

# Trends over calendar time in the prevalence of patients with extensive triple class virologic failure in the UK

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on behalf of UK CHIC



# Background

- It is important to monitor trends in numbers of patients who have extensive virologic failure in order to help understand the future need for new drugs
- An important distinction is between patients who started ART before the HAART era, with mono or dual nucleosides, and those who started ART with 3 or more drugs.
- The former group is likely to contain a higher proportion of patients with extensive failure. The latter group is most relevant for the long term future trends.

# Objectives

- To assess trends over time in the prevalence of extensive triple class failure and the proportion of such patients who have viral load  $< 50$  copies/mL.
- To study this separately in patients who started ART with three or more drugs.

# UK CHIC Study

- UK CHIC study
  - 10 participating clinics at time of this analysis
  - Information collected as part of routine clinical care
    - e.g. Full antiretroviral drug history
    - All viral loads & CD4 counts
  - Data on over 25000 people with HIV

# Participating centres

## Clinical centres

Brighton and Sussex University Hospitals NHS Trust, Brighton  
Barts and the London NHS Trust, London  
Chelsea & Westminster NHS Trust, London  
Mortimer Market Centre, RF&UC Medical School, London  
Homerton University Hospital NHS Trust, London  
Kings College Hospital, London  
The Lothian University Hospitals NHS Trust, Edinburgh  
The Royal Free NHS Trust, London  
North Middlesex University Hospital NHS Trust, London  
St Mary's NHS Trust, London

## Other centres

Dept. of Primary Care and Population Sciences, RF&UCMS  
Medical Research Council Clinical Trials Unit  
Health Protection Agency – Communicable Disease Surveillance  
Centre (HPA-CDSC)

## New centres (participating from 2007)

Reading, Bristol, St. George's



# Definitions

- Virologic failure of a drug:  
viral load > 500 copies/mL, despite > 4 months continuous use of that drug.
- Extensive triple class failure (ETCF) :  
virologic failure of
  - (i) (zdv or d4T) and (3TC or FTC) and (abacavir, ddl or tenofovir)
  - (ii) a ritonavir boosted PI
  - (iii) an NNRTI.



