



# Gender Difference in Skin prick sensitivity to allergens in 10-15 year Cases with Respiratory symptoms vs controls in Sicily and Malta

M.Balzan \*, C.Zammit\*, D.Bilocca\*, F.Cibella\*\*, S. Ruggieri\*\*, G.Drago\*\*, R. Minardi\*\*\*, S.Montefort\*, G.Viegi\*



\* Mater Dei Hospital – Dept. of Medicine, Malta; \*\*National Research Council of Italy, Institute of Biomedicine and Molecular Immunology, Palermo; \*\*\*ASP Caltanissetta – Health District of Gela, Italy

**Introduction:** The RESPIRA study was performed in the Health District of Gela (Southern Sicily) and Malta in 2012/3 in 11-14 years old schoolchildren (n=2,047) by means of standard respiratory questionnaires (ISAAC) and clinical exam of case and control subjects.

**Aims and Objectives:** To assess sensitivity to common allergens in cases and controls in these southern Mediterranean islands.

**Materials and Methods:** Cases (n=137, M=84) reported wheeze and/or use of asthma medications in the last 12 months, while controls (n=159, M=70) answered negatively to both and also to rhinitis in the last 12 months.

**Results:** A positive skin test ( $\geq 3\text{mm}$ ) for at least one allergen tested was found in 80/137 cases and 51/159 controls ( $p=0.0001$ ). House Dust Mite (cases 62/137, controls 28/159,  $p=0.001$ ), Parietaria (22/137, 10/159,  $p=0.008$ ), Alternaria (19/137, 9/159,  $p=0.018$ ), and Blattella (12/137, 5/159,  $p=0.046$ ) were more frequently positive in cases than in controls. Olive (25/137, 19/159,  $p=0.142$ ), cat (17/137, 11/159,  $P=0.116$ ), and dog (9/137, 5/159,  $p=0.182$ ) did not show a significant difference between cases and controls. Grass pollen sensitization was slightly higher in controls (10/137, 13/159). There was a significant difference by gender in a  $2 \times 4$   $\chi^2$  comparing positives amongst cases and controls. HDM; Males (cases 41/84 Controls 15/70), females (Cases 21/53, Con 13/89)  $p=0.011$ , Olive; in Males (CAS 19/84, Con 10/70) Females (Cas6/53, con 9/89)  $p=0.007$ , Cat; Males (Cas.12/84, Con 6/70) Females (Cas.5/53 and 5/89)  $p=0.019$  and for Dog; Males (CAS 7/84 and 2/70) and Females (Cases 2 /53 and 4/89  $p=0.017$ ).

**Conclusion:** Skin prick sensitivity to common Mediterranean aero-allergens in asthma patients vs controls was significantly higher in 11-14 year old Males when compared to females.

