**Table C-1. Studies of serology accuracy**

| Author, Year | Number of Participants, Populations | Type of Diagnostic Test, Cut-Off Value | Outcomes Sensitivity, Specificity, Positive Predictive Value, Negative Predictive Value | QUADAS |
| --- | --- | --- | --- | --- |
| Barada et al., 2014[31](#_ENREF_31) | Number of Participants: 999 Adults    Comments: Marsh 2 & 3 were considered celiac. In addition, authors classified 1 person with Marsh 1 and positive EMA as celiac. | Type of Diagnostic Test: EMA IgA Cut-off value: NR  Type of Diagnostic Test: tTG IgA Cut-off value: NR  Type of Diagnostic Test: Combined screen tTG IgA, DGP IgA Cut-off value: NR | Sensitivity: 72.2% Specificity: 99.7% Positive predictive value: 90 Negative predictive value: 99.2  Sensitivity: 72.2% Specificity: 98.4% Positive predictive value: 44.8 Negative predictive value: 99.5  Sensitivity: 72.2% Specificity: 97.4% Positive predictive value: 34.2 Negative predictive value: 99.5 | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: Yes Inappropriate exclusions: Yes Biased patient Selection: Low  QUADAS Domain 2 Blinded interpretation of index test results: Yes Prespecified test threshold: Yes Bias due to testing: Low  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Yes Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Yes All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Not Applicable |
| Basso et al., 2011[32](#_ENREF_32) | Number of Participants: 703 Adults | Type of Diagnostic Test: tTG IgA Cut-off value: 100 U/mL  Type of Diagnostic Test: tTG IgA Cut-off value: 17.5 U/mL  Type of Diagnostic Test: tTG IgA Cut-off value: 20 U  Type of Diagnostic Test: tTG IgA Cut-off value: 24 U/mL  Type of Diagnostic Test: tTG IgA Cut-off value: 75.6 U/mL  Type of Diagnostic Test: tTG IgA Cut-off value: 909.3 U/mL | Sensitivity: 75.7% Specificity: 100% Positive predictive value: 100 Negative predictive value: 82.4  Sensitivity: 94.5% Specificity: 97.1% Positive predictive value: 96.6 Negative predictive value: 95.3  Sensitivity: 94.2% Specificity: 97.3% Positive predictive value: 96.9 Negative predictive value: 95  Sensitivity: 96.3% Specificity: 81.3% Positive predictive value: 81.9 Negative predictive value: 96.2  Sensitivity: 90.9% Specificity: 96.5% Positive predictive value: 95.8 Negative predictive value: 92.3  Sensitivity: 62.6% Specificity: 100% Positive predictive value: 100 Negative predictive value: 75.2 | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: No Inappropriate exclusions: Yes Biased patient Selection: Low  QUADAS Domain 2 Blinded interpretation of index test results: Unclear Prespecified test threshold: Yes Bias due to testing: Unclear  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Unclear Bias due to reference test: Unclear  QUADAS Domain 4 Appropriate interval between reference and index test: Yes All patients received reference test: Yes All patients received same test: Yes All patients included analysis: No Could patient flow have introduced bias: Not Applicable |
| Basso et al., 2011[32](#_ENREF_32) | Number of Participants: 703 Adults | Type of Diagnostic Test: tTG IgA, DGP IgA Cut-off value: 145 U  Type of Diagnostic Test: tTG IgA, DGP IgA Cut-off value: 20 U  Type of Diagnostic Test: tTG IgA, DGP IgA Cut-off value: 32 U  Type of Diagnostic Test: tTG IgG Cut-off value: 20 U/mL  Type of Diagnostic Test: tTG IgG Cut-off value: 47.6 U/mL  Type of Diagnostic Test: tTG IgG Cut-off value: 976.8 U/mL | Sensitivity: 65.3% Specificity: 100% Positive predictive value: 100 Negative predictive value: 76.6  Sensitivity: 96.7% Specificity: 89.8% Positive predictive value: 89.3 Negative predictive value: 96.8  Sensitivity: 95.4% Specificity: 95.7% Positive predictive value: 95.2 Negative predictive value: 96  Sensitivity: 96.7% Specificity: 83.4% Positive predictive value: 83.7 Negative predictive value: 96.6  Sensitivity: 93.3% Specificity: 94.1% Positive predictive value: 93.3 Negative predictive value: 94.1  Sensitivity: 59.6% Specificity: 100% Positive predictive value: 100 Negative predictive value: 73.8 | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: No Inappropriate exclusions: Yes Biased patient Selection: Low  QUADAS Domain 2 Blinded interpretation of index test results: Unclear Prespecified test threshold: Yes Bias due to testing: Unclear  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Unclear Bias due to reference test: Unclear  QUADAS Domain 4 Appropriate interval between reference and index test: Yes All patients received reference test: Yes All patients received same test: Yes All patients included analysis: No Could patient flow have introduced bias: Not Applicable |
