** | **MW: p=0.017** |
| **μ ±SD** | **48.90 ±7.52** | **54.70 ±10.5** | **53.72 ±10.3** |
| TNF-alpha risk | high | 10 (50.0%) | 40 (40.8%) | 50 (42.4%) | OR=1.45 [0.55, 3.80] (p=0.467) |
| normal | 10 (50.0%) | 58 (59.2%) | 68 (57.6%) |
| **Group : Adiponectin** | **DM, medium-high risk** | **10 (50.0%)** | **0** | **10 (8.5%)** | **V>0.99 (p<0.001)** |
| **DM, low risk** | **0** | **42 (42.9%)** | **42 (35.6%)** |
| **control, medium-high risk** | **10 (50.0%)** | **0** | **10 (8.5%)** |
| **control, low risk** | **0** | **56 (57.1%)** | **56 (47.5%)** |
| Group : TNF-alpha | DM, high risk | 8 (40.0%) | 34 (34.7%) | 42 (35.6%) | V=0.09 (p=0.807) |
| DM, normal risk | 2 (10.0%) | 8 (8.2%) | 10 (8.5%) |
| control, high risk | 2 (10.0%) | 6 (6.1%) | 8 (6.8%) |
| control, normal risk | 8 (40.0%) | 50 (51.0%) | 58 (49.2%) |
| Group | DM | 10 (50.0%) | 42 (42.9%) | 52 (44.1%) | OR=1.33 [0.51, 3.49] (p=0.625) |
| control | 10 (50.0%) | 56 (57.1%) | 66 (55.9%) |
| **Age at onset (years)** | **M (min:max)** | **8.5 (5:15)** | **5 (1:16)** | **6 (1:16)** | **MW: p=0.019** |
| **μ ±SD** | **9.10 ±3.57** | **6.10 ±3.68** | **6.67 ±3.82** |
| Form of onset | insidious | 9 (90.0%) | 37 (88.1%) | 46 (88.5%) | OR=1.22 [0.13, 11.74] (p>0.999) |
| sudden | 1 (10.0%) | 5 (11.9%) | 6 (11.5%) |
| Decompensation stage | compensat | 3 (30.0%) | 6 (14.3%) | 9 (17.3%) | V=0.30 (p=0.576) |
| compensat, instabil | 0 | 3 (7.1%) | 3 (5.8%) |
| decompensat I | 3 (30.0%) | 11 (26.2%) | 14 (26.9%) |
| decompensat I, instabil | 3 (30.0%) | 8 (19.0%) | 11 (21.2%) |
| decompensat II | 0 | 8 (19.0%) | 8 (15.4%) |
| decompensat III | 0 | 2 (4.8%) | 2 (3.8%) |
| instabil | 1 (10.0%) | 4 (9.5%) | 5 (9.6%) |
| Glycaemia (mg/dL) | M (min:max) | 82.5 (72:92) | 85 (53:116) | 84 (53:116) | MW: p=0.395 |
| μ ±SD | 82.30 ±6.72 | 84.27 ±9.49 | 83.97 ±9.11 |
| HbA1C (%) | M (min:max) | 6.35 (4.1:12) | 5.5 (4:15.4) | 5.5 (4:15.4) | MW: p=0.588 |
| μ ±SD | 6.58 ±2.34 | 6.70 ±2.46 | 6.68 ±2.43 |
| Insulin necessity | M (min:max) | 0.9 (0.56:1.51) | 1 (0.36:1.5) | 1 (0.36:1.51) | MW: p=0.761 |
| μ ±SD | 0.995 ±0.296 | 0.953 ±0.253 | 0.961 ±0.26 |
| Insulin injections/day | 4 | 4 (40.0%) | 21 (50.0%) | 25 (48.1%) | V=0.19 (p=0.403) |
| 5 | 6 (60.0%) | 17 (40.5%) | 23 (44.2%) |
| insulin pump | 0 | 4 (9.5%) | 4 (7.7%) |
| SBP (mmHg) | M (min:max) | 107.5 (80:120) | 100 (80:130) | 100 (80:130) | MW: p=0.377 |
| μ ±SD | 104.50 ±13.3 | 102.35 ±12.0 | 102.71 ±12.2 |
| DBP (mmHg) | M (min:max) | 57.5 (40:70) | 60 (35:80) | 60 (35:80) | MW: p=0.603 |
| μ ±SD | 56.00 ±8.37 | 57.30 ±10.5 | 57.08 ±10.1 |
| Autoimmune disease | no | 15 (75.0%) | 85 (87.6%) | 100 (85.5%) | V=0.20 (p=0.216) |
| positive ANA | 0 | 0 | 0 |
| BC | 0 | 2 (2.1%) | 2 (1.7%) |
| TAI | 4 (20.0%) | 6 (6.2%) | 10 (8.5%) |
| TAI+BC | 1 (5.0%) | 4 (4.1%) | 5 (4.3%) |
| Age at onset of autoimmune disease (years) | M (min:max) | 9 (7:15) | 9 (2:16) | 9 (2:16) | T-test: p=0.634 |
| μ ±SD | 9.80 ±3.03 | 8.77 ±4.32 | 9.06 ±3.95 |
| Acute complications | cetoacidoza diabetica | 1 (10.0%) | 2 (4.8%) | 3 (5.8%) | V=0.39 (p=0.156) |
| hipoglicemii diurne | 2 (20.0%) | 1 (2.4%) | 3 (5.8%) |
| hipoglicemii frecvente | 1 (10.0%) | 1 (2.4%) | 2 (3.8%) |
| hipoglicemii recurente | 0 | 7 (16.7%) | 7 (13.5%) |
| hipoglicemii severe | 0 | 1 (2.4%) | 1 (1.9%) |
| no | 6 (60.0%) | 30 (71.4%) | 36 (69.2%) |
| Neuropathy | neuropatie diabetica senzitiva | 0 | 1 (2.4%) | 1 (1.9%) | V=0.18 (p=0.893) |
| neuropatie senitiva subclinica | 1 (10.0%) | 2 (4.8%) | 3 (5.8%) |
| neuropatie senzitiva | 0 | 3 (7.1%) | 3 (5.8%) |
| neuropatie senzitiva agravata | 0 | 1 (2.4%) | 1 (1.9%) |
| neuropatie senzitiva subclinica | 2 (20.0%) | 9 (21.4%) | 11 (21.2%) |
| no | 7 (70.0%) | 26 (61.9%) | 33 (63.5%) |
| Nephropathy | microalbuminurie tranzitorie | 0 | 4 (9.5%) | 4 (7.7%) | V=0.18 (p=0.446) |
| nefropatie diabetica incipienta | 0 | 2 (4.8%) | 2 (3.8%) |
| no | 10 (100%) | 36 (85.7%) | 46 (88.5%) |
| Retinopathy | minime modificari retiniene | 0 | 1 (2.4%) | 1 (1.9%) | V=0.10 (p=0.781) |
| no | 10 (100%) | 40 (95.2%) | 50 (96.2%) |
| retinopatia diabetica neproliferativa usoara | 0 | 1 (2.4%) | 1 (1.9%) |
| Atopies | | 3 (15.0%) | 17 (17.3%) | 20 (16.9%) | OR=0.84 [0.22, 3.19] (p>0.999) |
| Adipo Q genotype 1 | GG | 1 (9.1%) | 10 (18.5%) | 11 (16.9%) | V=0.11 (p=0.657) |
| GT | 6 (54.5%) | 30 (55.6%) | 36 (55.4%) |
| TT | 4 (36.4%) | 14 (25.9%) | 18 (27.7%) |
| Adipo Q genotype 2 | mutant | 10 (66.7%) | 37 (45.1%) | 47 (48.5%) | V=0.16 (p=0.306) |
| heterozygote | 4 (26.7%) | 35 (42.7%) | 39 (40.2%) |
| wild-type | 1 (6.7%) | 10 (12.2%) | 11 (11.3%) |
| GSTM genotype | M- | 4 (36.4%) | 24 (44.4%) | 28 (43.1%) | OR=0.71 [0.19, 2.73] (p=0.745) |
| M+ | 7 (63.6%) | 30 (55.6%) | 37 (56.9%) |
| GSTT genotype | T- | 2 (18.2%) | 19 (35.2%) | 21 (32.3%) | OR=0.41 [0.08, 2.09] (p=0.480) |
| T+ | 9 (81.8%) | 35 (64.8%) | 44 (67.7%) |
| TNF-alfa genotype | A1A1 | 6 (54.5%) | 42 (77.8%) | 48 (73.8%) | V=0.22 (p=0.201) |
