

Press Briefing: Monday, October 21, 2019

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# Work productivity loss is a major cost driver in IBD patients: the WORK-IBD study

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# Disclosures



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# Introduction

- ❖ Disease and economic burden due to IBD is substantial
- ❖ **Healthcare costs** result from **direct** and **indirect** costs
- ❖ Work productivity loss can be measured in
  - ❖ **Absenteeism** = absence from work
  - ❖ **Presenteeism** = on the job productivity loss
- ❖ Prior economic analyses focused on absenteeism, while  $\geq 30\%$  experience presenteeism<sup>1</sup>
- ❖ Little is known about indirect costs in the 'working' IBD population

# Aims



- ❖ To describe the prevalence of work productivity loss
- ❖ To assess predictors of severe work productivity loss
- ❖ To estimate associated indirect costs per patient per year

# Methods



## Design

- ❖ Web-based questionnaire study
- ❖ Cross-sectional baseline data were analysed

## Inclusion criteria

- ❖ CD or UC
- ❖ Outpatient clinic visit May 1st - August 31<sup>st</sup> 2017
- ❖ Participating in paid labor (including partial work disability)





# Outcome measures

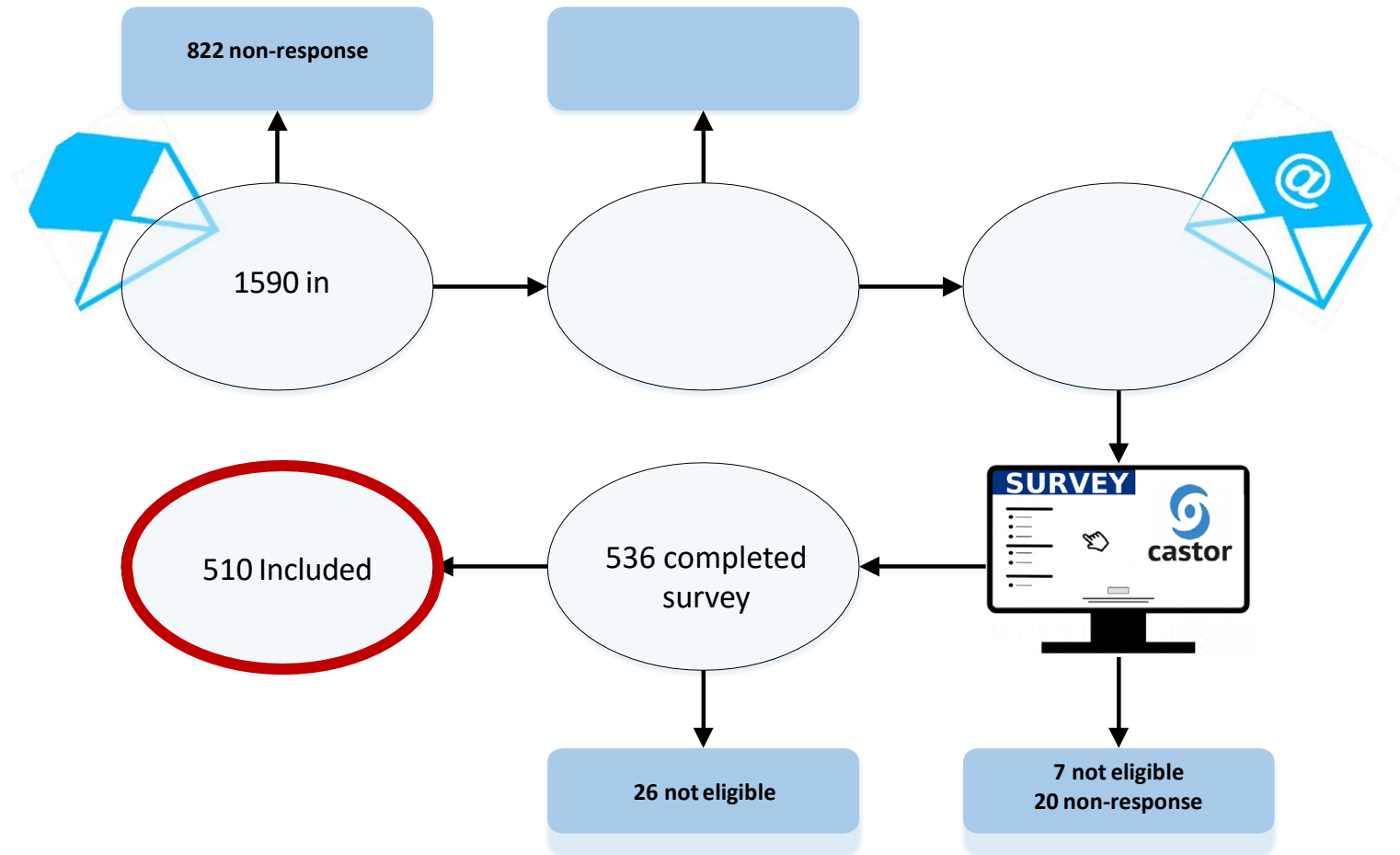
- ❖ **Work productivity loss:** Work Productivity and Activity Impairment (WPAI)
  - ❖ Severe work productivity loss  $\geq 50\%$
- ❖ **Fatigue:** Multidimensional Fatigue Inventory (MFI)
  - ❖ Severe fatigue = score  $>$  95th percentile of general population <sup>1</sup>
- ❖ **Mean (SD) indirect costs** in € per patient per year
  - ❖ Work productivity loss, contract hours, hourly wage, 47 weeks <sup>2,3</sup>