| Bienvenu et al., 2014[33](#_ENREF_33) | Number of Participants: 45 Population: Selective IgA deficient children | Type of Diagnostic Test: CD-LFIA (detects both human IgA and IgG anti-DGP)  Cut-off value: NA | Sensitivity: 100.0% Specificity: 89.2%  Negative predictive value: 100.0% | QUADAS Domain 1 Consecutive or random sample: Yes Case control design: Yes Inappropriate exclusions: Yes Biased patient Selection: Low  QUADAS Domain 2 Blinded interpretation of index test results: Yes Prespecified test threshold: Yes Bias due to testing: Low  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Yes Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Unclear All patients received reference test: Unclear All patients received same test: Unclear  All patients included analysis: Yes Could patient flow have introduced bias: High |
| Cekin et al., 2012[34](#_ENREF_34) | Number of Participants: 84 Adults with Iron Deficiency | Type of Diagnostic Test: EMA IgA  Type of Diagnostic Test: EMA IgG | Sensitivity: 100% Specificity: 98.72% Positive predictive value: 85.71 Negative predictive value: 100  Sensitivity: 33.33% Specificity: 96.15% Positive predictive value: 40 Negative predictive value: 94.94 | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: Yes Inappropriate exclusions: Yes Biased patient Selection: Low  QUADAS Domain 2 Blinded interpretation of index test results: Yes Prespecified test threshold: Yes Bias due to testing: Low  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Unclear Bias due to reference test: Unclear  QUADAS Domain 4 Appropriate interval between reference and index test: Unclear All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Unclear |
| Dahlbom et al., 2010[35](#_ENREF_35) | Number of Participants: 301 Children and Adults | Type of Diagnostic Test: tTG IgA Cut-off value: >3 U m/L  Type of Diagnostic Test: tTG IgG Cut-off value: >3 U m/L | Sensitivity: 100% Specificity: 99.24% Positive predictive value: 99.42 Negative predictive value: 100  Sensitivity: 84.12% Specificity: 98.47% Positive predictive value: 98.62 Negative predictive value: 82.69 | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: No Inappropriate exclusions: Not Applicable Biased patient Selection: High  QUADAS Domain 2 Blinded interpretation of index test results: Unclear Prespecified test threshold: Yes Bias due to testing: Unclear  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Unclear Bias due to reference test: Unclear  QUADAS Domain 4 Appropriate interval between reference and index test: Yes All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Not Applicable |
| Dahle et al., 2010[36](#_ENREF_36) | Number of Participants: 176 Adults | Type of Diagnostic Test: EMA IgA Cut-off value: Serum dilution 1/5  Type of Diagnostic Test: tTG IgA Cut-off value: 5 U/mL  Type of Diagnostic Test:, DGP IgA or DGP IgG Cut-off value: 20 Au/mL  Type of Diagnostic Test: tTG IgG or IgA combined with DGP IgG or IgA Cut-off value: 20 Au/mL  Type of Diagnostic Test: tTG IgG or IgA combined with DGP IgG or IgA Cut-off value: 35 AU/mL | Sensitivity: 61% Specificity: 100%  Sensitivity: 76% Specificity: 95%  Sensitivity: 87% Specificity: 96%  Sensitivity: 91% Specificity: 80%  Sensitivity: 85% Specificity: 98% | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: Yes Inappropriate exclusions: Yes Biased patient Selection: Low  QUADAS Domain 2 Blinded interpretation of index test results: Unclear Prespecified test threshold: Yes Bias due to testing: Unclear  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Yes Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Unclear All patients received reference test: Yes All patients received same test: No All patients included analysis: Yes Could patient flow have introduced bias: Unclear |
| DeGaetani et al., 2013[37](#_ENREF_37) | Number of Participants: 59 Adults with prior negative serology but villious atrophy. HLA test was used to rule out celiac disease. | Type of Diagnostic Test: HLA DQ2, HLA DQ2 | Sensitivity: 100% Specificity: 18.18% Positive predictive value: 29.41 Negative predictive value: 100 | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: Yes Inappropriate exclusions: No Biased patient Selection: High  QUADAS Domain 2 Blinded interpretation of index test results: Unclear Prespecified test threshold: Unclear Bias due to testing: Unclear  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Unclear Bias due to reference test: Unclear  QUADAS Domain 4 Appropriate interval between reference and index test: Unclear All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Unclear |
