

HELICOBACTER PYLORI TESTING IN IRELAND 2023-2024.

K. Hutchinson¹, S.J. Lewis¹, A. Zakharova¹, M. Louw¹, M. M. Hannan^{1,2}.



Biomnis



1. Eurofins Biomnis, Sandyford, Dublin 18, Ireland.
2. Mater Misericordiae University Hospital Dublin, Ireland.

BACKGROUND:

Helicobacter pylori (*H. pylori*) infection is a public health issue. It remains one of the most common infections in adults in Ireland and is associated with significant disease and is the main cause of stomach ulcers and stomach cancers. Currently, *H. pylori* infection is managed almost exclusively by general practitioners (GPs). Diagnosis of *H. pylori* infection is one of the most important steps in infection management.

METHODS:

We have performed an audit of stool *H. pylori* antigens test (ImmunoCard STAT! HpSA, rapid lateral flow immunoassay) and serum Helicobacter Pylori IgG antibodies (HPAB: CLIA Chemiluminescence, Liaison XL/Diasorin) in Irish patients from GPs' practices during 2023-2024 (for HpSA: total n=13.201: F=7.849, M=5.352; for HPAB: total n=3.368: F=1.936, M=1.432). The software used for the statistical analysis was GraphPad Prism 5, Version 10.2.0. The positivity rate and the concentrations of *H. pylori* tests were analysed overall (and specifically in relation to sex and age groups <18; 18-40; 40-60 and >60).

RESULTS:

The positivity rate for stool *H. pylori* antigens test was 13% **Fig 1**. The 40-60 age group had the highest number of positive results for both males and females, 43% and 41%, respectively; in the <18 age group: M=7.5%, F=5%; 18-40: M=30%, F=34% and in the >60: M=19.5%, F=20% **Fig 2**. The overall positivity rate for *H. pylori* antibody test was 35%, more prevalent in males (M=38%; F=31%) **Fig 3 & 4**, in the age group 40-60 years old M=45% and F=44%; 18-40: M=37% and F=34% ($p = 0.0001$) **Fig 5**.

CONCLUSION:

This study demonstrated a high prevalence of *H. pylori* infection in the Irish population, but with a decreased tendency than previously reported. We also confirmed associations between *H. pylori* infection, age, and sex. The lower rate of positivity for stool *H. pylori* antigen tests may be the result of the poor sensitivity of the diagnostic kits. Other factors may include the quality of specimen tested and/or intermittent shedding of the *H. pylori* antigens.

FIG 1. THE OVERALL POSITIVITY RATE FOR STOOL *H. PYLORI* ANTIGENS TEST IN IRELAND IN 2023-2024 (13%).