| A1A2 | 5 (45.5%) | 11 (20.4%) | 16 (24.6%) |
| A2A2 | 0 | 1 (1.9%) | 1 (1.5%) |
| ameteala | | 0 | 1 (2.4%) | 1 (1.9%) | OR=1.32 [0.05, 34.71] (p>0.999) |
| cetoacidoza inaugurala | | 1 (10.0%) | 0 | 1 (1.9%) | OR=13.42 [0.51, 355.60] (p=0.192) |
| dureri abdominale | | 0 | 5 (11.9%) | 5 (9.6%) | OR=0.32 [0.02, 6.36] (p=0.569) |
| fatigabilitate | | 0 | 2 (4.8%) | 2 (3.8%) | OR=0.77 [0.03, 17.32] (p>0.999) |
| lipotimie | | 0 | 1 (2.4%) | 1 (1.9%) | OR=1.32 [0.05, 34.71] (p>0.999) |
| nicturie | | 1 (10.0%) | 5 (11.9%) | 6 (11.5%) | OR=0.82 [0.09, 7.94] (p>0.999) |
| obnubilare | | 0 | 2 (4.8%) | 2 (3.8%) | OR=0.77 [0.03, 17.32] (p>0.999) |
| polidipsie | | 9 (90.0%) | 40 (95.2%) | 49 (94.2%) | OR=0.45 [0.04, 5.52] (p=0.481) |
| polifagie | | 0 | 9 (21.4%) | 9 (17.3%) | OR=0.17 [0.01, 3.14] (p=0.178) |
| poliurie | | 9 (90.0%) | 40 (95.2%) | 49 (94.2%) | OR=0.45 [0.04, 5.52] (p=0.481) |
| scadere in greutate | | 7 (70.0%) | 30 (71.4%) | 37 (71.2%) | OR=0.93 [0.21, 4.22] (p>0.999) |
| hiperglicemie | | 1 (10.0%) | 2 (4.8%) | 3 (5.8%) | OR=2.22 [0.18, 27.26] (p=0.481) |
| somnolenta | | 0 | 2 (4.8%) | 2 (3.8%) | OR=0.77 [0.03, 17.32] (p>0.999) |
| varsaturi | | 0 | 4 (9.5%) | 4 (7.7%) | OR=0.41 [0.02, 8.19] (p=0.576) |
| cheilartropatie diabetica | | 0 | 3 (7.1%) | 3 (5.8%) | OR=0.54 [0.03, 11.24] (p>0.999) |
| dyslipidemias | | 1 (10.0%) | 13 (31.0%) | 14 (26.9%) | OR=0.25 [0.03, 2.16] (p=0.254) |
| Dawn phenomenon | | 7 (70.0%) | 15 (35.7%) | 22 (42.3%) | OR=4.20 [0.94, 18.68] (p=0.075) |
| hepatopathy | | 0 | 2 (4.8%) | 2 (3.8%) | OR=0.77 [0.03, 17.32] (p>0.999) |
| hipomagneziemie | | 0 | 1 (2.4%) | 1 (1.9%) | OR=1.32 [0.05, 34.71] (p>0.999) |
| insulin resistance | | 1 (10.0%) | 1 (2.4%) | 2 (3.8%) | OR=4.56 [0.26, 79.88] (p=0.351) |
| insulin lipodystrophies | | 7 (70.0%) | 28 (66.7%) | 35 (67.3%) | OR=1.17 [0.26, 5.21] (p>0.999) |
| lipoidic necrosis | | 1 (10.0%) | 0 | 1 (1.9%) | OR=13.42 [0.51, 355.60] (p=0.192) |
| severe growth retardation | | 0 | 1 (2.4%) | 1 (1.9%) | OR=1.32 [0.05, 34.71] (p>0.999) |
| cholestasis | | 1 (10.0%) | 0 | 1 (1.9%) | OR=13.42 [0.51, 355.60] (p=0.192) |
| eating disorders | | 0 | 1 (2.4%) | 1 (1.9%) | OR=1.32 [0.05, 34.71] (p>0.999) |
| none | | 2 (20.0%) | 5 (11.9%) | 7 (13.5%) | OR=1.85 [0.30, 11.29] (p=0.608) |
| *μ ±SD = Mean (standard deviation); M (min:max) = Median (min:max); MW = Mann-Whitney Test; Welch = Welch T-Test (not assuming equal variances); OR/RR = odds-ratio / risk-ratio [95% CI] and p value from Fisher test); V = Cramér V (p value from Chi² test);* | | | | | |

## TNF alpha

| **Subset** | **N** | **Media ±SD** | **Med (Min:Max)** | **Media geom, SD** |
| --- | --- | --- | --- | --- |
| ***TNF-alpha (pg/mL) (Shapiro-Wilk normality test: p<0.001)*** | | | | |
| (total) | 118 (100.0%) | 9.07 ±3.6 | 7.8 (5.3:27.1) | 8.56, 1.4 |
| ***Group (Wilcoxon rank sum test with continuity correction: p<0.001)*** | | | | |
| DM | 52 (44.1%) | 11.09 ±4.2 | 9.7 (5.3:27.1) | 10.46, 1.4 |
| control | 66 (55.9%) | 7.47 ±1.9 | 7.1 (5.6:15.5) | 7.30, 1.2 |
| ***Sex (Wilcoxon rank sum test with continuity correction: p=0.365)*** | | | | |
| F | 62 (52.5%) | 9.02 ±3.4 | 7.9 (5.9:27.1) | 8.60, 1.3 |
| M | 56 (47.5%) | 9.11 ±3.8 | 7.8 (5.3:22.4) | 8.50, 1.4 |
| ***Place of living (Wilcoxon rank sum test with continuity correction: p=0.512)*** | | | | |
| rural | 50 (42.4%) | 9.19 ±3.7 | 7.8 (5.5:27.1) | 8.68, 1.4 |
| urban | 68 (57.6%) | 8.98 ±3.5 | 7.8 (5.3:22.4) | 8.46, 1.4 |
| ***Form of onset (Wilcoxon rank sum test with continuity correction: p=0.330)*** | | | | |
| insidious | 46 (88.5%) | 10.98 ±4.3 | 9.7 (5.3:27.1) | 10.33, 1.4 |
| sudden | 6 (11.5%) | 11.97 ±3.9 | 9.6 (9.1:17.5) | 11.50, 1.4 |
| ***Decompensation stage (Kruskal-Wallis rank sum test: p=0.259)*** | | | | |
| compensat | 9 (17.3%) | 8.63 ±2.1 | 8.0 (5.3:11.9) | 8.40, 1.3 |
| compensat, instabil | 3 (5.8%) | 8.77 ±1.1 | 9.3 (7.5:9.5) | 8.72, 1.1 |
| decompensat I | 14 (26.9%) | 12.05 ±4.5 | 10.4 (6.5:22.4) | 11.36, 1.4 |
| decompensat I, instabil | 11 (21.2%) | 10.73 ±3.2 | 9.7 (7.7:17.5) | 10.34, 1.3 |
| decompensat II | 8 (15.4%) | 13.56 ±6.4 | 11.3 (8.5:27.1) | 12.51, 1.5 |
| decompensat III | 2 (3.8%) | 10.60 ±2.0 | 10.6 (9.2:12.0) | 10.51, 1.2 |
| instabil | 5 (9.6%) | 11.30 ±4.2 | 10.4 (5.5:16.0) | 10.58, 1.5 |
| ***Insulin injections/day (Kruskal-Wallis rank sum test: p=0.193)*** | | | | |
| 4 | 25 (48.1%) | 11.94 ±4.9 | 10.4 (5.3:27.1) | 11.17, 1.4 |
| 5 | 23 (44.2%) | 10.52 ±3.6 | 9.0 (5.5:18.9) | 10.01, 1.4 |
| insulin pump | 4 (7.7%) | 9.10 ±2.2 | 8.5 (7.4:12.0) | 8.92, 1.3 |
| ***Autoimmune disease (Kruskal-Wallis rank sum test: p=0.002)*** | | | | |
| no | 100 (85.5%) | 8.66 ±3.3 | 7.6 (5.3:22.4) | 8.21, 1.4 |
| BC | 2 (1.7%) | 8.80 ±0.4 | 8.8 (8.5:9.1) | 8.80, 1.0 |
| TAI | 10 (8.5%) | 9.85 ±1.6 | 9.6 (7.6:12.9) | 9.74, 1.2 |
| TAI+BC | 5 (4.3%) | 15.48 ±7.2 | 14.1 (8.0:27.1) | 14.28, 1.6 |
| ***Acute complications (Kruskal-Wallis rank sum test: p=0.329)*** | | | | |