| Dutta et al., 2010[38](#_ENREF_38) | Number of Participants: 92 symptomatic adults in India  Comment: Unclear why tTG IgG test was used | Type of Diagnostic Test: tTG IgG Cut-off value: >15 U/mL | Sensitivity: 77.8% Specificity: 89.1% Positive predictive value: 63.6 Negative predictive value: 94.2 | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: Yes Inappropriate exclusions: Yes Biased patient Selection: Low  QUADAS Domain 2 Blinded interpretation of index test results: Yes Prespecified test threshold: Yes Bias due to testing: Low  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Yes Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Unclear All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Not Applicable |
| Emami et al., 2012[39](#_ENREF_39) | Number of Participants: 130 Population: IgA Deficient adults in Iran | Type of Diagnostic Test: tTG IgA Cut-off value: >10 AU/ml | Sensitivity: 38.46% Specificity: 96.58% Positive predictive value: 55.56 Negative predictive value: 93.39 | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: Yes Inappropriate exclusions: Yes Biased patient Selection: Low  QUADAS Domain 2 Blinded interpretation of index test results: Unclear Prespecified test threshold: Yes Bias due to testing: Unclear  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Unclear Bias due to reference test: Unclear  QUADAS Domain 4 Appropriate interval between reference and index test: Unclear All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Unclear |
| Harrison et al., 2013[40](#_ENREF_40) | Number of Participants: 12,289, age unclear. Some IgA deficient, but number not reported | Type of Diagnostic Test: tTG IgA,  Cut-off value: 5 U/mL  Type of Diagnostic Test: tTG IgA, tTG IgG Cut-off value: 5 U/mL | Sensitivity: 86.8% Specificity: 99.9%  Sensitivity: 92.1% Specificity: 99.9% | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: Yes Inappropriate exclusions: Yes Biased patient Selection: Low  QUADAS Domain 2 Blinded interpretation of index test results: Unclear Prespecified test threshold: Yes Bias due to testing: Low  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Unclear Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Unclear All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Not Applicable |
| Kaukinen et al., 1999[41](#_ENREF_41) | Number of Participants: 26 Population: Patients with endocrinologic disorders in Finland | Type of Diagnostic Test: HLA DQ2, HLA DQ2 | Sensitivity: 100% Specificity: 33.33% Positive predictive value: 5.26 Negative predictive value: 100 | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: No Inappropriate exclusions: No Biased patient Selection: High  QUADAS Domain 2 Blinded interpretation of index test results: Yes Prespecified test threshold: Yes Bias due to testing: Low  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Yes Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Unclear All patients received reference test: No All patients received same test: No All patients included analysis: No Could patient flow have introduced bias: High |
| Mansour et al., 2011[42](#_ENREF_42) | Number of Participants: 62 Population: Type 1 diabetes, Iraq | Type of Diagnostic Test: EMA IgA Cut-off value: 20 U/mL  Type of Diagnostic Test: tTG IgA Cut-off value: 15 U/mL  Type of Diagnostic Test: tTG IgG Cut-off value: 15 U/mL | Sensitivity: 71.43% Specificity: 96.36% Positive predictive value: 71.43 Negative predictive value: 96.36  Sensitivity: 71.43% Specificity: 92.73% Positive predictive value: 55.56 Negative predictive value: 96.23  Sensitivity: 57.14% Specificity: 92.73% Positive predictive value: 50 Negative predictive value: 94.44 | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: Yes Inappropriate exclusions: Yes Biased patient Selection: Low  QUADAS Domain 2 Blinded interpretation of index test results: Yes Prespecified test threshold: Yes Bias due to testing: Low  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Yes Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Unclear All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Unclear |
| Mozo et al., 2012[43](#_ENREF_43) | Number of Participants: 200 | Type of Diagnostic Test: DGP IgA Cut-off value: >7 U/mL  Type of Diagnostic Test: DGP IgG Cut-off value: >7 U/mL  Type of Diagnostic Test: tTG IgA Cut-off value: >7 U/mL | Sensitivity: 96% Specificity: 96% Positive predictive value: 96 Negative predictive value: 96  Sensitivity: 95% Specificity: 99% Positive predictive value: 98.9 Negative predictive value: 95.2  Sensitivity: 89% Specificity: 94% Positive predictive value: 93.7 Negative predictive value: 89.5 | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: No Inappropriate exclusions: No Biased patient Selection: High  QUADAS Domain 2 Blinded interpretation of index test results: Yes Prespecified test threshold: Yes Bias due to testing: Low  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Unclear Bias due to reference test: Unclear  QUADAS Domain 4 Appropriate interval between reference and index test: Yes All patients received reference test: No All patients received same test: Not Applicable All patients included analysis: Yes Could patient flow have introduced bias: Unclear |