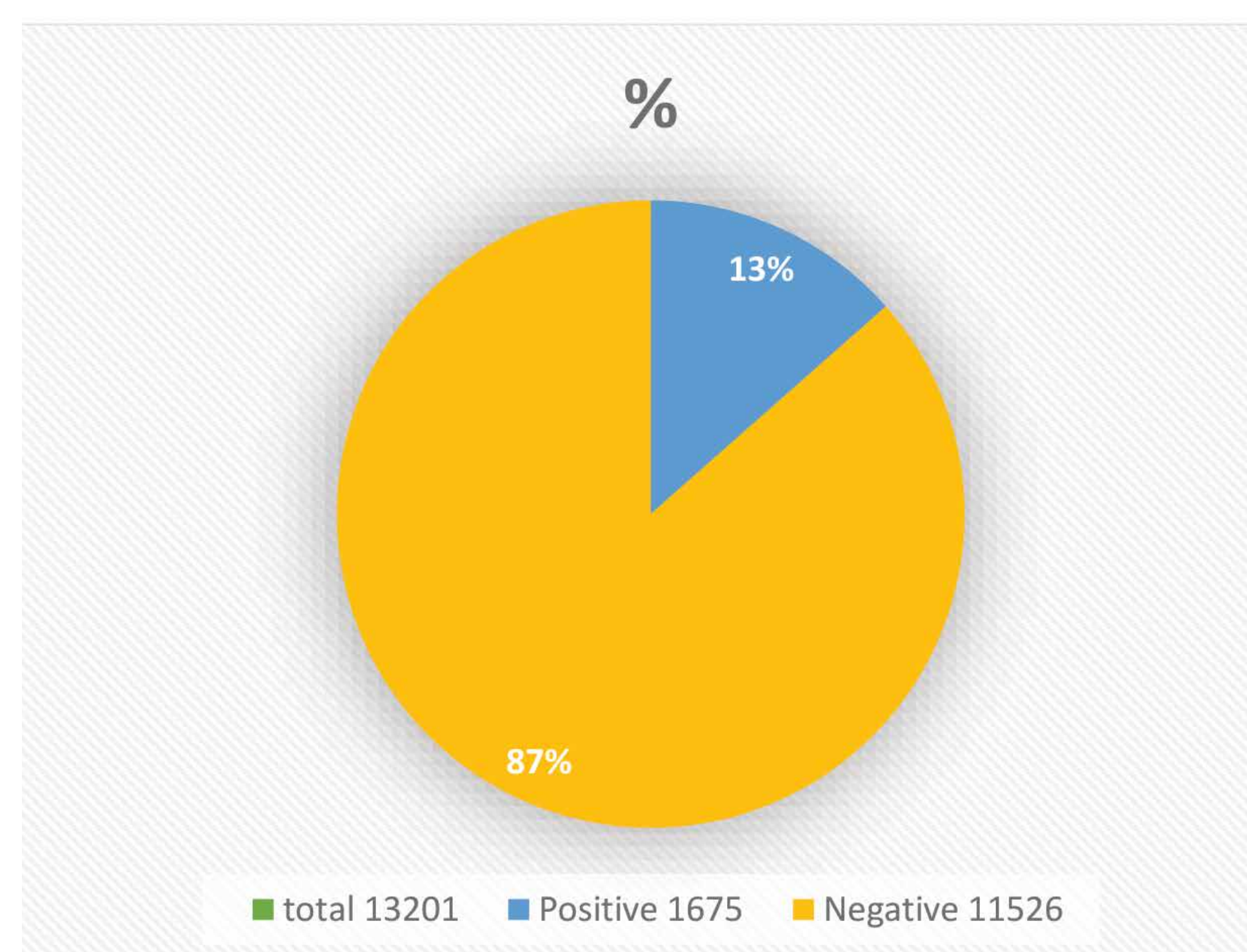


FIG 2. *H. PYLORI* ANTIGEN TEST, % OF POSITIVE RESULTS BY AGE GROUP AND SEX.