# Results





# Patient disposition



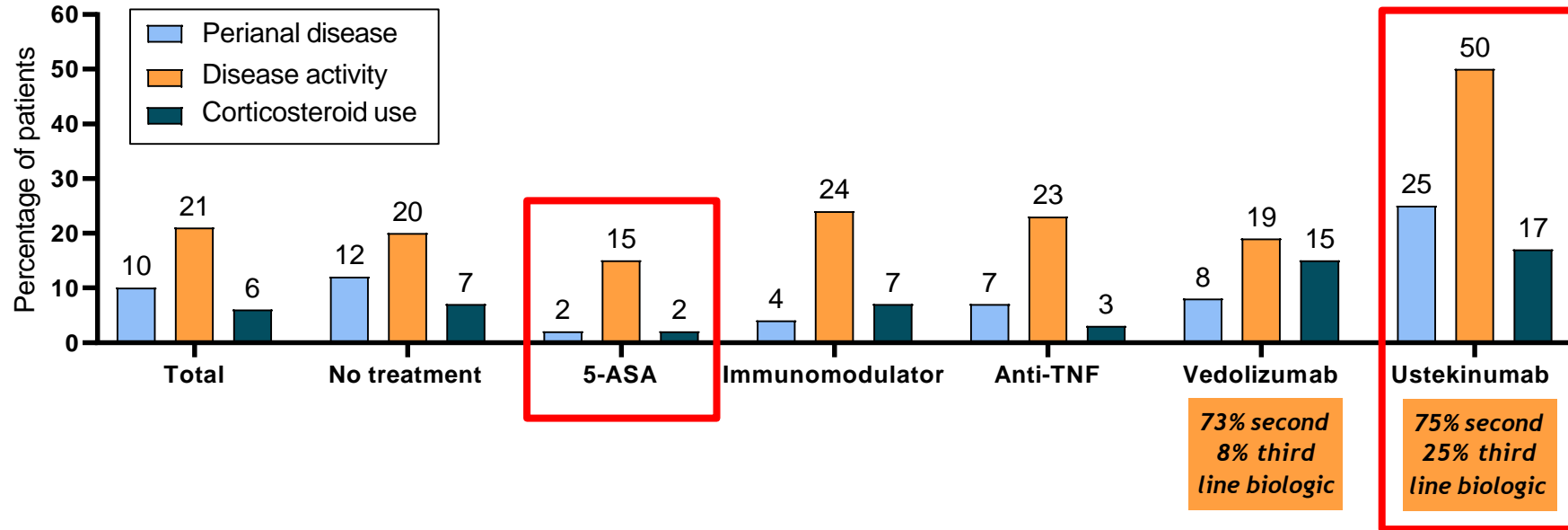
# Baseline characteristics



|   | Total      | No treatment | 5-ASA      | Immuno-modulator | Anti-TNF                 | Vedo-lizumab               | Uste-kinumab               |
|---|------------|--------------|------------|------------------|--------------------------|----------------------------|----------------------------|
| <b>Total</b>                                    | <b>510</b> | <b>132</b>   | <b>110</b> | <b>108</b>       | <b>122</b>               | <b>26</b>                  | <b>12</b>                  |
| <b>Second line biologic Third line biologic</b> |            |              |            |                  | <b>3 (2%)<br/>0 (0%)</b> | <b>19 (73%)<br/>2 (8%)</b> | <b>9 (75%)<br/>3 (25%)</b> |
| <b>Female</b>                                   | 299 (59%)  | 76 (58%)     | 66 (60%)   | 66 (61%)         | 73 (60%)                 | 11 (42%)                   | 7 (58%)                    |
| <b>CD</b>                                       | 268 (53%)  | 78 (59%)     | 11 (10%)   | 63 (58%)         | 87 (71%)                 | 17 (65%)                   | 12 (100%)                  |
| <b>UC</b>                                       | 242 (47%)  | 54 (41%)     | 99 (90%)   | 45 (42%)         | 35 (29%)                 | 9 (35%)                    | 0 (0%)                     |
| <b>Disease duration, median years (IQR)</b>     | 11 (5-20)  | 11 (6-22)    | 10 (4-19)  | 12 (5-20)        | 12 (6-20)                | 14 (5-20)                  | 11 (8-17)                  |
| <b>Prior biologic therapy</b>                   | 166 (33%)  | 51 (39%)     | 12 (11%)   | 32 (30%)         | 38 (31%)                 | 21 (81%)                   | 12 (100%)                  |
| <b>Bowel resection</b>                          | 131 (26%)  | 55 (42%)     | 2 (2%)     | 24 (22%)         | 37 (30%)                 | 6 (23%)                    | 7 (58%)                    |
| <b>Disease activity</b>                         | 107 (21%)  | 26 (20%)     | 16 (15%)   | 26 (24%)         | 28 (23%)                 | 5 (19%)                    | 6 (50%)                    |
| <b>Perianal disease</b>                         | 28 (10%)   | 9 (12%)      | 2 (2%)     | 4 (4%)           | 8 (7%)                   | 2 (8%)                     | 3 (25%)                    |
| <b>Corticosteroid use</b>                       | 28 (6%)    | 9 (7%)       | 2 (2%)     | 8 (7%)           | 3 (3%)                   | 4 (15%)                    | 2 (17%)                    |