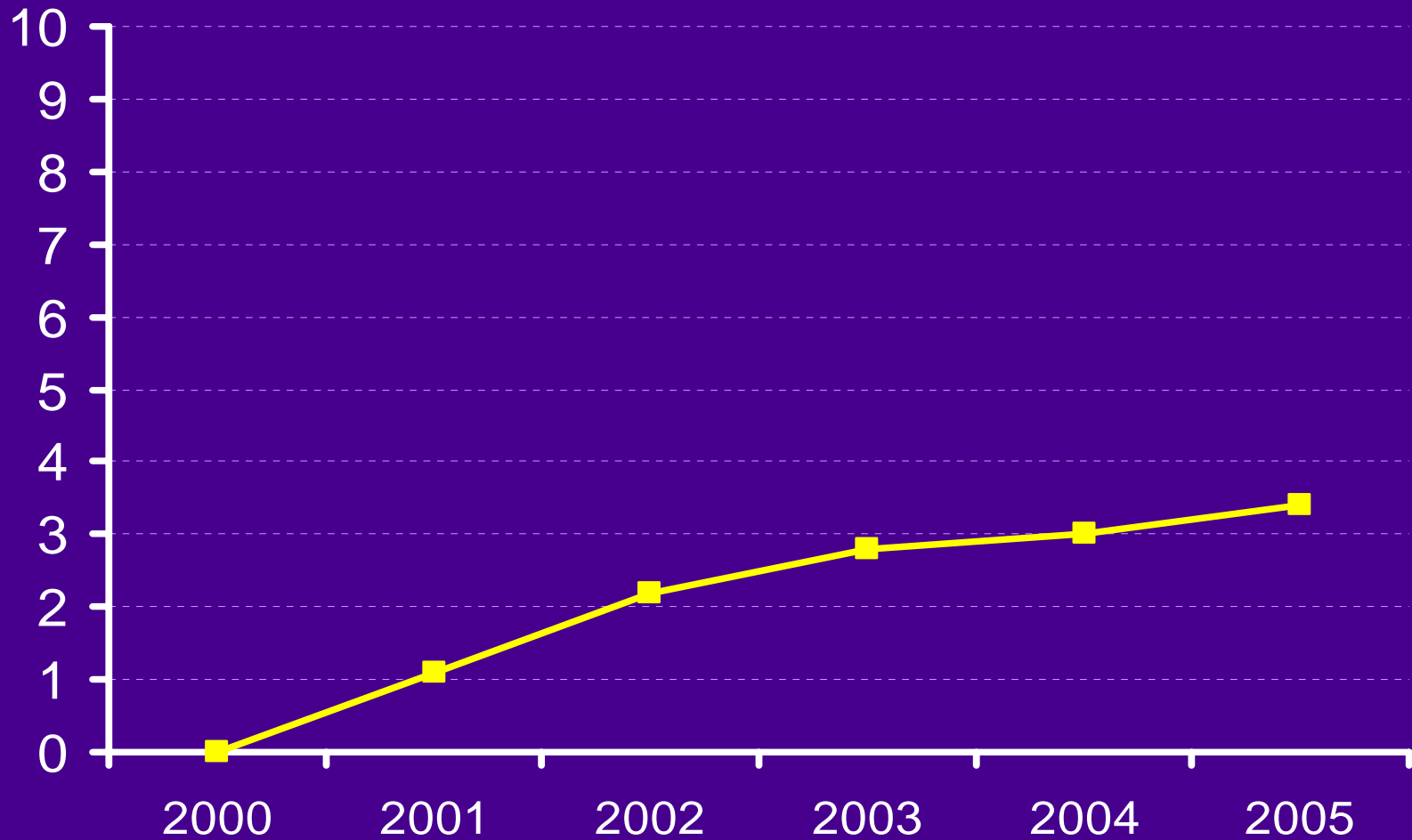
# Inclusion criteria

- Patients who were included in a given calendar year if:-
  - (i) they had started ART before the mid-point and their most recent visit was after.and
  - (ii) they had at least one viral load in that year