| cetoacidoza diabetica | 3 (5.8%) | 9.93 ±1.4 | 9.2 (9.1:11.5) | 9.88, 1.1 |
| hipoglicemii diurne | 3 (5.8%) | 14.80 ±6.9 | 12.9 (9.1:22.4) | 13.80, 1.6 |
| hipoglicemii frecvente | 2 (3.8%) | 11.85 ±3.2 | 11.8 (9.6:14.1) | 11.64, 1.3 |
| hipoglicemii recurente | 7 (13.5%) | 12.69 ±3.9 | 10.4 (8.5:18.9) | 12.19, 1.4 |
| hipoglicemii severe | 1 (1.9%) | 8.20 ±NA | 8.2 (8.2:8.2) | 8.20, NA |
| no | 36 (69.2%) | 10.61 ±4.2 | 9.4 (5.3:27.1) | 9.98, 1.4 |
| ***Neuropathy (Kruskal-Wallis rank sum test: p=0.499)*** | | | | |
| neuropatie diabetica senzitiva | 1 (1.9%) | 8.70 ±NA | 8.7 (8.7:8.7) | 8.70, NA |
| neuropatie senitiva subclinica | 3 (5.8%) | 12.03 ±6.1 | 9.8 (7.4:18.9) | 11.11, 1.6 |
| neuropatie senzitiva | 3 (5.8%) | 8.53 ±0.7 | 8.5 (7.9:9.2) | 8.52, 1.1 |
| neuropatie senzitiva agravata | 1 (1.9%) | 13.00 ±NA | 13.0 (13.0:13.0) | 13.00, NA |
| neuropatie senzitiva subclinica | 11 (21.2%) | 10.28 ±3.7 | 8.9 (5.5:16.4) | 9.73, 1.4 |
| no | 33 (63.5%) | 11.53 ±4.5 | 10.3 (5.3:27.1) | 10.85, 1.4 |
| ***Nephropathy (Kruskal-Wallis rank sum test: p=0.195)*** | | | | |
| microalbuminurie tranzitorie | 4 (7.7%) | 9.02 ±0.6 | 9.1 (8.2:9.6) | 9.01, 1.1 |
| nefropatie diabetica incipienta | 2 (3.8%) | 14.60 ±2.3 | 14.6 (13.0:16.2) | 14.51, 1.2 |
| no | 46 (88.5%) | 11.12 ±4.4 | 9.7 (5.3:27.1) | 10.45, 1.4 |
| ***Retinopathy (Kruskal-Wallis rank sum test: p=0.620)*** | | | | |
| minime modificari retiniene | 1 (1.9%) | 9.10 ±NA | 9.1 (9.1:9.1) | 9.10, NA |
| no | 50 (96.2%) | 11.10 ±4.3 | 9.7 (5.3:27.1) | 10.44, 1.4 |
| retinopatia diabetica neproliferativa usoara | 1 (1.9%) | 13.00 ±NA | 13.0 (13.0:13.0) | 13.00, NA |
| ***Atopies (Wilcoxon rank sum test with continuity correction: p=0.213)*** | | | | |
| yes | 20 (16.9%) | 9.22 ±2.8 | 8.0 (5.3:16.0) | 8.86, 1.3 |
| no | 98 (83.1%) | 9.03 ±3.7 | 7.7 (5.5:27.1) | 8.49, 1.4 |
| ***Adipo Q genotype 1 (Kruskal-Wallis rank sum test: p=0.343)*** | | | | |
| GG | 11 (16.9%) | 10.35 ±5.0 | 8.5 (5.9:22.4) | 9.52, 1.5 |
| GT | 36 (55.4%) | 10.84 ±4.5 | 9.8 (5.3:27.1) | 10.08, 1.5 |
| TT | 18 (27.7%) | 9.12 ±2.3 | 8.6 (6.2:14.8) | 8.88, 1.3 |
| ***Adipo Q genotype 2 (Kruskal-Wallis rank sum test: p=0.674)*** | | | | |
| mutant | 47 (48.5%) | 8.72 ±4.0 | 7.5 (5.3:27.1) | 8.15, 1.4 |
| heterozygote | 39 (40.2%) | 9.06 ±3.6 | 7.7 (5.6:22.4) | 8.55, 1.4 |
| wild-type | 11 (11.3%) | 8.48 ±2.6 | 7.8 (5.9:15.0) | 8.19, 1.3 |
| ***GSTM genotype (Wilcoxon rank sum test with continuity correction: p=0.648)*** | | | | |
| M- | 28 (43.1%) | 10.23 ±3.3 | 9.1 (5.6:17.5) | 9.75, 1.4 |
| M+ | 37 (56.9%) | 10.32 ±4.7 | 9.1 (5.3:27.1) | 9.55, 1.5 |
| ***GSTT genotype (Wilcoxon rank sum test with continuity correction: p=0.204)*** | | | | |
| T- | 21 (32.3%) | 9.02 ±2.5 | 9.0 (5.3:16.0) | 8.72, 1.3 |
| T+ | 44 (67.7%) | 10.89 ±4.6 | 9.6 (5.6:27.1) | 10.11, 1.5 |
| ***TNF-alfa genotype (Kruskal-Wallis rank sum test: p=0.977)*** | | | | |
| A1A1 | 48 (73.8%) | 10.37 ±4.4 | 9.1 (5.3:27.1) | 9.67, 1.4 |
| A1A2 | 16 (24.6%) | 10.06 ±3.4 | 9.2 (5.6:16.2) | 9.55, 1.4 |
| A2A2 | 1 (1.5%) | 9.60 ±NA | 9.6 (9.6:9.6) | 9.60, NA |
| ***Adiponectin risk (Wilcoxon rank sum test with continuity correction: p=0.303)*** | | | | |
| medium-high | 20 (16.9%) | 9.24 ±2.7 | 8.2 (5.8:15.5) | 8.90, 1.3 |
| low | 98 (83.1%) | 9.03 ±3.8 | 7.8 (5.3:27.1) | 8.49, 1.4 |
| ***TNF-alpha risk (Wilcoxon rank sum test with continuity correction: p<0.001)*** | | | | |
| high | 50 (42.4%) | 11.97 ±3.9 | 10.6 (8.1:27.1) | 11.47, 1.3 |
| normal | 68 (57.6%) | 6.93 ±0.7 | 7.0 (5.3:8.0) | 6.90, 1.1 |
| ***Group : Adiponectin (Kruskal-Wallis rank sum test: p<0.001)*** | | | | |
| DM, medium-high risk | 10 (8.5%) | 10.18 ±2.2 | 9.4 (7.6:14.1) | 9.97, 1.2 |
| DM, low risk | 42 (35.6%) | 11.31 ±4.6 | 9.7 (5.3:27.1) | 10.58, 1.4 |
| control, medium-high risk | 10 (8.5%) | 8.30 ±2.9 | 7.3 (5.8:15.5) | 7.95, 1.3 |
| control, low risk | 56 (47.5%) | 7.32 ±1.6 | 7.0 (5.6:15.0) | 7.19, 1.2 |
| ***Group : TNF-alpha (Kruskal-Wallis rank sum test: p<0.001)*** | | | | |
| DM, high risk | 42 (35.6%) | 12.05 ±4.1 | 10.4 (8.2:27.1) | 11.51, 1.3 |
| DM, normal risk | 10 (8.5%) | 7.06 ±1.0 | 7.4 (5.3:8.0) | 6.99, 1.2 |
| control, high risk | 8 (6.8%) | 11.51 ±2.6 | 11.3 (8.1:15.5) | 11.26, 1.3 |
| control, normal risk | 58 (49.2%) | 6.91 ±0.7 | 6.9 (5.6:8.0) | 6.88, 1.1 |
| ***ameteala (Wilcoxon rank sum test with continuity correction: p=0.739)*** | | | | |
| da | 1 (1.9%) | 10.40 ±NA | 10.4 (10.4:10.4) | 10.40, NA |
| nu | 51 (98.1%) | 11.11 ±4.3 | 9.7 (5.3:27.1) | 10.46, 1.4 |
| ***cetoacidoza inaugurala (Wilcoxon rank sum test with continuity correction: p=0.714)*** | | | | |
| da | 1 (1.9%) | 9.10 ±NA | 9.1 (9.1:9.1) | 9.10, NA |
| nu | 51 (98.1%) | 11.13 ±4.2 | 9.7 (5.3:27.1) | 10.49, 1.4 |
| ***dureri abdominale (Wilcoxon rank sum test with continuity correction: p=0.039)*** | | | | |
| da | 5 (9.6%) | 13.78 ±3.0 | 14.9 (9.5:16.4) | 13.50, 1.3 |