| Nevoral et al., 2013[44](#_ENREF_44) | Number of Participants: 345 children and adolescents  Number of Participants: 32 first degree relatives  Number of Participants: 263 with Marsh 2 or 3 classification  Number of Participants: 40 Type 1 diabetes | Type of Diagnostic Test: tTG IgA, EMA IgG Cut-off value: 12 U/mL  Type of Diagnostic Test: tTG IgA, EMA IgA Cut-off value: 12 U/mL  Type of Diagnostic Test: tTG IgA, EMA IgA Cut-off value: 12 U/mL  Type of Diagnostic Test: tTG IgA, EMA IgA Cut-off value: 12 U/mL  Comment: New ESPGHAN algorithm used | Sensitivity: 76% Specificity: 85% Positive predictive value: 94 Negative predictive value: 53  Sensitivity: 81% Specificity: 70%  Sensitivity: 83% Specificity: 67%  Sensitivity: 93% Specificity: 64% | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: Yes Inappropriate exclusions: Yes Biased patient Selection: Low  QUADAS Domain 2 Blinded interpretation of index test results: Yes Prespecified test threshold: Yes Bias due to testing: Low  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Yes Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Yes All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Not Applicable |
| Olen et al., 2012[45](#_ENREF_45) | Number of Participants: 69 Population: <2 years old  Number of Participants: 408 Population: all patients  Number of Participants: 67 Population: <2 years old  Number of Participants: 530 Population: all patients  Comments: 93 individuals were excluded from study because the serology analyses had not been carried out at the participating immunology departments. Also, it isn’t clear why some patients did not undergo DGP tests. | Type of Diagnostic Test: DGP IgA Cut-off value: NR  Type of Diagnostic Test: DGP IgA Cut-off value: NR  Type of Diagnostic Test: tTG IgA Cut-off value: NR  Type of Diagnostic Test: tTG IgA Cut-off value:NR | Sensitivity: 100% Specificity: 31% Positive predictive value: 44  Sensitivity: 91% Specificity: 26% Positive predictive value: 51  Sensitivity: 96% Specificity: 98% Positive predictive value: 96  Sensitivity: 94% Specificity: 86% Positive predictive value: 88 | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: Yes Inappropriate exclusions: No Biased patient Selection: High  QUADAS Domain 2 Blinded interpretation of index test results: Yes Prespecified test threshold: Yes Bias due to testing: Low  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Yes Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Yes All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Not Applicable |
| Sakly et al., 2012[46](#_ENREF_46) | Number of Participants: 297 adults and children | Type of Diagnostic Test: DGP IgA Cut-off value: 25 IU/mL  Type of Diagnostic Test: DGP IgG Cut-off value: 25 IU/mL | Sensitivity: 97% Specificity: 90.7%  Sensitivity: 94.2% Specificity: 95.4% | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: No Inappropriate exclusions: Yes Biased patient Selection: High  QUADAS Domain 2 Blinded interpretation of index test results: Unclear Prespecified test threshold: Yes Bias due to testing: Unclear  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Unclear Bias due to reference test: Unclear  QUADAS Domain 4 Appropriate interval between reference and index test: Unclear All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Unclear |
| Srinivas et al., 2014[47](#_ENREF_47) | Number of Participants: 752  Population: Clinical features of celiac disease | Type of Diagnostic Test: tTG IgA Cut-off value: : <10 IU/mL       Type of Diagnostic Test: IgA EMA | Sensitivity: 0.83 Specificity: 0.96  Sensitivity: 0.80 Specificity: 0.99 Positive predictive value:  Negative predictive value: | QUADAS Domain 1 Consecutive or random sample: Yes Case control design: Yes Inappropriate exclusions: Yes Biased patient Selection: Low  QUADAS Domain 2 Blinded interpretation of index test results: Unclear Prespecified test threshold: Yes Bias due to testing: Unclear  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Unclear Bias due to reference test: Unclear  QUADAS Domain 4 Appropriate interval between reference and index test: No All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: High |