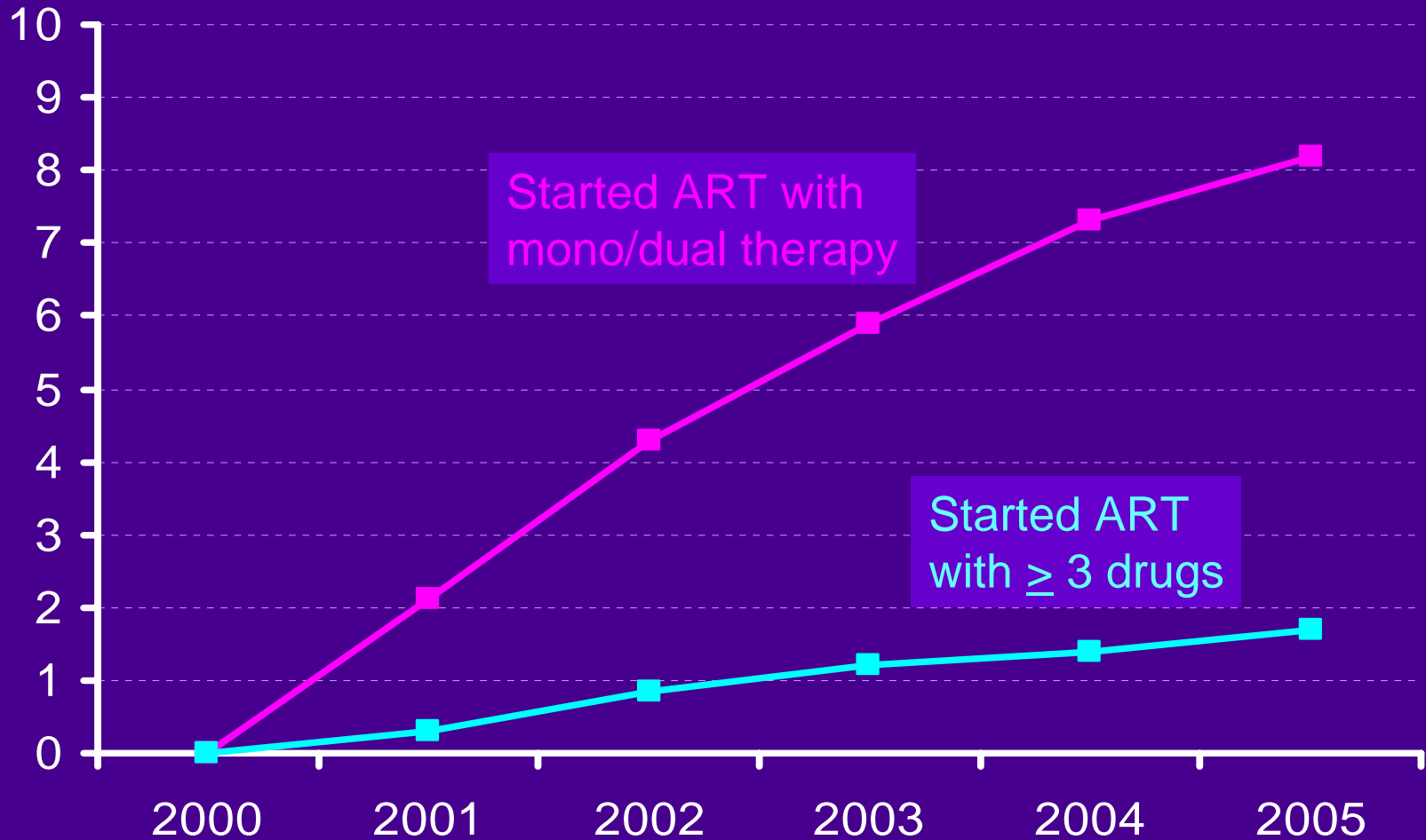
# Patient Characteristics

	Number ART experienced	Number who had started ART with $\geq 3$ drugs	MSM	Hetero-sexual	Women
2000	6535	3160 (48%)	67%	25%	18%
2001	7849	4369 (56%)	65%	27%	20%
2002	8900	5436 (61%)	63%	29%	21%
2003	9984	6583 (66%)	61%	32%	22%
2004	10354	7240 (70%)	59%	34%	24%
2005	9911	7226 (73%)	56%	36%	26%