| nu | 47 (90.4%) | 10.81 ±4.2 | 9.6 (5.3:27.1) | 10.18, 1.4 |
| ***fatigabilitate (Wilcoxon rank sum test with continuity correction: p=0.048)*** | | | | |
| da | 2 (3.8%) | 7.45 ±0.1 | 7.4 (7.4:7.5) | 7.45, 1.0 |
| nu | 50 (96.2%) | 11.24 ±4.2 | 9.7 (5.3:27.1) | 10.60, 1.4 |
| ***lipotimie (Wilcoxon rank sum test with continuity correction: p=0.739)*** | | | | |
| da | 1 (1.9%) | 10.40 ±NA | 10.4 (10.4:10.4) | 10.40, NA |
| nu | 51 (98.1%) | 11.11 ±4.3 | 9.7 (5.3:27.1) | 10.46, 1.4 |
| ***nicturie (Wilcoxon rank sum test with continuity correction: p=0.510)*** | | | | |
| da | 6 (11.5%) | 10.27 ±4.1 | 8.8 (5.5:16.4) | 9.61, 1.5 |
| nu | 46 (88.5%) | 11.20 ±4.3 | 9.7 (5.3:27.1) | 10.58, 1.4 |
| ***obnubilare (Wilcoxon rank sum test with continuity correction: p=0.153)*** | | | | |
| da | 2 (3.8%) | 14.05 ±3.0 | 14.0 (11.9:16.2) | 13.89, 1.2 |
| nu | 50 (96.2%) | 10.98 ±4.2 | 9.6 (5.3:27.1) | 10.34, 1.4 |
| ***polidipsie (Wilcoxon rank sum test with continuity correction: p=0.953)*** | | | | |
| da | 49 (94.2%) | 11.18 ±4.3 | 9.7 (5.3:27.1) | 10.51, 1.4 |
| nu | 3 (5.8%) | 9.70 ±0.7 | 9.6 (9.1:10.4) | 9.69, 1.1 |
| ***polifagie (Wilcoxon rank sum test with continuity correction: p=0.681)*** | | | | |
| da | 9 (17.3%) | 11.58 ±6.5 | 9.1 (5.5:27.1) | 10.40, 1.6 |
| nu | 43 (82.7%) | 10.99 ±3.7 | 9.7 (5.3:22.4) | 10.47, 1.4 |
| ***poliurie (Wilcoxon rank sum test with continuity correction: p=0.953)*** | | | | |
| da | 49 (94.2%) | 11.18 ±4.3 | 9.7 (5.3:27.1) | 10.51, 1.4 |
| nu | 3 (5.8%) | 9.70 ±0.7 | 9.6 (9.1:10.4) | 9.69, 1.1 |
| ***scadere in greutate (Wilcoxon rank sum test with continuity correction: p=0.130)*** | | | | |
| da | 37 (71.2%) | 10.43 ±3.4 | 9.3 (5.3:22.4) | 9.97, 1.3 |
| nu | 15 (28.8%) | 12.74 ±5.5 | 10.4 (5.5:27.1) | 11.76, 1.5 |
| ***hiperglicemie (Wilcoxon rank sum test with continuity correction: p=0.307)*** | | | | |
| da | 3 (5.8%) | 12.23 ±2.3 | 13.0 (9.6:14.1) | 12.07, 1.2 |
| nu | 49 (94.2%) | 11.02 ±4.3 | 9.7 (5.3:27.1) | 10.37, 1.4 |
| ***somnolenta (Wilcoxon rank sum test with continuity correction: p=0.981)*** | | | | |
| da | 2 (3.8%) | 10.30 ±2.3 | 10.3 (8.7:11.9) | 10.18, 1.2 |
| nu | 50 (96.2%) | 11.13 ±4.3 | 9.7 (5.3:27.1) | 10.47, 1.4 |
| ***varsaturi (Wilcoxon rank sum test with continuity correction: p=0.122)*** | | | | |
| da | 4 (7.7%) | 13.12 ±3.0 | 13.4 (9.5:16.2) | 12.85, 1.3 |
| nu | 48 (92.3%) | 10.92 ±4.3 | 9.6 (5.3:27.1) | 10.28, 1.4 |
| ***cheilartropatie diabetica (Wilcoxon rank sum test with continuity correction: p=0.922)*** | | | | |
| da | 3 (5.8%) | 11.30 ±4.2 | 9.0 (8.7:16.2) | 10.83, 1.4 |
| nu | 49 (94.2%) | 11.08 ±4.3 | 9.7 (5.3:27.1) | 10.44, 1.4 |
| ***dyslipidemias (Wilcoxon rank sum test with continuity correction: p=0.781)*** | | | | |
| da | 14 (26.9%) | 12.09 ±5.5 | 9.3 (7.4:27.1) | 11.19, 1.5 |
| nu | 38 (73.1%) | 10.73 ±3.6 | 9.7 (5.3:22.4) | 10.20, 1.4 |
| ***Dawn phenomenon (Wilcoxon rank sum test with continuity correction: p=0.795)*** | | | | |
| da | 22 (42.3%) | 10.51 ±2.8 | 9.7 (7.4:16.4) | 10.19, 1.3 |
| nu | 30 (57.7%) | 11.52 ±5.0 | 9.6 (5.3:27.1) | 10.66, 1.5 |
| ***hepatopathy (Wilcoxon rank sum test with continuity correction: p=0.634)*** | | | | |
| da | 2 (3.8%) | 12.45 ±5.3 | 12.4 (8.7:16.2) | 11.87, 1.6 |
| nu | 50 (96.2%) | 11.04 ±4.2 | 9.7 (5.3:27.1) | 10.41, 1.4 |
| ***hipomagneziemie (Wilcoxon rank sum test with continuity correction: p=0.317)*** | | | | |
| da | 1 (1.9%) | 8.20 ±NA | 8.2 (8.2:8.2) | 8.20, NA |
| nu | 51 (98.1%) | 11.15 ±4.2 | 9.7 (5.3:27.1) | 10.51, 1.4 |
| ***insulin resistance (Wilcoxon rank sum test with continuity correction: p=0.686)*** | | | | |
| da | 2 (3.8%) | 12.45 ±5.6 | 12.4 (8.5:16.4) | 11.81, 1.6 |
| nu | 50 (96.2%) | 11.04 ±4.2 | 9.7 (5.3:27.1) | 10.41, 1.4 |
| ***insulin lipodystrophies (Wilcoxon rank sum test with continuity correction: p=0.646)*** | | | | |
| da | 35 (67.3%) | 10.97 ±3.3 | 9.7 (5.5:18.9) | 10.52, 1.3 |
| nu | 17 (32.7%) | 11.35 ±5.8 | 9.5 (5.3:27.1) | 10.34, 1.5 |
| ***lipoidic necrosis (Wilcoxon rank sum test with continuity correction: p=0.230)*** | | | | |
| da | 1 (1.9%) | 7.70 ±NA | 7.7 (7.7:7.7) | 7.70, NA |
| nu | 51 (98.1%) | 11.16 ±4.2 | 9.7 (5.3:27.1) | 10.52, 1.4 |
| ***severe growth retardation (Wilcoxon rank sum test with continuity correction: p=0.549)*** | | | | |
| da | 1 (1.9%) | 8.70 ±NA | 8.7 (8.7:8.7) | 8.70, NA |
| nu | 51 (98.1%) | 11.14 ±4.2 | 9.7 (5.3:27.1) | 10.50, 1.4 |
| ***cholestasis (Wilcoxon rank sum test with continuity correction: p=0.424)*** | | | | |
| da | 1 (1.9%) | 8.50 ±NA | 8.5 (8.5:8.5) | 8.50, NA |
| nu | 51 (98.1%) | 11.15 ±4.2 | 9.7 (5.3:27.1) | 10.50, 1.4 |
| ***eating disorders (Wilcoxon rank sum test with continuity correction: p=0.317)*** | | | | |
| da | 1 (1.9%) | 14.40 ±NA | 14.4 (14.4:14.4) | 14.40, NA |
| nu | 51 (98.1%) | 11.03 ±4.2 | 9.7 (5.3:27.1) | 10.39, 1.4 |
| ***none (Wilcoxon rank sum test with continuity correction: p=0.737)*** | | | | |
| da | 7 (13.5%) | 10.90 ±5.6 | 9.5 (5.3:22.4) | 9.88, 1.6 |