| Srinivas et al., 2013[48](#_ENREF_48) | Number of Participants: 75  Number of Participants: 102  Number of Participants: 71 | Type of Diagnostic Test: EMA IgG  Type of Diagnostic Test: tTG IgA Cut-off value: 10 IU/mL  Type of Diagnostic Test: tTG IgA, EMA IgA | Sensitivity: 83% Specificity: 99% Positive predictive value: 93 Negative predictive value: 98  Sensitivity: 84% Specificity: 96% Positive predictive value: 72 Negative predictive value: 98  Sensitivity: 83% Specificity: 99% Positive predictive value: 97 Negative predictive value: 98 | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: Yes Inappropriate exclusions: Yes Biased patient Selection: Low  QUADAS Domain 2 Blinded interpretation of index test results: Yes Prespecified test threshold: Yes Bias due to testing: Low  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Yes Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Unclear All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Not Applicable |
| Sugai et al., 2010[49](#_ENREF_49) | Number of Participants: 17 IgA tTG negative adults with villous atrophy    Comments: Original N = 22, five patients refused biopsy. | Type of Diagnostic Test: DGP  Type of Diagnostic Test: tTG IgA, DGP IgA | Sensitivity: 35.71% Specificity: 100%  Sensitivity: 42.86% Specificity: 100% | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: Yes Inappropriate exclusions: Yes Biased patient Selection: Low  QUADAS Domain 2 Blinded interpretation of index test results: Yes Prespecified test threshold: Yes Bias due to testing: Low  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Yes Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Yes All patients received reference test: No All patients received same test: Yes All patients included analysis: No Could patient flow have introduced bias: High |
| Swallow et al., 2013[50](#_ENREF_50) | Number of Participants: 733 Adults Results when Marsh 1-2 considered celiac  Number of Participants: 756 Adults Results when Marsh 1-3 considered celiac  Number of Participants: 756 Adults Results when Marsh 3 considered celiac  Number of Participants: 733Adults  Results when Marsh 1-2 considered celiac  Number of Participants: 756 Adults  Results when Marsh 1-3 considered celiac  Number of Participants: 756 Population: Marsh 3  Comments: 473 patients were excluded because only one of the two serology tests was performed. 14 of these were diagnosed as CD via biopsy. | Type of Diagnostic Test: EMA IgA  Type of Diagnostic Test: EMA IgA  Type of Diagnostic Test: EMA IgA  Type of Diagnostic Test: , tTG IgA followed by EMA IgA, (NICE two step strategy)  Type of Diagnostic Test: , tTG IgA followed by EMA IgA, (NICE two step strategy)  Type of Diagnostic Test: , tTG IgA followed by EMA IgA, (NICE two step strategy) | Sensitivity: 42.9% Specificity: 99.5% Positive predictive value: 42.9 Negative predictive value: 99.5  Sensitivity: 73.3% Specificity: 99.5% Positive predictive value: 84.6 Negative predictive value: 98.9  Sensitivity: 82.6% Specificity: 99.1% Positive predictive value: 73.1 Negative predictive value: 99.5  Sensitivity: 57.1% Specificity: 97.3% Positive predictive value: 16.7 Negative predictive value: 99.6  Sensitivity: 80% Specificity: 97.3% Positive predictive value: 54.6 Negative predictive value: 99.2  Sensitivity: 87% Specificity: 96.9% Positive predictive value: 46.5 Negative predictive value: 99.6 | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: Yes Inappropriate exclusions: No Biased patient Selection: High  QUADAS Domain 2 Blinded interpretation of index test results: Yes Prespecified test threshold: Yes Bias due to testing: Low  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Yes Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Yes All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Not Applicable |
| Swallow et al., 2013[50](#_ENREF_50) | Number of Participants: 733Adults Results when Marsh 1-2 considered celiac  Number of Participants: 756 Adults Results when Marsh 1-3 considered celiac  Number of Participants: 756 Adults Results when Marsh 3 considered celiac as CD via biopsy. | Type of Diagnostic Test: tTG IgA  Type of Diagnostic Test: tTG IgA  Type of Diagnostic Test: tTG IgA | Sensitivity: 42.9% Specificity: 99.5% Positive predictive value: 42.9 Negative predictive value: 99.5  Sensitivity: 73.3% Specificity: 99.5% Positive predictive value: 84.6 Negative predictive value: 98.9  Sensitivity: 82.6% Specificity: 99.1% Positive predictive value: 73.1 Negative predictive value: 99.5 | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: Yes Inappropriate exclusions: No Biased patient Selection: High  QUADAS Domain 2 Blinded interpretation of index test results: Yes Prespecified test threshold: Yes Bias due to testing: Low  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Yes Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Yes All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Not Applicable |