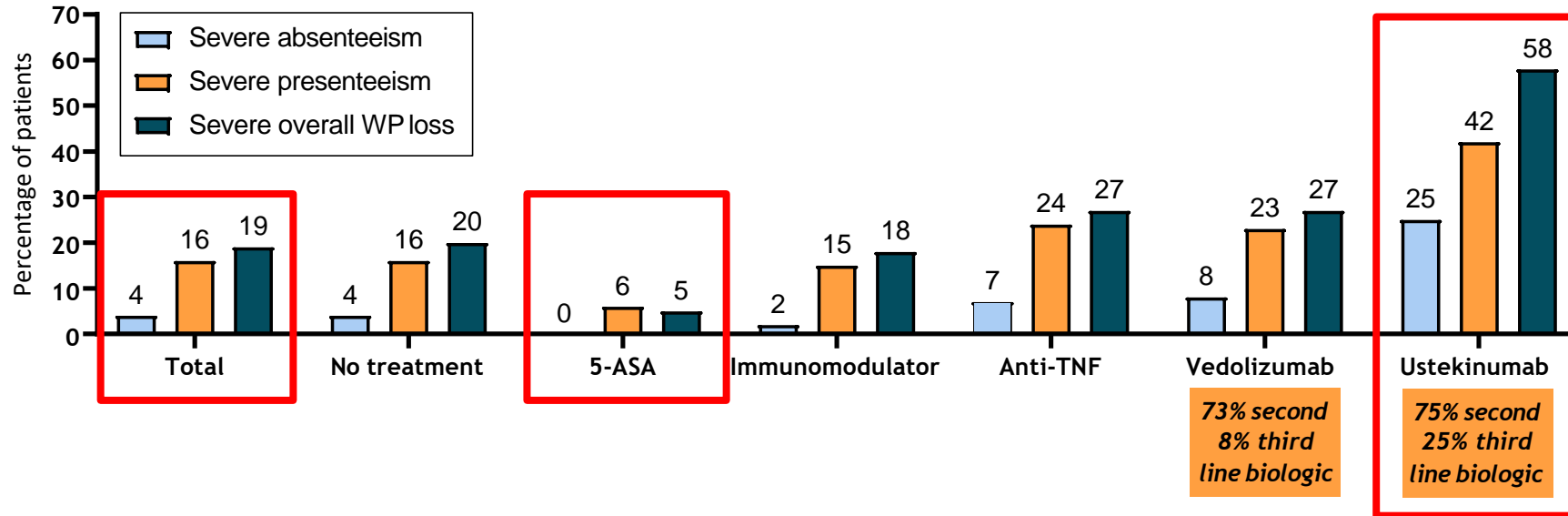


# Disease activity per treatment group





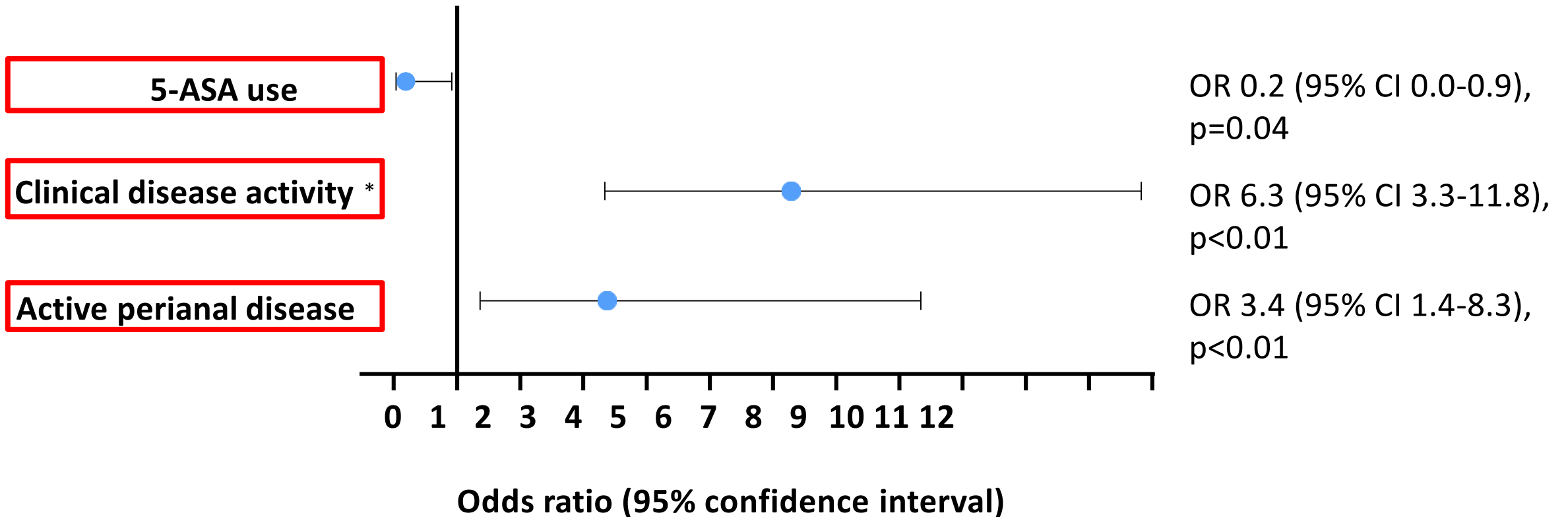