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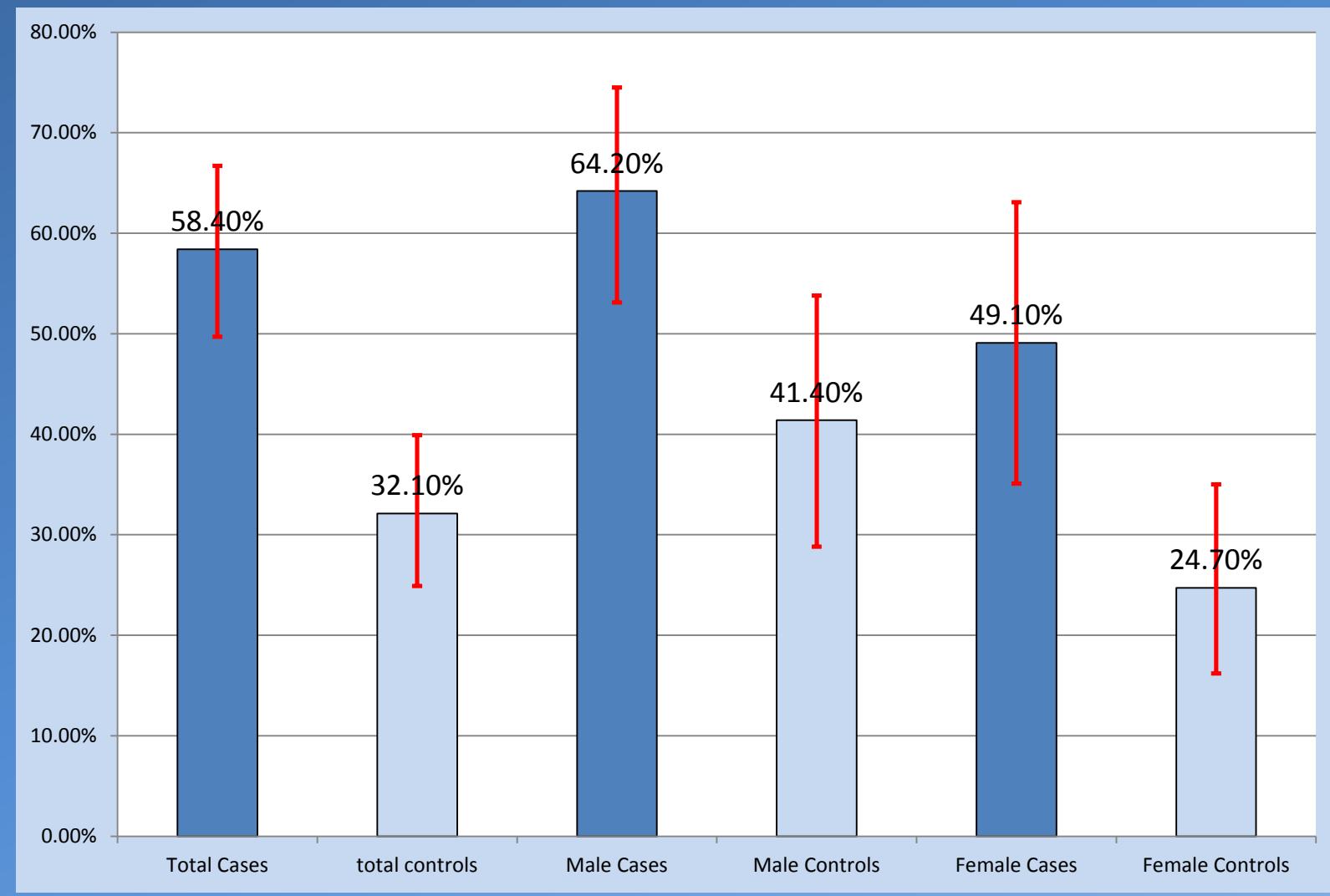


Figure 1. Positive ( $\geq 3\text{mm}$ ) Skin Prick test to at least one allergen