| Van Meensel et al., 2004[51](#_ENREF_51) | Number of Participants: 175 Adults  Comment: 5 patients were IgA deficient | Type of Diagnostic Test: tTG IgA Cut-off value: 10 kilounits/L  Type of Diagnostic Test: tTG IgA Cut-off value: 15 kilounits  Type of Diagnostic Test: tTG IgA Cut-off value: 19.05 kilounits/L  Type of Diagnostic Test: tTG IgA Cut-off value: 2.64 kilounits/L  Type of Diagnostic Test: tTG IgA Cut-off value: 20 kilounits  Type of Diagnostic Test: tTG IgA Cut-off value: 20 kilounits/L | Sensitivity: 94% Specificity: 100%  Sensitivity: 94% Specificity: 100%  Sensitivity: 93% Specificity: 100%  Sensitivity: 96% Specificity: 99%  Sensitivity: 97% Specificity: 96%  Sensitivity: 93% Specificity: 100% | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: No Inappropriate exclusions: Yes Biased patient Selection: High  QUADAS Domain 2 Blinded interpretation of index test results: Yes Prespecified test threshold: Yes Bias due to testing: Unclear  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Yes Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Yes All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Not Applicable |
| Van Meensel et al., 2004[51](#_ENREF_51) | Number of Participants: 175 Adults  Comment: 5 patients were IgA deficient | Type of Diagnostic Test: tTG IgA Cut-off value: 20.47 kilounits  Type of Diagnostic Test: tTG IgA Cut-off value: 3.13 kilounits/L  Type of Diagnostic Test: tTG IgA Cut-off value: 3.69 kilounits/L  Type of Diagnostic Test: tTG IgA Cut-off value: 4 kilounits/L  Type of Diagnostic Test: tTG IgA Cut-off value: 4.43 kilounits/L  Type of Diagnostic Test: tTG IgA Cut-off value: 40 kilounits/L | Sensitivity: 97% Specificity: 100%  Sensitivity: 96% Specificity: 99%  Sensitivity: 96% Specificity: 100%  Sensitivity: 93% Specificity: 99%  Sensitivity: 99% Specificity: 99%  Sensitivity: 96% Specificity: 96% | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: No Inappropriate exclusions: Yes Biased patient Selection: High  QUADAS Domain 2 Blinded interpretation of index test results: Yes Prespecified test threshold: Yes Bias due to testing: Unclear  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Yes Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Yes All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Not Applicable |
| Van Meensel et al., 2004[51](#_ENREF_51) | Number of Participants: 175 Adults  Comment: 5 patients were IgA deficient | Type of Diagnostic Test: tTG IgA Cut-off value: 5 kilounits/L  Type of Diagnostic Test: tTG IgA Cut-off value: 50 kilounits/L  Type of Diagnostic Test: tTG IgA Cut-off value: 56.9 kilounits/L  Type of Diagnostic Test: tTG IgA Cut-off value: 7 kilounits/L  Type of Diagnostic Test: tTG IgA Cut-off value: 7 kilounits/L  Type of Diagnostic Test: tTG IgA Cut-off value: 7.16 kilounits/L | Sensitivity: 93% Specificity: 99%  Sensitivity: 93% Specificity: 93%  Sensitivity: 91% Specificity: 99%  Sensitivity: 91% Specificity: 100%  Sensitivity: 97% Specificity: 100%  Sensitivity: 97% Specificity: 100% | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: No Inappropriate exclusions: Yes Biased patient Selection: High  QUADAS Domain 2 Blinded interpretation of index test results: Yes Prespecified test threshold: Yes Bias due to testing: Unclear  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Yes Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Yes All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Not Applicable |
| Van Meensel et al., 2004[51](#_ENREF_51) | Number of Participants: 175  Comment: 5 patients were IgA deficient | Type of Diagnostic Test: tTG IgA Cut-off value: 7.98 kilounits  Type of Diagnostic Test: tTG IgA Cut-off value: 9.73 kilounits/L | Sensitivity: 96% Specificity: 100%  Sensitivity: 94% Specificity: 100% | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: No Inappropriate exclusions: Yes Biased patient Selection: High  QUADAS Domain 2 Blinded interpretation of index test results: Yes Prespecified test threshold: Yes Bias due to testing: Unclear  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Yes Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Yes All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Not Applicable |