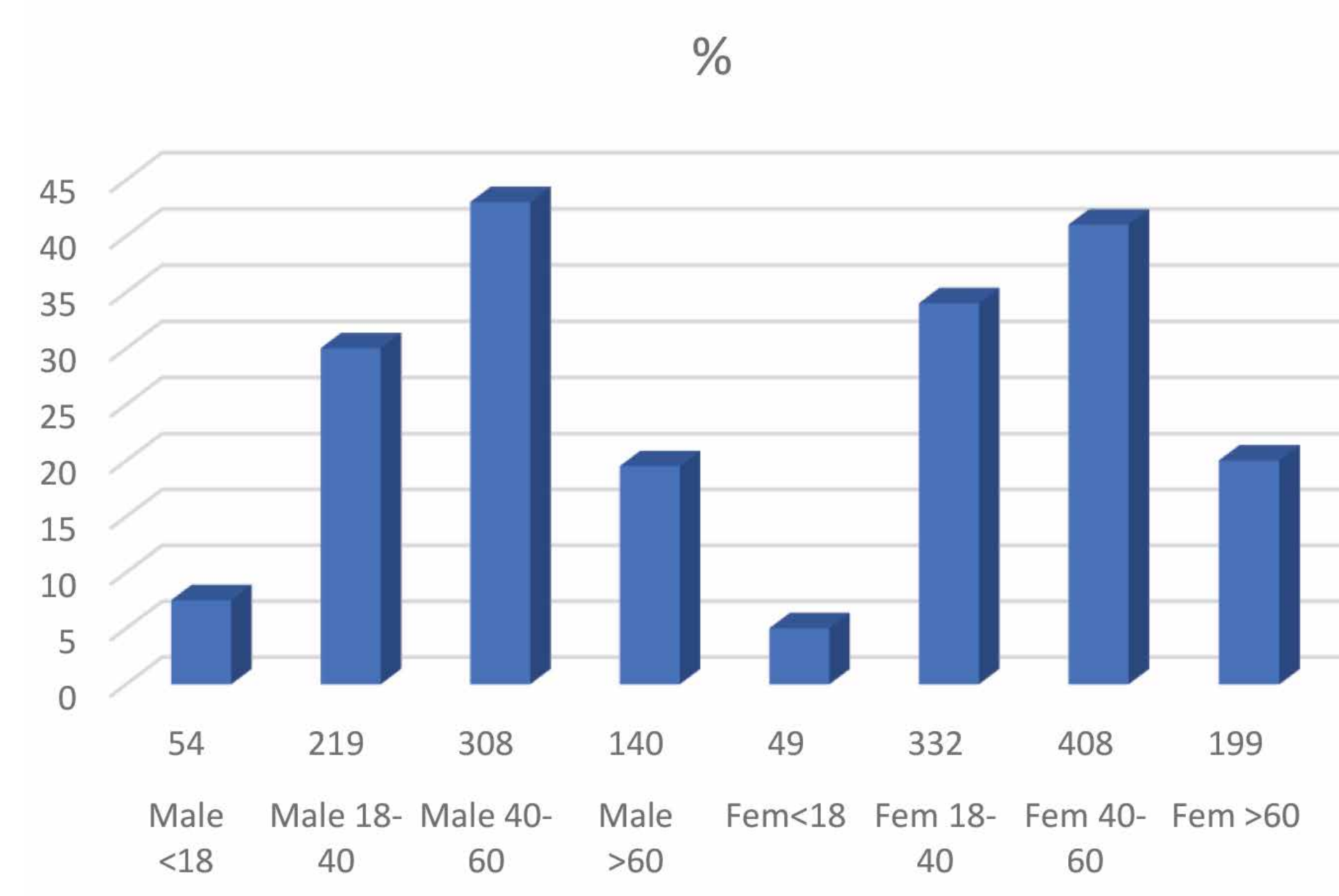


FIG 3. THE POSITIVITY RATE FOR *H. PYLORI* ANTIBODY TEST IN MALES.

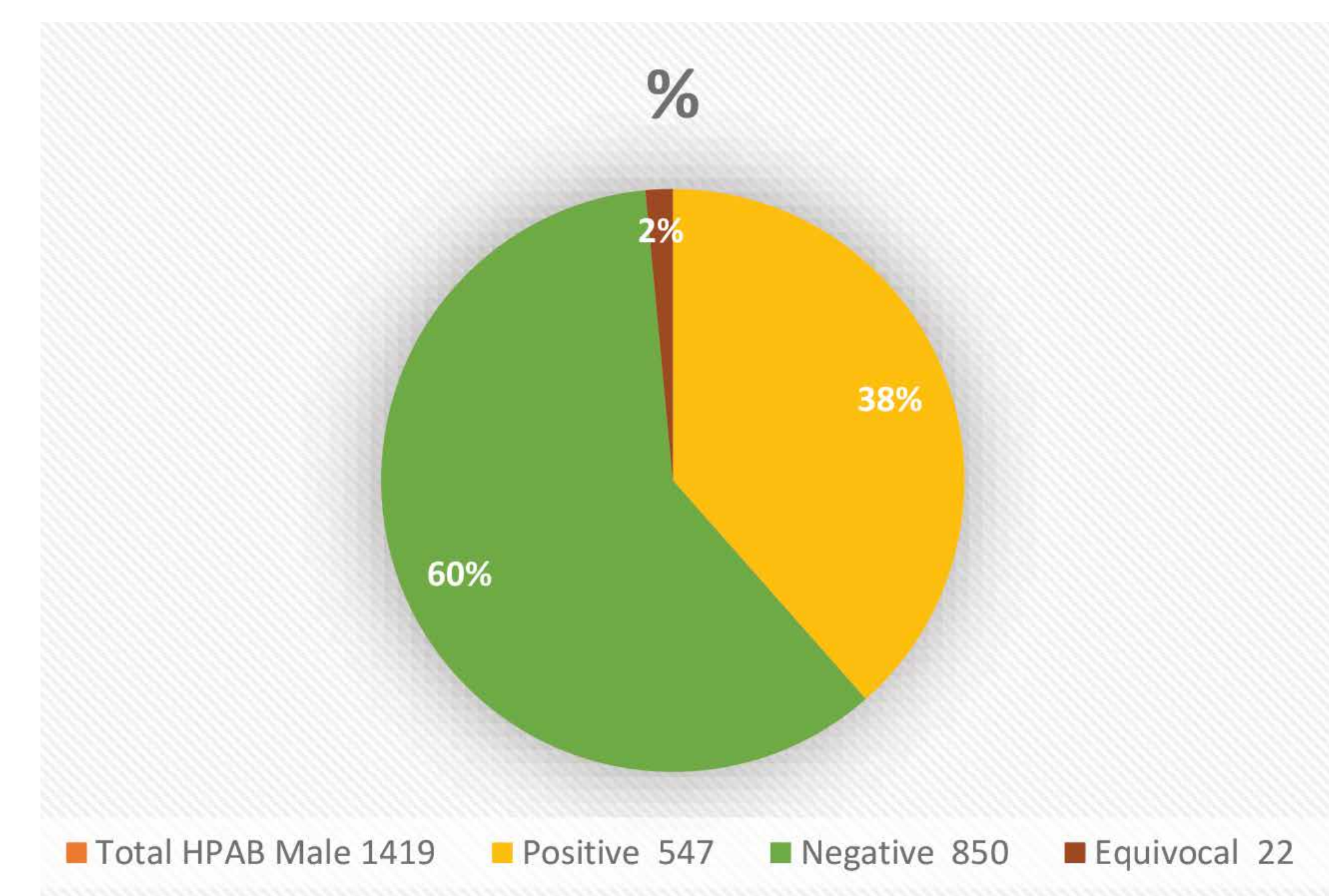


FIG 4. THE POSITIVITY RATE FOR *H. PYLORI* ANTIBODY TEST IN FEMALES.