| nu | 45 (86.5%) | 11.12 ±4.0 | 9.7 (5.5:27.1) | 10.55, 1.4 |

### log2: TNF alpha

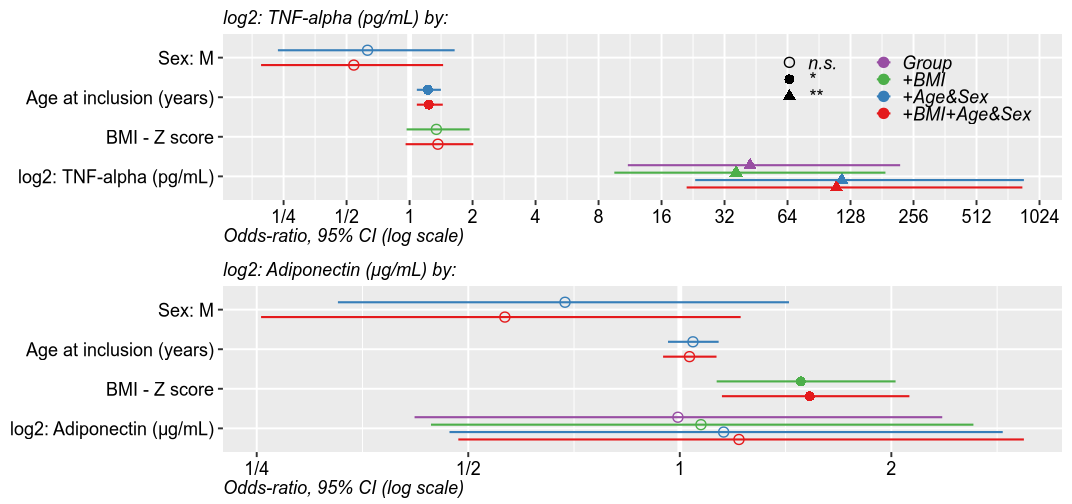
| **Subset** | **N** | **Media ±SD** | **Med (Min:Max)** |
| --- | --- | --- | --- |
| ***TNF-alpha (pg/mL) (Shapiro-Wilk normality test: p<0.001)*** | | | |
| (total) | 118 (100.0%) | 3.10 ±0.5 | 3.0 (2.4:4.8) |
| ***Group (Wilcoxon rank sum test with continuity correction: p<0.001)*** | | | |
| DM | 52 (44.1%) | 3.39 ±0.5 | 3.3 (2.4:4.8) |
| control | 66 (55.9%) | 2.87 ±0.3 | 2.8 (2.5:4.0) |
| ***Sex (Wilcoxon rank sum test with continuity correction: p=0.365)*** | | | |
| F | 62 (52.5%) | 3.10 ±0.4 | 3.0 (2.6:4.8) |
| M | 56 (47.5%) | 3.09 ±0.5 | 3.0 (2.4:4.5) |
| ***Place of living (Wilcoxon rank sum test with continuity correction: p=0.512)*** | | | |
| rural | 50 (42.4%) | 3.12 ±0.5 | 3.0 (2.5:4.8) |
| urban | 68 (57.6%) | 3.08 ±0.5 | 3.0 (2.4:4.5) |
| ***Form of onset (Welch Two Sample t-test: p=0.448)*** | | | |
| insidious | 46 (88.5%) | 3.37 ±0.5 | 3.3 (2.4:4.8) |
| sudden | 6 (11.5%) | 3.52 ±0.4 | 3.3 (3.2:4.1) |
| ***Decompensation stage (ANOVA: p=0.248)*** | | | |
| compensat | 9 (17.3%) | 3.07 ±0.4 | 3.0 (2.4:3.6) |
| compensat, instabil | 3 (5.8%) | 3.12 ±0.2 | 3.2 (2.9:3.2) |
| decompensat I | 14 (26.9%) | 3.51 ±0.5 | 3.4 (2.7:4.5) |
| decompensat I, instabil | 11 (21.2%) | 3.37 ±0.4 | 3.3 (2.9:4.1) |
| decompensat II | 8 (15.4%) | 3.64 ±0.6 | 3.5 (3.1:4.8) |
| decompensat III | 2 (3.8%) | 3.39 ±0.3 | 3.4 (3.2:3.6) |
| instabil | 5 (9.6%) | 3.40 ±0.6 | 3.4 (2.5:4.0) |
| ***Insulin injections/day (ANOVA: p=0.332)*** | | | |
| 4 | 25 (48.1%) | 3.48 ±0.5 | 3.4 (2.4:4.8) |
| 5 | 23 (44.2%) | 3.32 ±0.5 | 3.2 (2.5:4.2) |
| insulin pump | 4 (7.7%) | 3.16 ±0.3 | 3.1 (2.9:3.6) |
| ***Autoimmune disease (Kruskal-Wallis rank sum test: p=0.002)*** | | | |
| no | 100 (85.5%) | 3.04 ±0.4 | 2.9 (2.4:4.5) |
| BC | 2 (1.7%) | 3.14 ±0.1 | 3.1 (3.1:3.2) |
| TAI | 10 (8.5%) | 3.28 ±0.2 | 3.3 (2.9:3.7) |
| TAI+BC | 5 (4.3%) | 3.84 ±0.6 | 3.8 (3.0:4.8) |
| ***Acute complications (ANOVA: p=0.423)*** | | | |
| cetoacidoza diabetica | 3 (5.8%) | 3.30 ±0.2 | 3.2 (3.2:3.5) |
| hipoglicemii diurne | 3 (5.8%) | 3.79 ±0.7 | 3.7 (3.2:4.5) |
| hipoglicemii frecvente | 2 (3.8%) | 3.54 ±0.4 | 3.5 (3.3:3.8) |
| hipoglicemii recurente | 7 (13.5%) | 3.61 ±0.4 | 3.4 (3.1:4.2) |
| hipoglicemii severe | 1 (1.9%) | 3.04 ±NA | 3.0 (3.0:3.0) |
| no | 36 (69.2%) | 3.32 ±0.5 | 3.2 (2.4:4.8) |
| ***Neuropathy (ANOVA: p=0.743)*** | | | |
| neuropatie diabetica senzitiva | 1 (1.9%) | 3.12 ±NA | 3.1 (3.1:3.1) |
| neuropatie senitiva subclinica | 3 (5.8%) | 3.47 ±0.7 | 3.3 (2.9:4.2) |
| neuropatie senzitiva | 3 (5.8%) | 3.09 ±0.1 | 3.1 (3.0:3.2) |
| neuropatie senzitiva agravata | 1 (1.9%) | 3.70 ±NA | 3.7 (3.7:3.7) |
| neuropatie senzitiva subclinica | 11 (21.2%) | 3.28 ±0.5 | 3.2 (2.5:4.0) |
| no | 33 (63.5%) | 3.44 ±0.5 | 3.4 (2.4:4.8) |
| ***Nephropathy (ANOVA: p=0.264)*** | | | |
| microalbuminurie tranzitorie | 4 (7.7%) | 3.17 ±0.1 | 3.2 (3.0:3.3) |
| nefropatie diabetica incipienta | 2 (3.8%) | 3.86 ±0.2 | 3.9 (3.7:4.0) |
| no | 46 (88.5%) | 3.38 ±0.5 | 3.3 (2.4:4.8) |
| ***Retinopathy (ANOVA: p=0.751)*** | | | |
| minime modificari retiniene | 1 (1.9%) | 3.19 ±NA | 3.2 (3.2:3.2) |
| no | 50 (96.2%) | 3.38 ±0.5 | 3.3 (2.4:4.8) |
| retinopatia diabetica neproliferativa usoara | 1 (1.9%) | 3.70 ±NA | 3.7 (3.7:3.7) |
| ***Atopies (Wilcoxon rank sum test with continuity correction: p=0.213)*** | | | |
| yes | 20 (16.9%) | 3.15 ±0.4 | 3.0 (2.4:4.0) |
| no | 98 (83.1%) | 3.09 ±0.5 | 2.9 (2.5:4.8) |
| ***Adipo Q genotype 1 (Kruskal-Wallis rank sum test: p=0.343)*** | | | |
| GG | 11 (16.9%) | 3.25 ±0.6 | 3.1 (2.6:4.5) |
| GT | 36 (55.4%) | 3.33 ±0.5 | 3.3 (2.4:4.8) |
| TT | 18 (27.7%) | 3.15 ±0.3 | 3.1 (2.6:3.9) |
| ***Adipo Q genotype 2 (Kruskal-Wallis rank sum test: p=0.674)*** | | | |
| mutant | 47 (48.5%) | 3.03 ±0.5 | 2.9 (2.4:4.8) |
| heterozygote | 39 (40.2%) | 3.09 ±0.5 | 2.9 (2.5:4.5) |
| wild-type | 11 (11.3%) | 3.03 ±0.4 | 3.0 (2.6:3.9) |
| ***GSTM genotype (Wilcoxon rank sum test with continuity correction: p=0.648)*** | | | |
| M- | 28 (43.1%) | 3.29 ±0.4 | 3.2 (2.5:4.1) |
| M+ | 37 (56.9%) | 3.26 ±0.5 | 3.2 (2.4:4.8) |
| ***GSTT genotype (Wilcoxon rank sum test with continuity correction: p=0.204)*** | | | |
| T- | 21 (32.3%) | 3.12 ±0.4 | 3.2 (2.4:4.0) |
| T+ | 44 (67.7%) | 3.34 ±0.5 | 3.3 (2.5:4.8) |
| ***TNF-alfa genotype (Kruskal-Wallis rank sum test: p=0.977)*** | | | |
| A1A1 | 48 (73.8%) | 3.27 ±0.5 | 3.2 (2.4:4.8) |
| A1A2 | 16 (24.6%) | 3.26 ±0.5 | 3.2 (2.5:4.0) |
| A2A2 | 1 (1.5%) | 3.26 ±NA | 3.3 (3.3:3.3) |
| ***Adiponectin risk (Wilcoxon rank sum test with continuity correction: p=0.303)*** | | | |
| medium-high | 20 (16.9%) | 3.15 ±0.4 | 3.0 (2.5:4.0) |
| low | 98 (83.1%) | 3.08 ±0.5 | 3.0 (2.4:4.8) |
| ***TNF-alpha risk (Wilcoxon rank sum test with continuity correction: p<0.001)*** | | | |
| high | 50 (42.4%) | 3.52 ±0.4 | 3.4 (3.0:4.8) |