| Vermeersch et al., 2010[52](#_ENREF_52) | Number of Participants: 827 (599 adults, 228 children)  Number of Participants: 827  Number of Participants: 827  Number of Participants: 827  Number of Participants: 827  Number of Participants: 827 | Type of Diagnostic Test: DGP IgA Cut-off value: >7  Type of Diagnostic Test: DGP IgG Cut-off value: 10  Type of Diagnostic Test: DGP IgG Cut-off value: 20  Type of Diagnostic Test: DGP IgG Cut-off value: 25  Type of Diagnostic Test: DGP IgG Cut-off value: >7  Type of Diagnostic Test: tTG IgA Cut-off value: 7 | Sensitivity: 65.1% Specificity: 99.1%  Sensitivity: 79.1% Specificity: 97.6%  Sensitivity: 83.7% Specificity: 99.3%  Sensitivity: 76.7% Specificity: 99.2%  Sensitivity: 86% Specificity: 97.3%  Sensitivity: 84.9% Specificity: 92% | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: No Inappropriate exclusions: Yes Biased patient Selection: High  QUADAS Domain 2 Blinded interpretation of index test results: Unclear Prespecified test threshold: Yes Bias due to testing: Unclear  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Yes Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Unclear All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Unclear |
| Vermeersch et al., 2010[52](#_ENREF_52) | Number of Participants: 827  Number of Participants: 827  Number of Participants: 827  Number of Participants: 827 | Type of Diagnostic Test: tTG IgA Cut-off value: >15  Type of Diagnostic Test: tTG IgA Cut-off value: >7  Type of Diagnostic Test: tTG IgG Cut-off value: >15  Type of Diagnostic Test: tTG IgG Cut-off value: >7 | Sensitivity: 88.4% Specificity: 94.9%  Sensitivity: 83.7% Specificity: 98.4%  Sensitivity: 60.5% Specificity: 98.1%  Sensitivity: 38.4% Specificity: 98.5% | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: No Inappropriate exclusions: Yes Biased patient Selection: High  QUADAS Domain 2 Blinded interpretation of index test results: Unclear Prespecified test threshold: Yes Bias due to testing: Unclear  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Yes Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Unclear All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Unclear |
| Vermeersch et al., 2010[53](#_ENREF_53) | Number of Participants: 588 Adults  Number of Participants: 588 Adults | Type of Diagnostic Test: tTG IgA Cut-off value: >15 U/mL  Type of Diagnostic Test: tTG IgA Cut-off value: >=7 U/mL | Sensitivity: 86% Specificity: 95%  Sensitivity: 95.3% Specificity: 92.7% Positive predictive value: 50.6 | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: No Inappropriate exclusions: No Biased patient Selection: High  QUADAS Domain 2 Blinded interpretation of index test results: Unclear Prespecified test threshold: Yes Bias due to testing: Unclear  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Yes Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Unclear All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Unclear |
| Vermeersch et al., 2012[54](#_ENREF_54) | Number of Participants: 649 Adults and Children  Comments: Retrospective study; the controls spanned years 2004 to 2006, while cases spanned years 2001 to 2009. | Type of Diagnostic Test: DGP IgA + tTG IgG\* Cut-off value: 20 U/mL  Type of Diagnostic Test: DGP IgA + tTG IgG\* Cut-off value: 7 U/mL  Type of Diagnostic Test: DGP IgG Cut-off value: 20 U/mL  Type of Diagnostic Test: DGP IgG Cut-off value: 7 U/mL  Type of Diagnostic Test: tTG IgA Cut-off value: 20 U/mL  Type of Diagnostic Test: tTG IgA Cut-off value: 7 U/mL  \*Combined test determines whether patient has low IgA and will need IgG tests instead of IgA tests | Sensitivity: 89.7% Specificity: 93.3%  Sensitivity: 88.8% Specificity: 95.6%  Sensitivity: 85% Specificity: 99.3%  Sensitivity: 86.9% Specificity: 96.7%  Sensitivity: 84.1% Specificity: 95.9%  Sensitivity: 81.3% Specificity: 98.5% | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: No Inappropriate exclusions: Yes Biased patient Selection: High  QUADAS Domain 2 Blinded interpretation of index test results: Unclear Prespecified test threshold: Yes Bias due to testing: Unclear  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Yes Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Unclear All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Unclear |
| Wakim-Fleming et al., 2014[55](#_ENREF_55) | Number of Participants: 204 Population: Consecutive patients with biopsy proven cirrhosis | Type of Diagnostic Test: EMA  Serum dilution >= 1/10  Type of Diagnostic Test: TTG Cut-off value: above 20 U | Sensitivity: 1.00 Specificity: 1.00 Positive predictive value:  Negative predictive value:  Sensitivity: 1.00 Specificity: 0.96 Positive predictive value:  Negative predictive value: | QUADAS Domain 1 Consecutive or random sample: Yes Case control design: Yes Inappropriate exclusions: Yes Biased patient Selection: Low  QUADAS Domain 2 Blinded interpretation of index test results: Yes Prespecified test threshold: Yes Bias due to testing: Low  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Yes Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Yes All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Low |