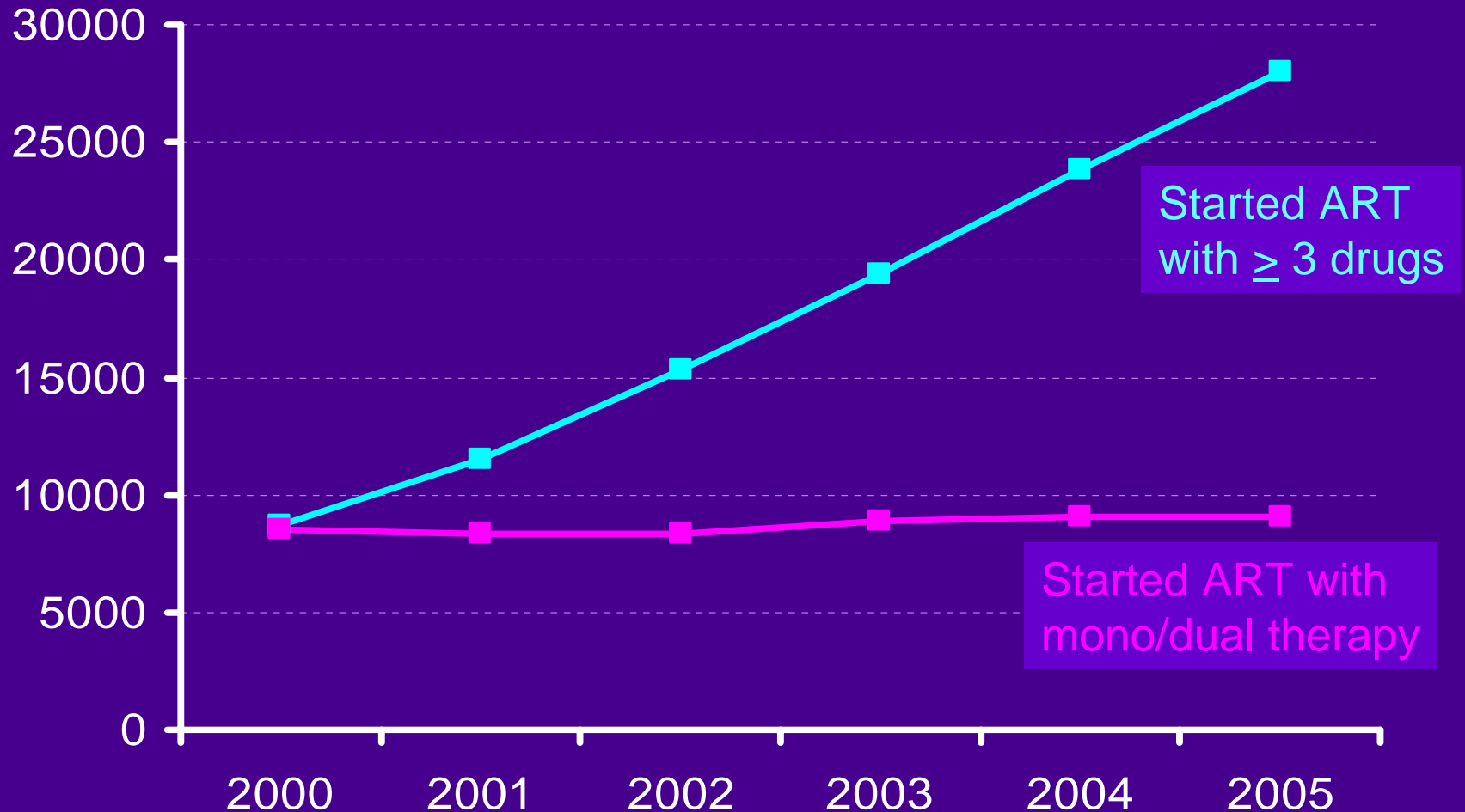
# Percent of ART-experienced patients with extensive triple class failure