| normal | 68 (57.6%) | 2.79 ±0.2 | 2.8 (2.4:3.0) |
| ***Group : Adiponectin (Kruskal-Wallis rank sum test: p<0.001)*** | | | |
| DM, medium-high risk | 10 (8.5%) | 3.32 ±0.3 | 3.2 (2.9:3.8) |
| DM, low risk | 42 (35.6%) | 3.40 ±0.5 | 3.3 (2.4:4.8) |
| control, medium-high risk | 10 (8.5%) | 2.99 ±0.4 | 2.9 (2.5:4.0) |
| control, low risk | 56 (47.5%) | 2.85 ±0.3 | 2.8 (2.5:3.9) |
| ***Group : TNF-alpha (Kruskal-Wallis rank sum test: p<0.001)*** | | | |
| DM, high risk | 42 (35.6%) | 3.52 ±0.4 | 3.4 (3.0:4.8) |
| DM, normal risk | 10 (8.5%) | 2.81 ±0.2 | 2.9 (2.4:3.0) |
| control, high risk | 8 (6.8%) | 3.49 ±0.3 | 3.5 (3.0:4.0) |
| control, normal risk | 58 (49.2%) | 2.78 ±0.1 | 2.8 (2.5:3.0) |
| ***ameteala (T test ?: NA)*** | | | |
| da | 1 (1.9%) | 3.38 ±NA | 3.4 (3.4:3.4) |
| nu | 51 (98.1%) | 3.39 ±0.5 | 3.3 (2.4:4.8) |
| ***cetoacidoza inaugurala (T test ?: NA)*** | | | |
| da | 1 (1.9%) | 3.19 ±NA | 3.2 (3.2:3.2) |
| nu | 51 (98.1%) | 3.39 ±0.5 | 3.3 (2.4:4.8) |
| ***dureri abdominale (Welch Two Sample t-test: p=0.051)*** | | | |
| da | 5 (9.6%) | 3.75 ±0.3 | 3.9 (3.2:4.0) |
| nu | 47 (90.4%) | 3.35 ±0.5 | 3.3 (2.4:4.8) |
| ***fatigabilitate (Welch Two Sample t-test: p<0.001)*** | | | |
| da | 2 (3.8%) | 2.90 ±0.0 | 2.9 (2.9:2.9) |
| nu | 50 (96.2%) | 3.41 ±0.5 | 3.3 (2.4:4.8) |
| ***lipotimie (T test ?: NA)*** | | | |
| da | 1 (1.9%) | 3.38 ±NA | 3.4 (3.4:3.4) |
| nu | 51 (98.1%) | 3.39 ±0.5 | 3.3 (2.4:4.8) |
| ***nicturie (Welch Two Sample t-test: p=0.594)*** | | | |
| da | 6 (11.5%) | 3.26 ±0.6 | 3.1 (2.5:4.0) |
| nu | 46 (88.5%) | 3.40 ±0.5 | 3.3 (2.4:4.8) |
| ***obnubilare (Welch Two Sample t-test: p=0.286)*** | | | |
| da | 2 (3.8%) | 3.80 ±0.3 | 3.8 (3.6:4.0) |
| nu | 50 (96.2%) | 3.37 ±0.5 | 3.3 (2.4:4.8) |
| ***polidipsie (Welch Two Sample t-test: p=0.217)*** | | | |
| da | 49 (94.2%) | 3.39 ±0.5 | 3.3 (2.4:4.8) |
| nu | 3 (5.8%) | 3.28 ±0.1 | 3.3 (3.2:3.4) |
| ***polifagie (Welch Two Sample t-test: p=0.967)*** | | | |
| da | 9 (17.3%) | 3.38 ±0.7 | 3.2 (2.5:4.8) |
| nu | 43 (82.7%) | 3.39 ±0.4 | 3.3 (2.4:4.5) |
| ***poliurie (Welch Two Sample t-test: p=0.217)*** | | | |
| da | 49 (94.2%) | 3.39 ±0.5 | 3.3 (2.4:4.8) |
| nu | 3 (5.8%) | 3.28 ±0.1 | 3.3 (3.2:3.4) |
| ***scadere in greutate (Welch Two Sample t-test: p=0.171)*** | | | |
| da | 37 (71.2%) | 3.32 ±0.4 | 3.2 (2.4:4.5) |
| nu | 15 (28.8%) | 3.56 ±0.6 | 3.4 (2.5:4.8) |
| ***hiperglicemie (Welch Two Sample t-test: p=0.323)*** | | | |
| da | 3 (5.8%) | 3.59 ±0.3 | 3.7 (3.3:3.8) |
| nu | 49 (94.2%) | 3.37 ±0.5 | 3.3 (2.4:4.8) |
| ***somnolenta (Welch Two Sample t-test: p=0.886)*** | | | |
| da | 2 (3.8%) | 3.35 ±0.3 | 3.3 (3.1:3.6) |
| nu | 50 (96.2%) | 3.39 ±0.5 | 3.3 (2.4:4.8) |
| ***varsaturi (Welch Two Sample t-test: p=0.159)*** | | | |
| da | 4 (7.7%) | 3.68 ±0.3 | 3.7 (3.2:4.0) |
| nu | 48 (92.3%) | 3.36 ±0.5 | 3.3 (2.4:4.8) |
| ***cheilartropatie diabetica (Welch Two Sample t-test: p=0.875)*** | | | |
| da | 3 (5.8%) | 3.44 ±0.5 | 3.2 (3.1:4.0) |
| nu | 49 (94.2%) | 3.38 ±0.5 | 3.3 (2.4:4.8) |
| ***dyslipidemias (Welch Two Sample t-test: p=0.432)*** | | | |
| da | 14 (26.9%) | 3.48 ±0.6 | 3.2 (2.9:4.8) |
| nu | 38 (73.1%) | 3.35 ±0.5 | 3.3 (2.4:4.5) |
| ***Dawn phenomenon (Welch Two Sample t-test: p=0.609)*** | | | |
| da | 22 (42.3%) | 3.35 ±0.4 | 3.3 (2.9:4.0) |
| nu | 30 (57.7%) | 3.41 ±0.6 | 3.3 (2.4:4.8) |
| ***hepatopathy (Welch Two Sample t-test: p=0.745)*** | | | |
| da | 2 (3.8%) | 3.57 ±0.6 | 3.6 (3.1:4.0) |
| nu | 50 (96.2%) | 3.38 ±0.5 | 3.3 (2.4:4.8) |
| ***hipomagneziemie (T test ?: NA)*** | | | |
| da | 1 (1.9%) | 3.04 ±NA | 3.0 (3.0:3.0) |
| nu | 51 (98.1%) | 3.39 ±0.5 | 3.3 (2.4:4.8) |
| ***insulin resistance (Welch Two Sample t-test: p=0.767)*** | | | |
| da | 2 (3.8%) | 3.56 ±0.7 | 3.6 (3.1:4.0) |
| nu | 50 (96.2%) | 3.38 ±0.5 | 3.3 (2.4:4.8) |
| ***insulin lipodystrophies (Welch Two Sample t-test: p=0.877)*** | | | |
| da | 35 (67.3%) | 3.40 ±0.4 | 3.3 (2.5:4.2) |
| nu | 17 (32.7%) | 3.37 ±0.6 | 3.2 (2.4:4.8) |
| ***lipoidic necrosis (T test ?: NA)*** | | | |
| da | 1 (1.9%) | 2.94 ±NA | 2.9 (2.9:2.9) |
| nu | 51 (98.1%) | 3.40 ±0.5 | 3.3 (2.4:4.8) |
| ***severe growth retardation (T test ?: NA)*** | | | |
| da | 1 (1.9%) | 3.12 ±NA | 3.1 (3.1:3.1) |
| nu | 51 (98.1%) | 3.39 ±0.5 | 3.3 (2.4:4.8) |
| ***cholestasis (T test ?: NA)*** | | | |
| da | 1 (1.9%) | 3.09 ±NA | 3.1 (3.1:3.1) |
| nu | 51 (98.1%) | 3.39 ±0.5 | 3.3 (2.4:4.8) |
| ***eating disorders (T test ?: NA)*** | | | |
| da | 1 (1.9%) | 3.85 ±NA | 3.8 (3.8:3.8) |
| nu | 51 (98.1%) | 3.38 ±0.5 | 3.3 (2.4:4.8) |
| ***none (Welch Two Sample t-test: p=0.730)*** | | | |
| da | 7 (13.5%) | 3.30 ±0.7 | 3.2 (2.4:4.5) |
| nu | 45 (86.5%) | 3.40 ±0.5 | 3.3 (2.5:4.8) |

### TNF alpha risk

Patients with high or medium risk based on TNF-alpha values had significantly higer Weight Z-scores, total cholesterol, HbA1C and lower Alpha-1 antitrypsin, Glycaemia values compared to low risk patients as well ashigher odds of Autoimmune disease.