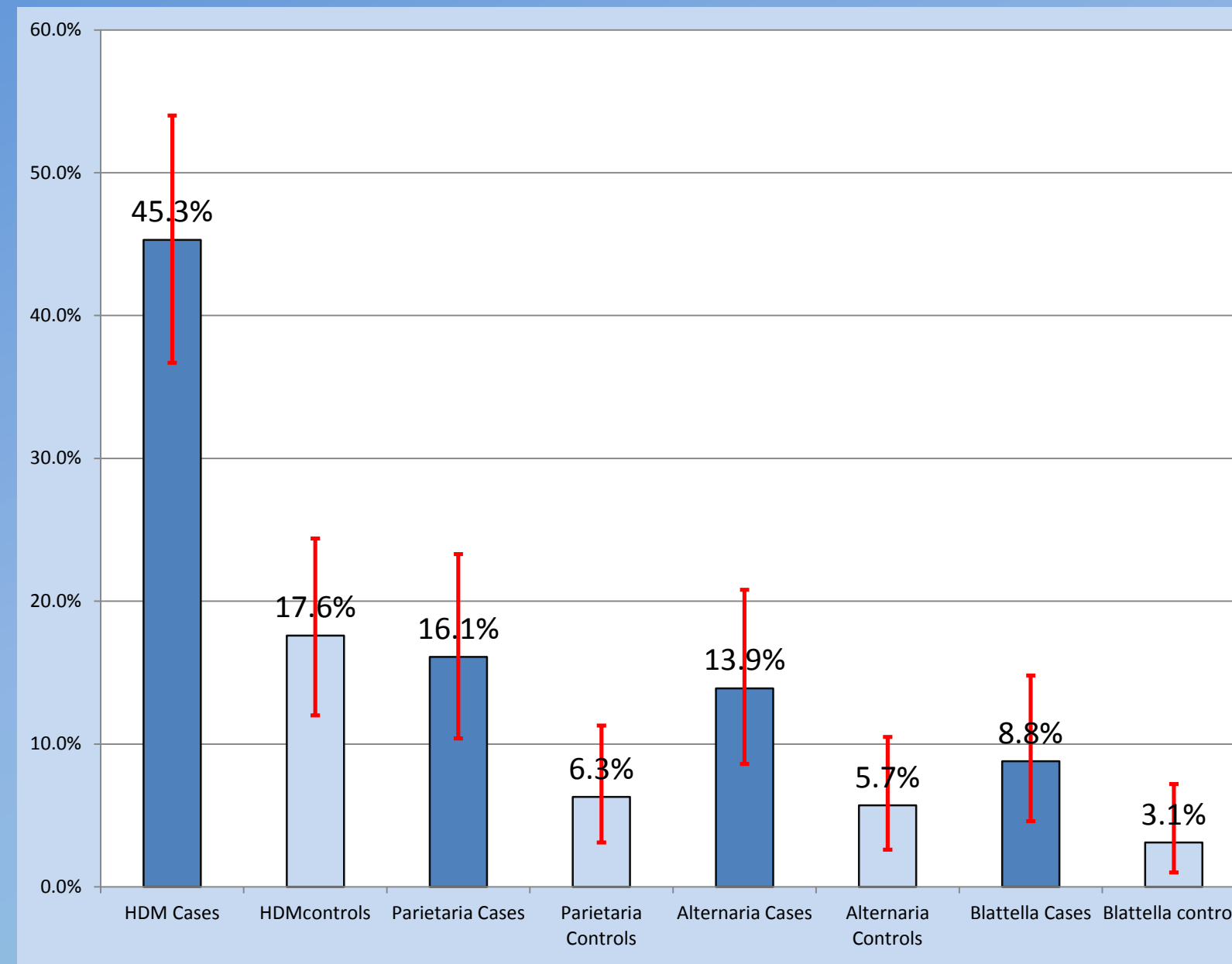


Figure 2. Positive skin prick tests - 4 allergens

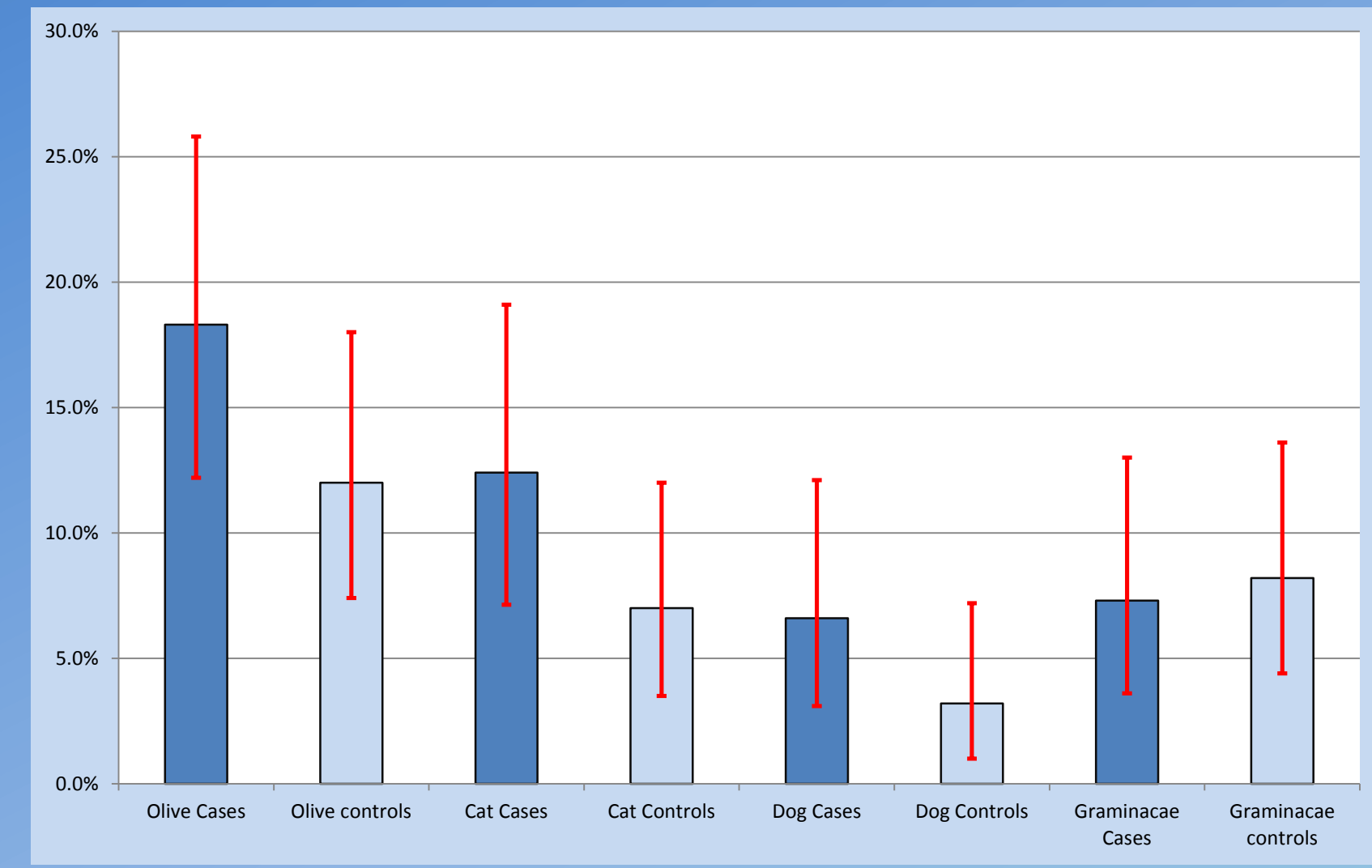