| Wolf et al., 2014[57](#_ENREF_57) | Number of Participants: 1071 children Population: Selective IgA deficiency (sIgAD) was found in 27 patients | Type of Diagnostic Test: tTG IgA Cut-off value: >10 U/mL  Type of Diagnostic Test: DGP IgG Cut-off value: >10 U/mL | Sensitivity: 0.88 Specificity: 0.97  Sensitivity: 0.89 Specificity: 0.95  when added to tTG in children without IgA deficiency  Sensitivity: 0.29 Specificity: 1.00  when added to tTG in children WITH IgA deficiency | QUADAS Domain 1 Consecutive or random sample: Yes Case control design: No Inappropriate exclusions: Yes Biased patient Selection: High  QUADAS Domain 2 Blinded interpretation of index test results: Yes Prespecified test threshold: Yes Bias due to testing: Low  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Yes Bias due to reference test: Low  QUADAS Domain 4 Appropriate interval between reference and index test: Yes All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Low |
| Zanini et al., 2012[58](#_ENREF_58) | Number of Participants: 263 Adults, (Brand B used)  Number of Participants: 393 Adults, (Brand A used)  Number of Participants: 289Adults, (Brand C used)  Number of Participants: 393  Number of Participants: 289  Number of Participants: 263 | Type of Diagnostic Test: tTG IgA Cut-off value: 16 U/mL  Type of Diagnostic Test: tTG IgA Cut-off value: 21 U/mL  Type of Diagnostic Test: tTG IgA Cut-off value: 24 U/mL  Type of Diagnostic Test: tTG IgA Cut-off value: 35 U/mL  Type of Diagnostic Test: tTG IgA Cut-off value: 40 U/mL  Type of Diagnostic Test: tTG IgA Cut-off value: 48 U/mL | Sensitivity: 89.4% Specificity: 88.1% Positive predictive value: 90.3 Negative predictive value: 77.4  Sensitivity: 38.2% Specificity: 97.4% Positive predictive value: 95.8 Negative predictive value: 50.7  Sensitivity: 58.8% Specificity: 99% Positive predictive value: 99 Negative predictive value: 60.7  Sensitivity: 10.1% Specificity: 100% Positive predictive value: 100 Negative predictive value: 42  Sensitivity: 43.1% Specificity: 100% Positive predictive value: 100 Negative predictive value: 53.1  Sensitivity: 69.7% Specificity: 58.8% Positive predictive value: 100 Negative predictive value: 60.3 | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: Yes Inappropriate exclusions: No Biased patient Selection: High  QUADAS Domain 2 Blinded interpretation of index test results: Unclear Prespecified test threshold: Yes Bias due to testing: Unclear  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Unclear Bias due to reference test: Unclear  QUADAS Domain 4 Appropriate interval between reference and index test: Yes All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Not Applicable |
| Zanini et al., 2012[58](#_ENREF_58) | Number of Participants: 393  Number of Participants: 289  Number of Participants: 263 | Type of Diagnostic Test: tTG IgA Cut-off value: 7 U/mL  Type of Diagnostic Test: tTG IgA Cut-off value: 8 U/mL  Type of Diagnostic Test: tTG IgA Cut-off value: 80 U/mL | Sensitivity: 94.5% Specificity: 76.1% Positive predictive value: 85.9 Negative predictive value: 90.1  Sensitivity: 88.1% Specificity: 92.2% Positive predictive value: 94.6 Negative predictive value: 83.3  Sensitivity: 59.1% Specificity: 43.1% Positive predictive value: 100 Negative predictive value: 52.9 | QUADAS Domain 1 Consecutive or random sample: Yes Case control design avoided: Yes Inappropriate exclusions: No Biased patient Selection: High  QUADAS Domain 2 Blinded interpretation of index test results: Unclear Prespecified test threshold: Yes Bias due to testing: Unclear  QUADAS Domain 3 Valid reference standard: Yes Blinded analysis of reference test: Unclear Bias due to reference test: Unclear  QUADAS Domain 4 Appropriate interval between reference and index test: Yes All patients received reference test: Yes All patients received same test: Yes All patients included analysis: Yes Could patient flow have introduced bias: Not Applicable |

Table Notes: Au/ml – Absorbance Units per Milliliter; DGP – Deamidated Gliadin Peptide (DGP); DM = Diabetes; EMA – Endomysial Antibodies; HLA Human Leukocyte Antigen; IgA - Immunoglobulin A; IgG - Immunoglobulin G; L – Liter; NR – Not Reported; QUADAS – Quality Assessment of Diagnostic Studies; tTG - Anti-tissue Transglutaminase; U – Units; U/mL – Units per milliliter