

Susceptibility-guided treatment	Empirical treatment
<p>Advantages:</p> <ul style="list-style-type: none"> • Provide personalized treatment • Reduce unnecessary antibiotic prescription • Limit the emergence of antibiotic resistance worldwide • Allow performing resistance surveys over time • Might allow prescribing the optimized clarithromycin-based triple therapy to patients with clarithromycin-susceptible strains in areas with high overall clarithromycin resistance • Molecular testing on gastric biopsies is a highly accurate diagnostic method. <p>Limitations:</p> <p>While molecular tests based on gastric biopsies benefit from a long experience, it is not the same with stool samples. However novel commercial molecular kits have recently become available.</p> <ul style="list-style-type: none"> • An endoscopy is required to obtain gastric biopsies which is expensive and uncomfortable • Low rate of acceptance of endoscopy by patients • Since most endoscopy findings are normal this procedure does not contribute to management in young patients (age below 50 years) • Culture is time-consuming and requires expertise • Culture is not always available on a routine basis • Culture provides information for all antibiotics but it is useful only for clarithromycin and quinolones • Metronidazole testing is not reproducible and has an imperfect correlation between <i>in vitro</i> and <i>in vivo</i> results • Expensive (mainly because of endoscopy) 	<p>Advantages:</p> <ul style="list-style-type: none"> • “Test-and-treat” strategy for dyspepsia is recommended by all consensus conferences (for young patients without alarm symptoms) • Resistance to amoxicillin , tetracycline and rifabutin is extremely rare, so they can be empirically prescribed • No <i>in vitro</i> resistance to bismuth has been described, so it can be also empirically prescribed • <i>in vitro</i> metronidazole resistance has a limited impact on the efficacy of treatments when sufficiently long treatments and high metronidazole doses are used • The position in the case of failure is clear: not to re-administer any of the antibiotics against which <i>H. pylori</i> has probably become resistant • Rifabutin and furazolidone are good alternatives for empirical treatment after several eradication failures • Cumulative <i>H. pylori</i> eradication rate with several successive rescue therapies empirically prescribed reaches almost 100% <p>Limitations:</p> <ul style="list-style-type: none"> • Resistance of <i>H. pylori</i> to antibiotics has reached alarming levels worldwide • Empirical treatment may increase the emergence of antibiotic resistance worldwide • In some cases, it will imply prescribing an antibiotic that will lack efficacy • Increase unnecessary antibiotic prescription • Does not allow performing resistance surveys • Does not provide personalized treatment • May induce transient increase of antibiotic resistance to certain other bacteria • May induce short-term perturbation of gut microbiota after <i>H. pylori</i> eradication