# Severe work productivity loss



- Severe absenteeism = 4%
- Severe presenteeism = 16%
- Severe overall work productivity loss = 19%

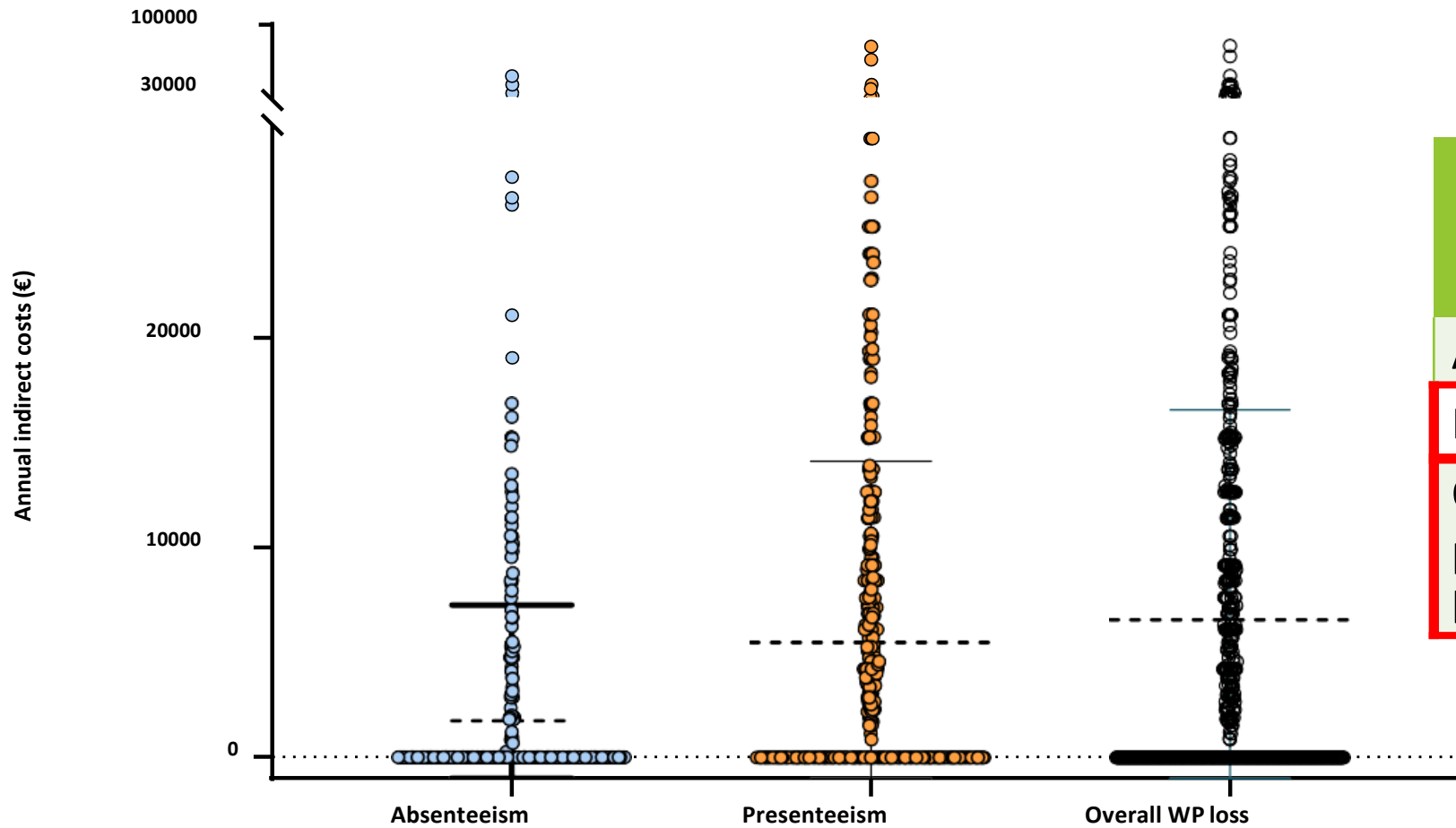
# Predictors of severe work productivity loss in IBD