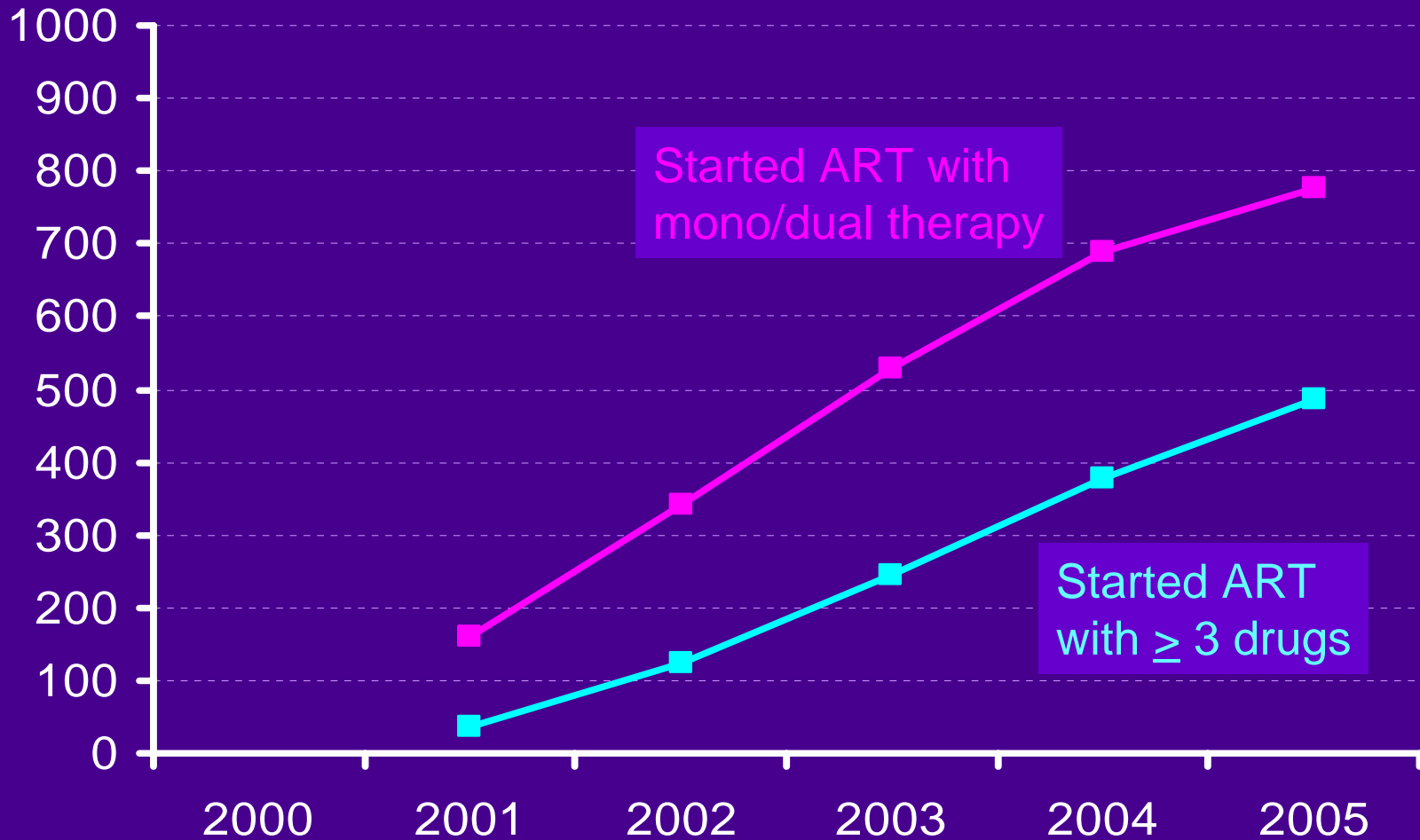
# Percent of patients with extensive triple class failure according to number of drugs used at start of ART



# Number of ART experienced patients in the UK according to number of drugs used at start of ART: estimations based on SOPHID and CHIC