Figure 3. Positive skin prick tests 4 allergens

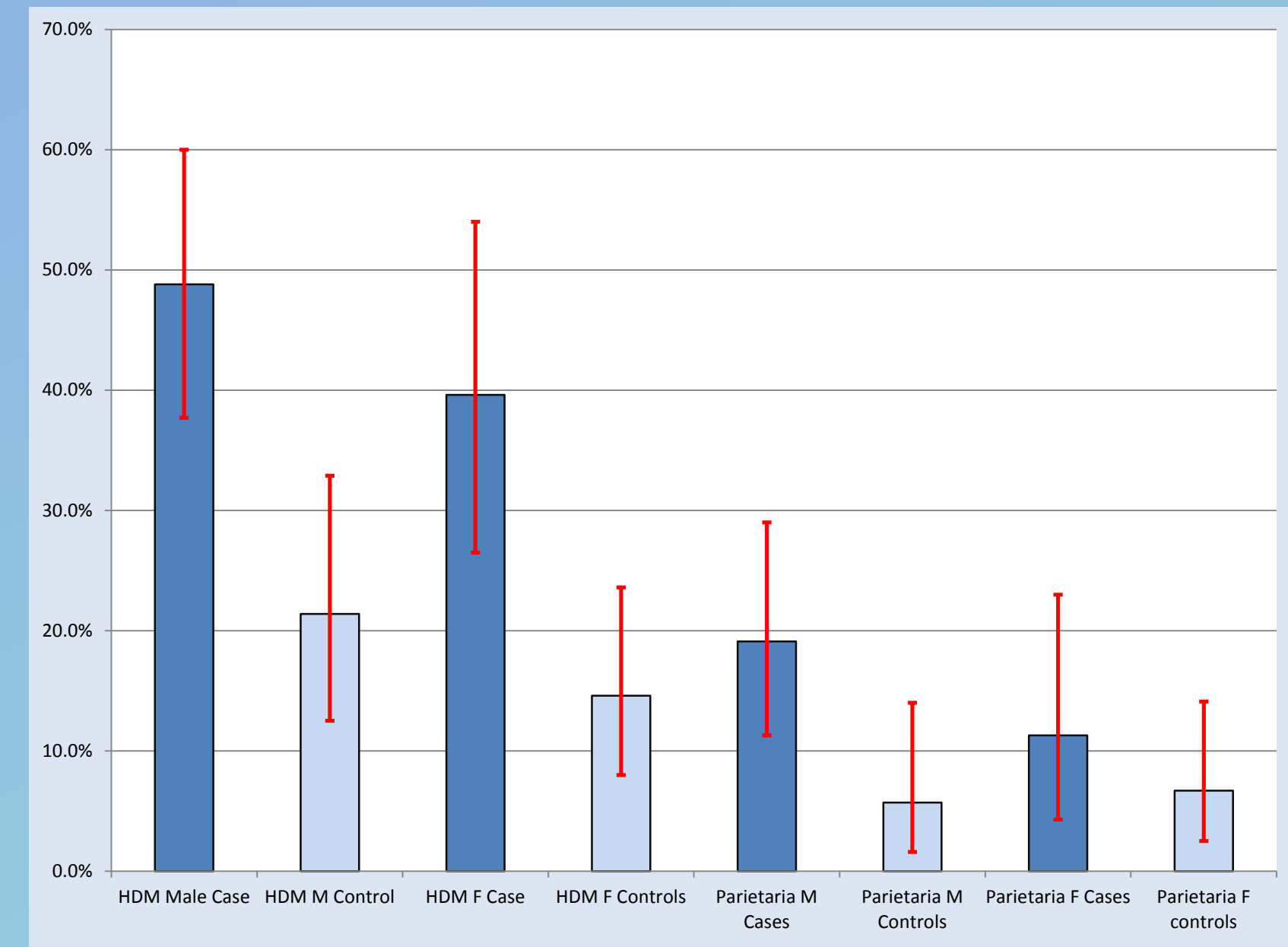
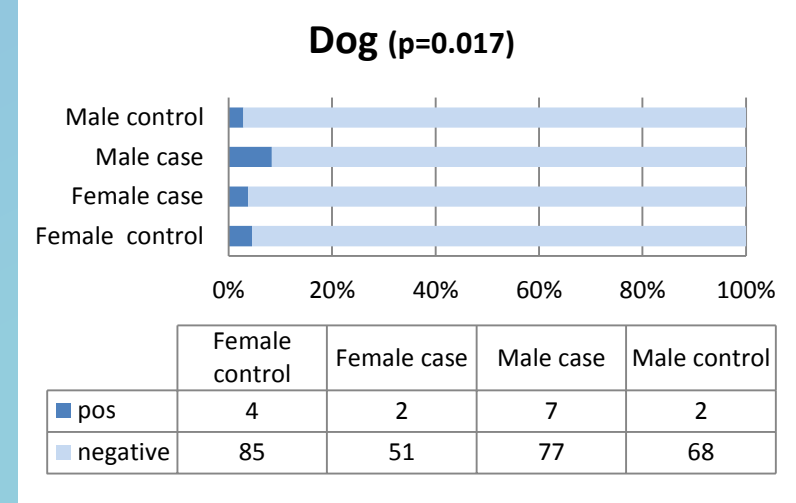
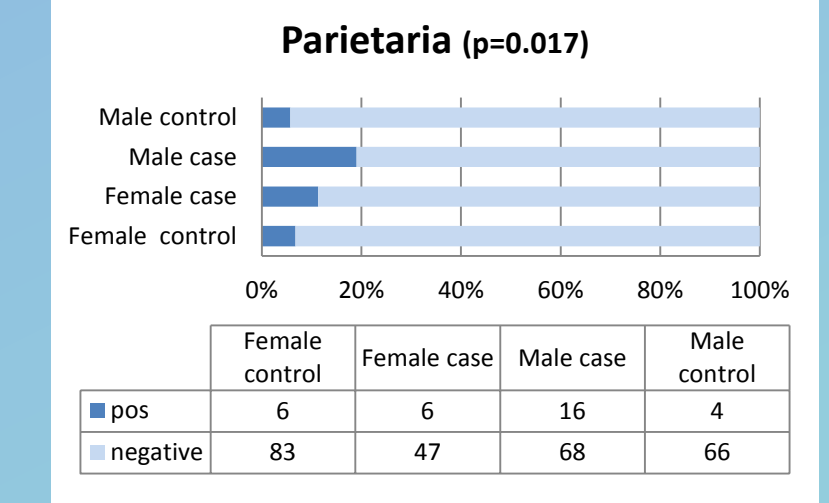