| **Variable** | **Details** | **high** | **normal** | **Total** | **Statistics** |
| --- | --- | --- | --- | --- | --- |
| **TNF-alpha risk** |  | **50 (42.4%)** | **68 (57.6%)** | **118** |  |
| Sex | F | 29 (58.0%) | 33 (48.5%) | 62 (52.5%) | OR=1.46 [0.70, 3.06] (p=0.354) |
| M | 21 (42.0%) | 35 (51.5%) | 56 (47.5%) |
| Place of living | rural | 21 (42.0%) | 29 (42.6%) | 50 (42.4%) | OR=0.97 [0.47, 2.04] (p>0.999) |
| urban | 29 (58.0%) | 39 (57.4%) | 68 (57.6%) |
| Age at inclusion (years) | M (min:max) | 11 (1:17) | 13.5 (1:18) | 12 (1:18) | MW: p=0.069 |
| μ ±SD | 10.68 ±4.44 | 12.04 ±4.77 | 11.47 ±4.66 |
| Weight (kg) | M (min:max) | 38 (11:76) | 46 (6.5:84) | 42.5 (6.5:84) | MW: p=0.327 |
| μ ±SD | 40.04 ±17.6 | 43.92 ±20.4 | 42.28 ±19.3 |
| **Weight - Z score** | **M (min:max)** | **1.02 (-1.46:3.04)** | **-0.41 (-3.52:1.1)** | **-0.1 (-3.52:3.04)** | **T-test: p<0.001** |
| **μ ±SD** | **0.736 ±1.27** | **-0.472 ±0.934** | **0.158 ±1.27** |
| Height (cm) | M (min:max) | 144.98 (84.04:178.03) | 155.22 (72.11:190.42) | 151.85 (72.11:190.42) | MW: p=0.139 |
| μ ±SD | 142.55 ±24.3 | 148.99 ±25.4 | 146.27 ±25.0 |
| Height - Z score | M (min:max) | 0.42 (-3.4:3.49) | 0.48 (-1.98:3.81) | 0.45 (-3.4:3.81) | T-test: p=0.983 |
| μ ±SD | 0.419 ±1.25 | 0.414 ±1.28 | 0.417 ±1.26 |
| BMI (kg/m²) | M (min:max) | 18.05 (12.78:26.76) | 18.4 (10.7:30.9) | 18.21 (10.7:30.9) | T-test: p=0.727 |
| μ ±SD | 18.58 ±3.35 | 18.33 ±4.36 | 18.43 ±3.95 |
| **BMI - Z score** | **M (min:max)** | **0.26 (-2.28:4.54)** | **-0.26 (-4.85:2.57)** | **-0.02 (-4.85:4.54)** | **MW: p=0.013** |
| **μ ±SD** | **0.296 ±1.23** | **-0.435 ±1.56** | **-0.125 ±1.47** |
| Adiponectin (μg/mL) | M (min:max) | 13.8 (6.82:26.61) | 13.8 (7.31:22.06) | 13.8 (6.82:26.61) | MW: p=0.740 |
| μ ±SD | 14.35 ±4.87 | 13.58 ±3.22 | 13.91 ±4.0 |
| **TNF-alpha (pg/mL)** | **M (min:max)** | **10.6 (8.1:27.1)** | **6.95 (5.3:8)** | **7.8 (5.3:27.1)** | **MW: p<0.001** |
| **μ ±SD** | **11.97 ±3.9** | **6.93 ±0.721** | **9.07 ±3.59** |
| **Alpha-1 antitrypsin (mg/dL)** | **M (min:max)** | **135 (104:240)** | **154 (98:198)** | **142.5 (98:240)** | **MW: p<0.001** |
| **μ ±SD** | **136.32 ±23.4** | **153.85 ±25.8** | **146.42 ±26.2** |
| **Total cholesterol (mg/dL)** | **M (min:max)** | **164 (111:272)** | **156.5 (99:353)** | **159 (99:353)** | **MW: p=0.034** |
| **μ ±SD** | **171.64 ±35.0** | **160.71 ±34.3** | **165.34 ±34.8** |
| Triglycerides (mg/dL) | M (min:max) | 69.5 (24:318) | 68.5 (29:187) | 69 (24:318) | MW: p=0.645 |
| μ ±SD | 86.32 ±52.9 | 75.91 ±32.8 | 80.32 ±42.6 |
| HDL cholesterol (mg/dL) | M (min:max) | 54 (31:84) | 52 (31:84) | 53 (31:84) | MW: p=0.248 |
| μ ±SD | 54.76 ±9.9 | 52.96 ±10.5 | 53.72 ±10.3 |
| Adiponectin risk | medium-high | 10 (20.0%) | 10 (14.7%) | 20 (16.9%) | OR=1.45 [0.55, 3.80] (p=0.467) |
| low | 40 (80.0%) | 58 (85.3%) | 98 (83.1%) |
| **Group : Adiponectin** | **DM, medium-high risk** | **8 (16.0%)** | **2 (2.9%)** | **10 (8.5%)** | **V=0.69 (p<0.001)** |
| **DM, low risk** | **34 (68.0%)** | **8 (11.8%)** | **42 (35.6%)** |
| **control, medium-high risk** | **2 (4.0%)** | **8 (11.8%)** | **10 (8.5%)** |
| **control, low risk** | **6 (12.0%)** | **50 (73.5%)** | **56 (47.5%)** |
| **Group : TNF-alpha** | **DM, high risk** | **42 (84.0%)** | **0** | **42 (35.6%)** | **V>0.99 (p<0.001)** |
| **DM, normal risk** | **0** | **10 (14.7%)** | **10 (8.5%)** |
| **control, high risk** | **8 (16.0%)** | **0** | **8 (6.8%)** |
| **control, normal risk** | **0** | **58 (85.3%)** | **58 (49.2%)** |
| **Group** | **DM** | **42 (84.0%)** | **10 (14.7%)** | **52 (44.1%)** | **OR=30.45 [11.08, 83.68] (p<0.001)** |
| **control** | **8 (16.0%)** | **58 (85.3%)** | **66 (55.9%)** |
| Age at onset (years) | M (min:max) | 5 (1:15) | 9 (2:16) | 6 (1:16) | MW: p=0.055 |
| μ ±SD | 6.07 ±3.28 | 9.20 ±4.98 | 6.67 ±3.82 |
| Form of onset | insidious | 36 (85.7%) | 10 (100%) | 46 (88.5%) | OR=0.27 [0.01, 5.15] (p=0.582) |
| sudden | 6 (14.3%) | 0 | 6 (11.5%) |
| Decompensation stage | compensat | 4 (9.5%) | 5 (50.0%) | 9 (17.3%) | V=0.48 (p=0.068) |
| compensat, instabil | 2 (4.8%) | 1 (10.0%) | 3 (5.8%) |
| decompensat I | 13 (31.0%) | 1 (10.0%) | 14 (26.9%) |
| decompensat I, instabil | 9 (21.4%) | 2 (20.0%) | 11 (21.2%) |
| decompensat II | 8 (19.0%) | 0 | 8 (15.4%) |
| decompensat III | 2 (4.8%) | 0 | 2 (3.8%) |
| instabil | 4 (9.5%) | 1 (10.0%) | 5 (9.6%) |
| **Glycaemia (mg/dL)** | **M (min:max)** | **79 (72:85)** | **85 (53:116)** | **84 (53:116)** | **MW: p=0.020** |
| **μ ±SD** | **79.00 ±3.96** | **84.66 ±9.42** | **83.97 ±9.11** |
| **HbA1C (%)** | **M (min:max)** | **8.55 (4.1:15.4)** | **4.95 (4:10.6)** | **5.5 (4:15.4)** | **MW: p<0.001** |
| **μ ±SD** | **8.54 ±2.39** | **5.31 ±1.3** | **6.68 ±2.43** |
| Insulin necessity | M (min:max) | 1 (0.36:1.51) | 0.9 (0.7:1.37) | 1 (0.36:1.51) | MW: p=0.583 |
| μ ±SD | 0.963 ±0.266 | 0.952 ±0.245 | 0.961 ±0.26 |
| Insulin injections/day | 4 | 21 (50.0%) | 4 (40.0%) | 25 (48.1%) | V=0.23 (p=0.265) |
| 5 | 19 (45.2%) | 4 (40.0%) | 23 (44.2%) |
| insulin pump | 2 (4.8%) | 2 (20.0%) | 4 (7.7%) |
| **SBP (mmHg)** | **M (min:max)** | **100 (80:120)** | **105 (80:130)** | **100 (80:130)** | **MW: p=0.013** |
| **μ ±SD** | **99.30 ±11.5** | **105.22 ±12.1** | **102.71 ±12.2** |
| **DBP (mmHg)** | **M (min:max)** | **55 (35:80)** | **60 (35:80)** | **60 (35:80)** | **MW: p=0.002** |
| **μ ±SD** | **53.80 ±10.8** | **59.49 ±8.9** | **57.08 ±10.1** |
| **Autoimmune disease** | **no** | **34 (69.4%)** | **66 (97.1%)** | **100 (85.5%)** | **V=0.39 (p<0.001)** |
| **positive ANA** | **0** | **0** | **0** |
