**Supplementary table 1:** Spearman correlation coefficient between age, weight, body condition score (BCS), thyroid palpation score (TPS), Karnfosky score (KS), and T4 in all cats.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **All cats** |  | Age (years) | Weight (kg) | BCS(1–9) | TPS(1–6) | KS(0–100%) |
| Weight (kg) | r95% CI*P*n | -0.282\*-0.373– -0.185*<0.001*386 |  |  |  |  |
| BCS(1–9) | r95% CI*P*n | -0.218\*-0.318– -0.113*<0.001*353 | **0.750\*****0.698–0.794*****<0.001*****349** |  |  |  |
| TPS(0–6) | r95% CI*P*n | 0.202\*0.093–0.306*<0.001*332 | -0.219\*-0.325–0.108*<0.001*315 | -0.240\*-0.347– -0.127*<0.001*299 |  |  |
| KS(0–100%) | r95% CI*P*n | **-0.617\*****-0.765– -0.407*****<0.001*****52** | 0.459\*0.204–0.655*0.001*52 | **0.593\*****0.375–0.749*****<0.001*****52** | -0.455\*-0.652– -0.199*<0.001*52 |  |
| T4 (0.8–4.7 µg/dL) | r95% CI*P*n | 0.190\*0.094–0.283*<0.001*427 | -0.105\*-0.205–0.002*0.040*386 | -0.092-0.198–0.015*0.084*353 | 0.443\*0.350–0.528*<0.001*332 | -0.358\*-0.580– -0.086*0.009*52 |

CI = confidence interval; *P* = level of significance; n = number; \*correlation is significant after Bonferroni-Holm correction; bold = r ≥0.5

**Supplementary table 2:** Spearman correlation coefficient between age, weight, body condition score (BCS), thyroid palpation score (TPS), Karnfosky score (KS), and T4 in hyperthyroid cats.

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| --- | --- | --- | --- | --- | --- | --- |
| **Hyper-thyroid cats** |  | Age (years) | Weight (kg) | BCS(1–9) | TPS(1–6) | KS(0–100%) |
| Weight (kg) | r95% CI*P*n | **-0.601\*****-0.752– -0.390*****<0.001*****54** |  |  |  |  |
| BCS(1–9) | r95% CI*P*n | -0.419\*-0.632– -0.148*0.011*49 | **0.846\*****0.738–0.912*****<0.001*****49** |  |  |  |
| TPS(0–6) | r95% CI*P*n | 0.033-0.265–0.325*1.000*47 | -0.050-0.344–0.252*0.740*46 | -0.172-0.453–0.141*0.265*44 |  |  |
| KS(0–100%) | r95% CI*P*n | **-0.641\*****-0.867– -0.198*****0.022*****16** | 0.308-0.237–0.706*0.491*16 | 0.503-0.007–0.805*0.142*16 | -0.442-0.776–0.085*0.434*16 |  |
| T4 (0.8–4.7 µg/dL) | r95% CI*P*n | 0.051-0.225–0.319*1.000*55 | -0.319-0.546–0.047*0.057*54 | -0.273-0.521–0.018*0.142*49 | 0.096-0.205–0.381*1.000*47 | -0.358-0.733–0.183*0.346*16 |

CI = confidence interval; *P* = level of significance; n = number; \*correlation is significant after Bonferroni-Holm correction; bold = r ≥0.5

**Supplementary table 3:** Spearman correlation coefficient between age, weight, body condition score (BCS), thyroid palpation score (TPS), Karnfosky score (KS), and T4 in healthy cats.

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| **Healthy cats** |  | Age (years) | Weight (kg) | BCS(1–9) | TPS(1–6) | KS(0–100%) |
| Weight (kg) | r95% CI*P*n | -0.038-0.358–0.290*1.000*39 |  |  |  |  |
| BCS(1–9) | r95% CI*P*n | -0.048-0.375–0.289*1.000*37 | **0.652\*****0.399–0.813*****<0.001*****35** |  |  |  |
| TPS(0–6) | r95% CI*P*n | 0.074-0.252–0.385*1.000*40 | -0.264-0.549–0.076*0.458*37 | -0.044-0.371–0.294*1.000*37 |  |  |
| KS(0–100%) | r95% CI*P*n | -0.356-0.713–0.148*0.558*18 | -0.305-0.684–0.204*0.458*18 | -0.437-0.757–0.052*0.278*18 | 0.129-0.373–0.572*1.000*18 |  |
| T4 (0.8–4.7 µg/dL) | r95% CI*P*n | 0.3190.019–0.566*0.163*45 | 0.247-0.084–0.529*0.458*39 | 0.146-0.197–0.456*1.000*37 | 0.048-0.276–0.362*1.000*40 | -0.259-0.656–0.250*0.658*18 |

CI = confidence interval; *P* = level of significance; n = number; \*correlation is significant after Bonferroni-Holm correction; bold = r ≥0.5

**Supplementary table 4:** Spearman correlation coefficient between age, weight, body condition score (BCS), thyroid palpation score (TPS), Karnfosky score (KS), and T4 in cats with non-thyroidal illness.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Cats with non-thyroidal illness** |  | Age (years) | Weight (kg) | BCS(1–9) | TPS(0–6) | KS(0–100%) |
| Weight (kg) | r95% CI*P*n | -0.181\*-0.293– -0.065*0.009*293 |  |  |  |  |
| BCS(1–9) | r95% CI*P*n | -0.124-0.244–0.001*0.172*267 | **0.743\*****0.682–0.794*****<0.001*****265** |  |  |  |
| TPS(0–6) | r95% CI*P*n | 0.075-0.055–0.202*0.726*245 | -0.101-0.230–0.032*0.376*232 | -0.107-0.240–0.030*0.347*218 |  |  |
| KS(0–100%) | r95% CI*P*n | -0.131-0.573–0.371*1.000*18 | 0.306-0.202–0.684*0.434*18 | 0.343-0.162–0.706*0.347*18 | -0.171-0.601–0.335*0.497*18 |  |
| T4 (0.8–4.7 µg/dL) | r95% CI*P*n | 0.017-0.095–0.129*1.000*327 | 0.006-0.112–0.124*0.921*293 | 0.080-0.044–0.202*0.347*267 | 0.231\*0.105–0.349*0.002*245 | -0.050-0.516–0.439*1.000*18 |

CI = confidence interval; *P* = level of significance; n = number; \*correlation is significant after Bonferroni-Holm correction; bold = r ≥0.5