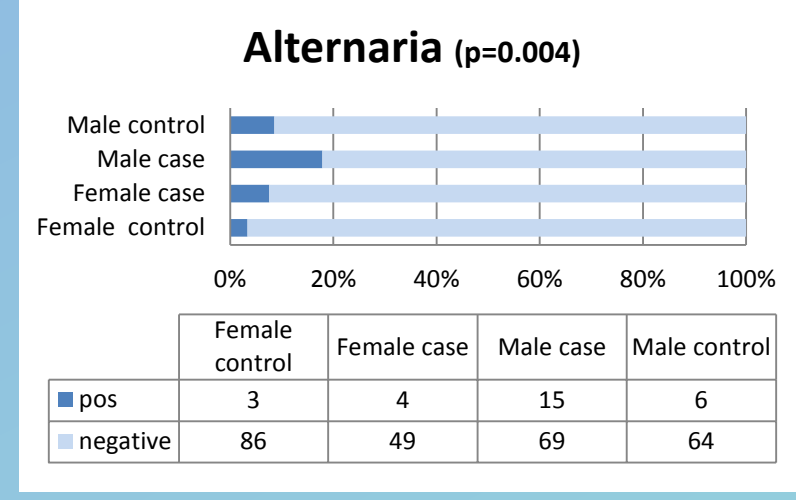
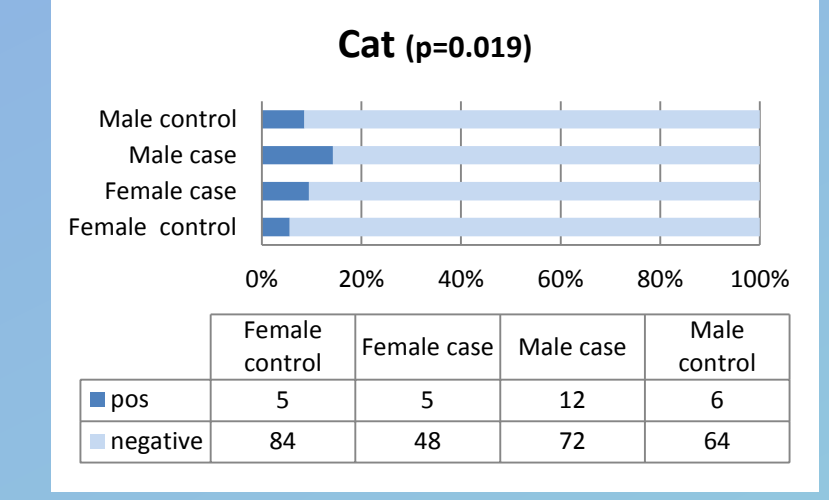
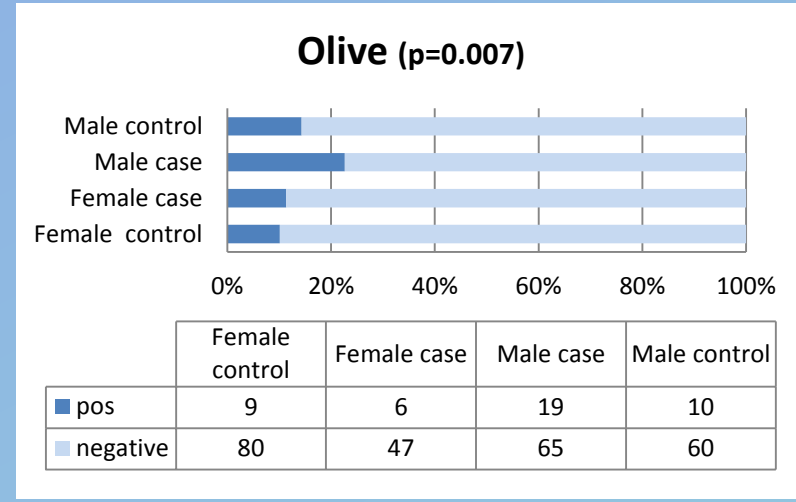