## Multivariable regression analysis





# Indirect costs (€) per patient per year

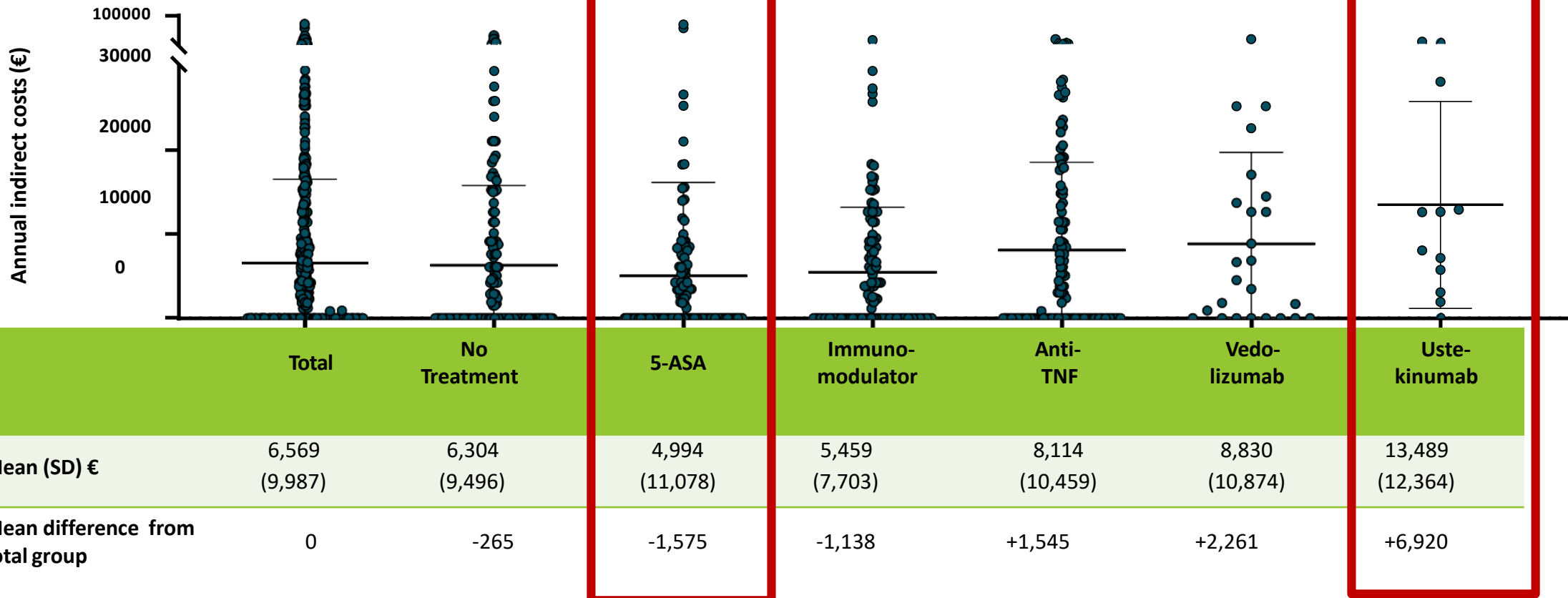


|                                | Mean (SD) costs in € |
|--------------------------------|----------------------|
| Absenteeism                    | 1,738 (5,505)        |
| Presenteeism                   | 5,478 (8,629)        |
| Overall work productivity loss | <b>6,597 (9,987)</b> |



# Indirect costs (€) per patient per year

## Treatment groups

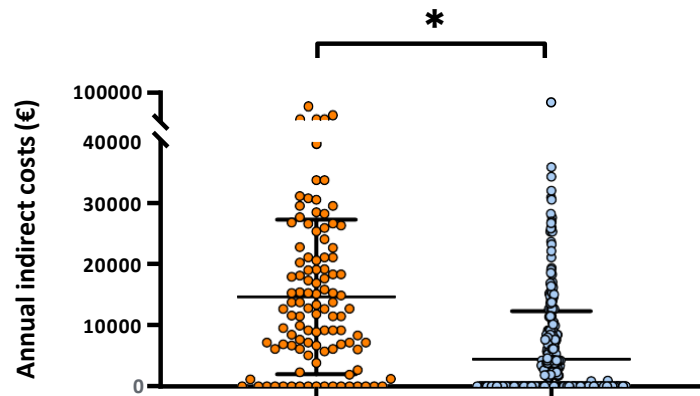




# Indirect costs (€) per patient per year

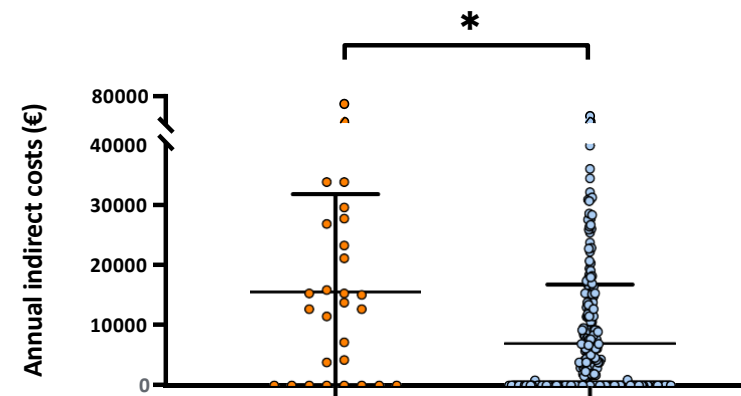
## *Predictors of work productivity loss*

Clinical disease activity



|                   | Active                   | Inactive         |
|-------------------|--------------------------|------------------|
| Mean (SD)<br>in € | 14,619<br>(12,636)       | 4,415<br>(7,876) |
|                   | 10,203<br>(8,261-12,146) |                  |

Active perianal disease (CD)



|                   | Active                   | Inactive         |
|-------------------|--------------------------|------------------|
| Mean (SD)<br>in € | 15,495<br>(16,223)       | 6,949<br>(9,745) |
|                   | 10,203<br>(8,261-12,146) |                  |



# Conclusions



- ❖ **Work productivity loss is substantial in the “working” IBD population**
  - ❖ *19% reported severe work productivity loss*
- ❖ **Patients using ustekinumab as a second or third line biologic and 5-ASA monotherapy users had the highest and lowest amount of work productivity loss**
  - ❖ *reflecting disease severity*
- ❖ **Disease activity and perianal disease are predictors of work productivity loss**
  - ❖ *and result in a significant increase of indirect costs*
- ❖ **Work productivity loss leads to ± €6,600 per patient per year**
  - ❖ *presenteeism is the major cost driver*

# Acknowledgements