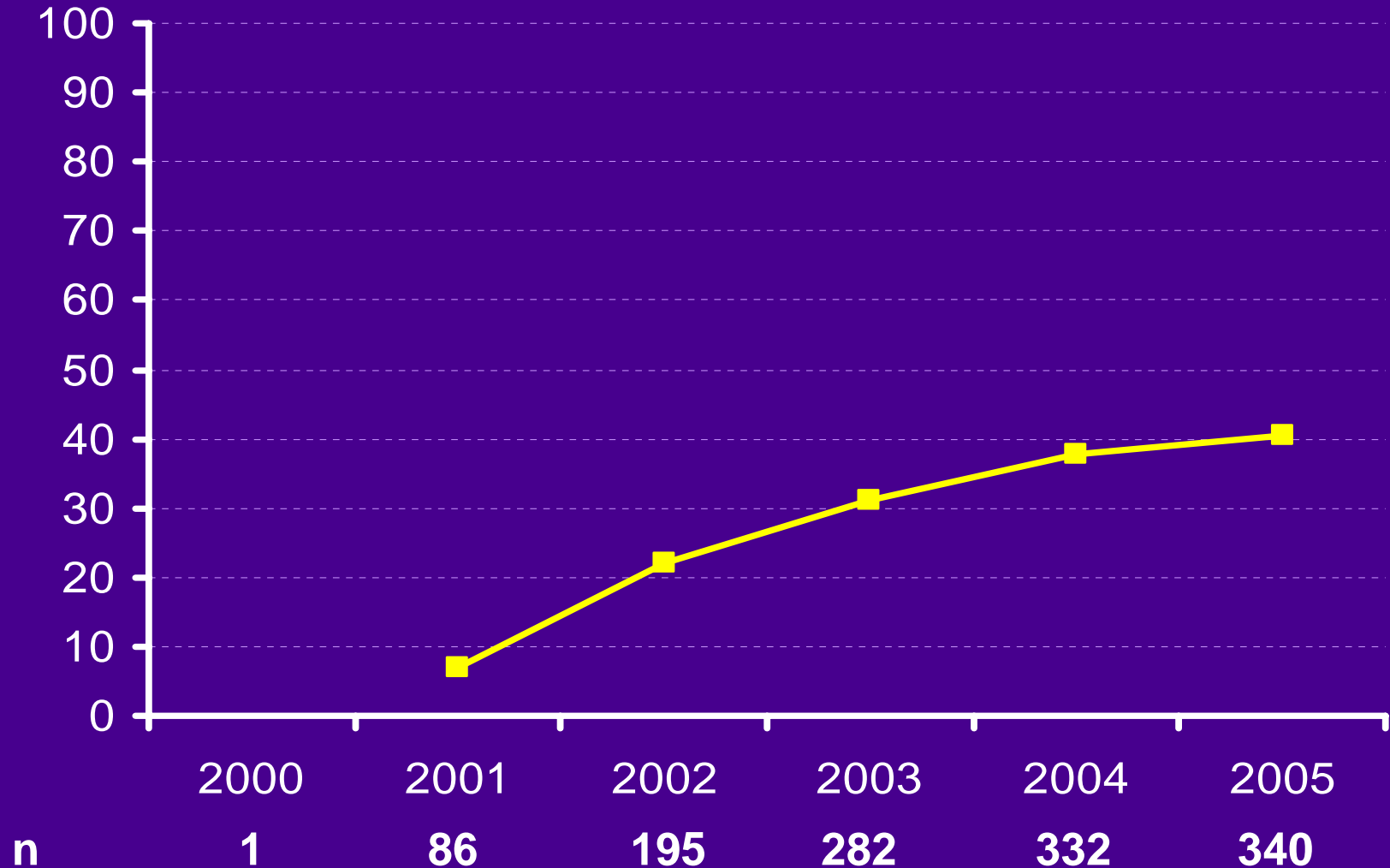
# Estimated number of patients with extensive triple class failure in the UK, using SOPHID



*2005: 1,261 out of 37,051 ART experienced patients*



# Percent of patients with extensive triple class failure for whom viral load < 50 copies/mL



# Summary

- The number of patients under care in the UK with extensive triple class failure is relatively low, but growing steadily – around 1200 in the UK in 2005.
- The prevalence of extensive triple class failure differs markedly between patients who started ART with three or more drugs and those who started ART with mono or dual therapy: 2% vs 8% in 2005.
- An increasing proportion of patients with extensive triple class failure have viral load < 50 copies/mL.

# Potential Implications

- Given that three other drug classes are now available in developed countries, the numbers of patients for whom there are insufficient active drugs to suppress viral replication is likely to be extremely low over the next few years.
- The findings are particularly encouraging for developing countries where drugs outside the the three original classes are unlikely to be widely available for some time.

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