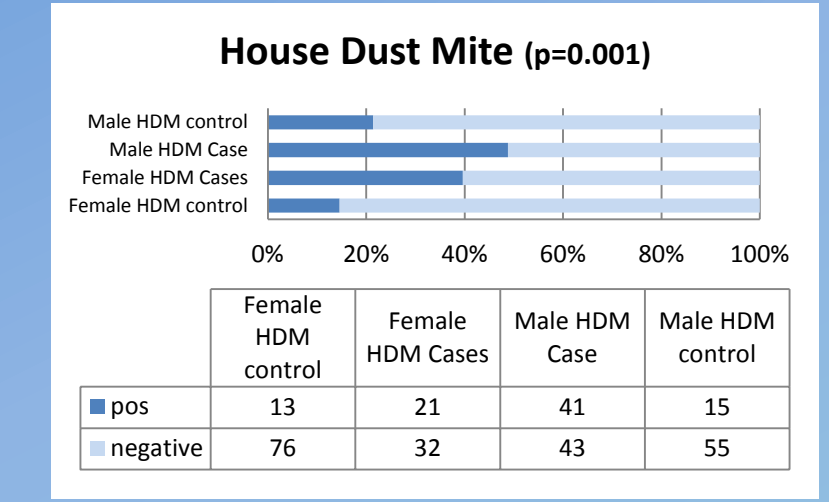


Figure 4. Positive Skin prick test – by gender



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