| **BC** | **2 (4.1%)** | **0** | **2 (1.7%)** |
| **TAI** | **9 (18.4%)** | **1 (1.5%)** | **10 (8.5%)** |
| **TAI+BC** | **4 (8.2%)** | **1 (1.5%)** | **5 (4.3%)** |
| **Age at onset of autoimmune disease (years)** | **M (min:max)** | **9 (2:16)** | **15 (15:15)** | **9 (2:16)** | **Welch: p<0.001** |
| **μ ±SD** | **8.31 ±3.52** | **15.00 ±0.0** | **9.06 ±3.95** |
| Acute complications | cetoacidoza diabetica | 3 (7.1%) | 0 | 3 (5.8%) | V=0.33 (p=0.358) |
| hipoglicemii diurne | 3 (7.1%) | 0 | 3 (5.8%) |
| hipoglicemii frecvente | 2 (4.8%) | 0 | 2 (3.8%) |
| hipoglicemii recurente | 7 (16.7%) | 0 | 7 (13.5%) |
| hipoglicemii severe | 1 (2.4%) | 0 | 1 (1.9%) |
| no | 26 (61.9%) | 10 (100%) | 36 (69.2%) |
| Neuropathy | neuropatie diabetica senzitiva | 1 (2.4%) | 0 | 1 (1.9%) | V=0.16 (p=0.937) |
| neuropatie senitiva subclinica | 2 (4.8%) | 1 (10.0%) | 3 (5.8%) |
| neuropatie senzitiva | 2 (4.8%) | 1 (10.0%) | 3 (5.8%) |
| neuropatie senzitiva agravata | 1 (2.4%) | 0 | 1 (1.9%) |
| neuropatie senzitiva subclinica | 9 (21.4%) | 2 (20.0%) | 11 (21.2%) |
| no | 27 (64.3%) | 6 (60.0%) | 33 (63.5%) |
| Nephropathy | microalbuminurie tranzitorie | 4 (9.5%) | 0 | 4 (7.7%) | V=0.18 (p=0.446) |
| nefropatie diabetica incipienta | 2 (4.8%) | 0 | 2 (3.8%) |
| no | 36 (85.7%) | 10 (100%) | 46 (88.5%) |
| Retinopathy | minime modificari retiniene | 1 (2.4%) | 0 | 1 (1.9%) | V=0.10 (p=0.781) |
| no | 40 (95.2%) | 10 (100%) | 50 (96.2%) |
| retinopatia diabetica neproliferativa usoara | 1 (2.4%) | 0 | 1 (1.9%) |
| Atopies | | 9 (18.0%) | 11 (16.2%) | 20 (16.9%) | OR=1.14 [0.43, 2.99] (p=0.809) |
| Adipo Q genotype 1 | GG | 7 (16.3%) | 4 (18.2%) | 11 (16.9%) | V=0.15 (p=0.466) |
| GT | 26 (60.5%) | 10 (45.5%) | 36 (55.4%) |
| TT | 10 (23.3%) | 8 (36.4%) | 18 (27.7%) |
| Adipo Q genotype 2 | mutant | 13 (39.4%) | 34 (53.1%) | 47 (48.5%) | V=0.17 (p=0.264) |
| heterozygote | 17 (51.5%) | 22 (34.4%) | 39 (40.2%) |
| wild-type | 3 (9.1%) | 8 (12.5%) | 11 (11.3%) |
| GSTM genotype | M- | 20 (46.5%) | 8 (36.4%) | 28 (43.1%) | OR=1.52 [0.53, 4.37] (p=0.597) |
| M+ | 23 (53.5%) | 14 (63.6%) | 37 (56.9%) |
| GSTT genotype | T- | 13 (30.2%) | 8 (36.4%) | 21 (32.3%) | OR=0.76 [0.26, 2.25] (p=0.780) |
| T+ | 30 (69.8%) | 14 (63.6%) | 44 (67.7%) |
| TNF-alfa genotype | A1A1 | 32 (74.4%) | 16 (72.7%) | 48 (73.8%) | V=0.10 (p=0.736) |
| A1A2 | 10 (23.3%) | 6 (27.3%) | 16 (24.6%) |
| A2A2 | 1 (2.3%) | 0 | 1 (1.5%) |
| ameteala | | 1 (2.4%) | 0 | 1 (1.9%) | OR=0.76 [0.03, 20.00] (p>0.999) |
| cetoacidoza inaugurala | | 1 (2.4%) | 0 | 1 (1.9%) | OR=0.76 [0.03, 20.00] (p>0.999) |
| dureri abdominale | | 5 (11.9%) | 0 | 5 (9.6%) | OR=3.08 [0.16, 60.33] (p=0.569) |
| **fatigabilitate** | | **0** | **2 (20.0%)** | **2 (3.8%)** | **OR=0.04 [0.00, 0.91] (p=0.034)** |
| lipotimie | | 1 (2.4%) | 0 | 1 (1.9%) | OR=0.76 [0.03, 20.00] (p>0.999) |
| nicturie | | 4 (9.5%) | 2 (20.0%) | 6 (11.5%) | OR=0.42 [0.07, 2.71] (p=0.324) |
| obnubilare | | 2 (4.8%) | 0 | 2 (3.8%) | OR=1.30 [0.06, 29.10] (p>0.999) |
| polidipsie | | 39 (92.9%) | 10 (100%) | 49 (94.2%) | OR=0.54 [0.03, 11.24] (p>0.999) |
| polifagie | | 7 (16.7%) | 2 (20.0%) | 9 (17.3%) | OR=0.80 [0.14, 4.60] (p>0.999) |
| poliurie | | 39 (92.9%) | 10 (100%) | 49 (94.2%) | OR=0.54 [0.03, 11.24] (p>0.999) |
| scadere in greutate | | 29 (69.0%) | 8 (80.0%) | 37 (71.2%) | OR=0.56 [0.10, 3.00] (p=0.704) |
| hiperglicemie | | 3 (7.1%) | 0 | 3 (5.8%) | OR=1.86 [0.09, 38.91] (p>0.999) |
| somnolenta | | 2 (4.8%) | 0 | 2 (3.8%) | OR=1.30 [0.06, 29.10] (p>0.999) |
| varsaturi | | 4 (9.5%) | 0 | 4 (7.7%) | OR=2.45 [0.12, 49.32] (p=0.576) |
| cheilartropatie diabetica | | 3 (7.1%) | 0 | 3 (5.8%) | OR=1.86 [0.09, 38.91] (p>0.999) |
| dyslipidemias | | 12 (28.6%) | 2 (20.0%) | 14 (26.9%) | OR=1.60 [0.30, 8.65] (p=0.710) |
| Dawn phenomenon | | 17 (40.5%) | 5 (50.0%) | 22 (42.3%) | OR=0.68 [0.17, 2.71] (p=0.725) |
| hepatopathy | | 2 (4.8%) | 0 | 2 (3.8%) | OR=1.30 [0.06, 29.10] (p>0.999) |
| hipomagneziemie | | 1 (2.4%) | 0 | 1 (1.9%) | OR=0.76 [0.03, 20.00] (p>0.999) |
| insulin resistance | | 2 (4.8%) | 0 | 2 (3.8%) | OR=1.30 [0.06, 29.10] (p>0.999) |
| insulin lipodystrophies | | 30 (71.4%) | 5 (50.0%) | 35 (67.3%) | OR=2.50 [0.61, 10.23] (p=0.264) |
| lipoidic necrosis | | 0 | 1 (10.0%) | 1 (1.9%) | OR=0.07 [0.00, 1.97] (p=0.192) |
| severe growth retardation | | 1 (2.4%) | 0 | 1 (1.9%) | OR=0.76 [0.03, 20.00] (p>0.999) |
| cholestasis | | 1 (2.4%) | 0 | 1 (1.9%) | OR=0.76 [0.03, 20.00] (p>0.999) |
| eating disorders | | 1 (2.4%) | 0 | 1 (1.9%) | OR=0.76 [0.03, 20.00] (p>0.999) |
| none | | 5 (11.9%) | 2 (20.0%) | 7 (13.5%) | OR=0.54 [0.09, 3.30] (p=0.608) |
| *μ ±SD = Mean (standard deviation); M (min:max) = Median (min:max); MW = Mann-Whitney Test; Welch = Welch T-Test (not assuming equal variances); OR/RR = odds-ratio / risk-ratio [95% CI] and p value from Fisher test); V = Cramér V (p value from Chi² test);* | | | | | |

## Multicariate: Age - original values



Odds of DM significantly increased with every doubling of TNF-alpha vales, unadjusted (OR=42.40 \*\*\*, 11.04 – 221.00) as well as adjusted for BMI Z scores (OR=36.36 \*\*\*, 9.52 – 187.95), Age & Sex (OR=116.34 \*\*\*, 23.17 – 862.45) and BMI, Age and Sex (OR = 109.62 \*\*\*, 21.09 – 848.16).

Odds of DM did not increase with every doubling of Adiponectin vales, unadjusted (OR=0.99, 0.42 – 2.36) or adjusted for BMI Z scores (OR=1.07, 0.44 – 2.62), Age & Sex (OR=1.15, 0.47 – 2.88) or BMI, Age and Sex (OR = 1.21, 0.48 – 3.09).

# References

1. R Core Team (2019). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL <https://www.R-project.org/>.