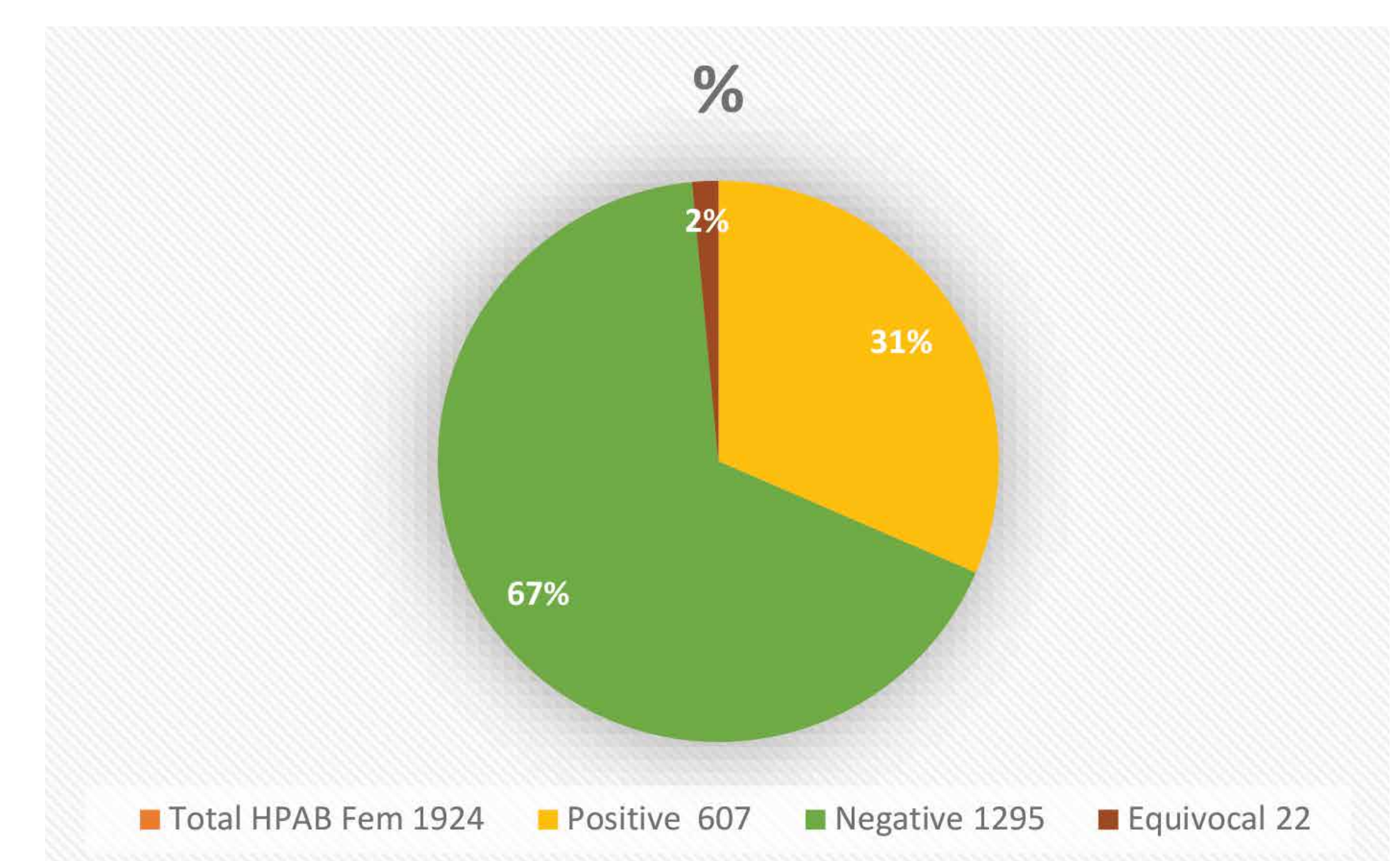


FIG 5. *H. PYLORI* ANTIBODY TEST, % OF POSITIVE RESULTS BY AGE GROUP AND SEX.

