



# VacZine Analytics

Bringing life to vaccine strategy...

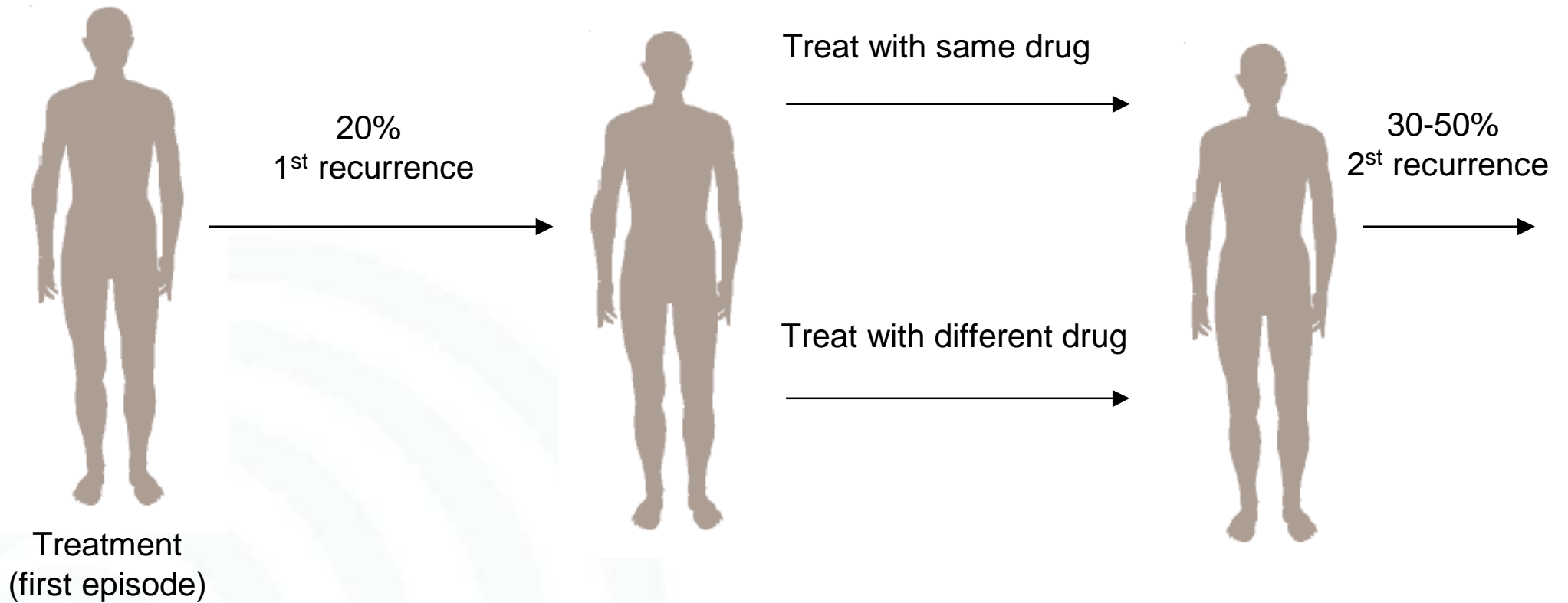
## OpportunitySCAN

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*Clostridium difficile*

**\*\*PRODUCT SAMPLE\*\***

# The challenge: recurrent CDAD



*“Recurrences are not a drug failure problem – they are a host failure problem. They can be managed with a repeat course of the same drug or you can switch to a different drug” – US opinion leader*

## Vaccine opportunity: scientific rationale (1)

① **C.diff** associated disease is mediated by two toxins:

- Toxin A (enterotoxin – 308Kd)
- Toxin B (cytoxin – 269Kd)

② **C.diff** strains associated with increased virulence and higher disease severity e.g. **C.diff** ribotype 027 produce more toxin<sup>4</sup>

③ There is strong evidence that the host immune response has a role in determining clinical outcome of **C.diff** infection

- Around 60% of humans have serum IgG and colonic IgA antitoxin antibody<sup>5</sup>

④ Individuals with high level of toxin antibodies are more likely:

- To be asymptomatic carriers of **C.diff**<sup>5</sup>
- Are less likely to suffer disease recurrence<sup>6</sup>

4: Warny M et al. Toxin production by an emerging strain of *Clostridium difficile* associated with severe disease in North America and Europe. Lancet. 2005;366:1079-1084

5. Kyne L et al . Asymptomatic Carriage of *Clostridium difficile* and serum levels of IgG antibody against toxin. N Engl J Med 2000;342:390-397

6: Kyne L et al. Association between antibody response to toxin A and protection against recurrent *Clostridium difficile* diarrhoea. Lancet 357:189-193

## Expert viewpoints: emerging treatments

- ③ *“Tolvamer has already failed in Phase III. It failed miserably – it didn’t even come close to vancomycin as a therapeutic but it did have very low recurrence rates”* – **US opinion leader**
- ③ *“OPT-90 is interesting in that it may show low recurrence rates because it has a very narrow spectrum and does not likely affect bacteroides and some of the other flora”* – **US opinion leader**
- ③ *“They [new treatments] might bring benefits at the margins but I’m not persuaded by what I’ve seen. I’m not persuaded there will be a giant leap forward”* – **UK opinion leader**

## About VacZine Analytics:

VacZine Analytics is a brand new research consultancy based in the United Kingdom. Its aim is to provide high-quality disease and commercial analysis to those working within or in collaboration with the vaccine industry.

With our product lines:

- ① **DiseaseINFOPACK**
- ① **OpportunitySCAN**
- ① **MarketVIEW**
- ① **ExpertREACT**

Our key focus is helping clients to build the case for developing new vaccines.

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