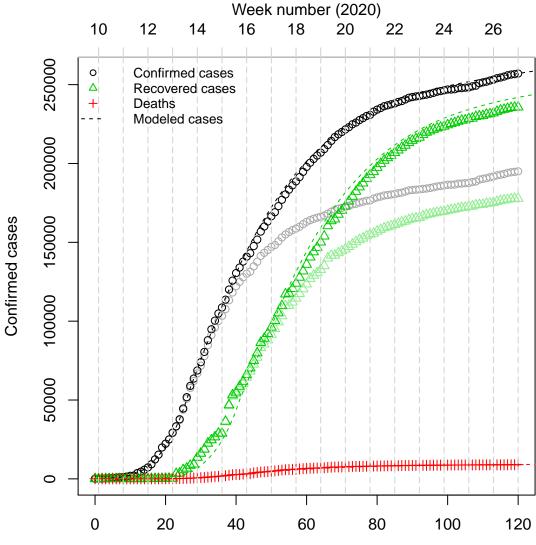
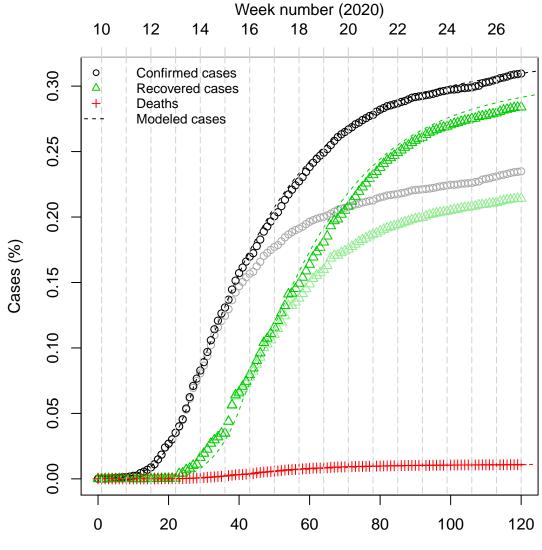
#### Situation vs Model COVID-19 in Germany

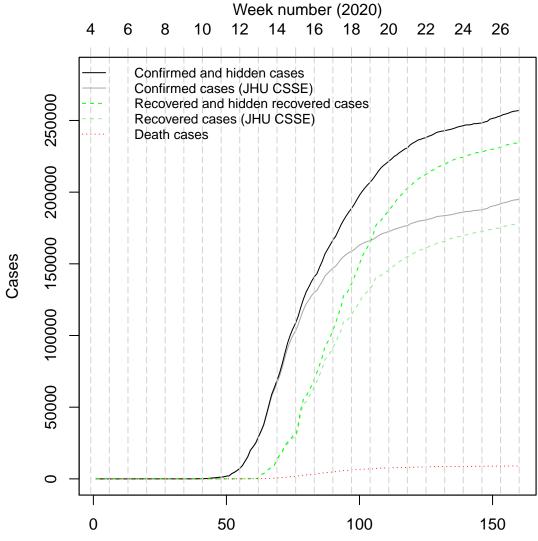


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#### Situation vs Model COVID-19 in Germany



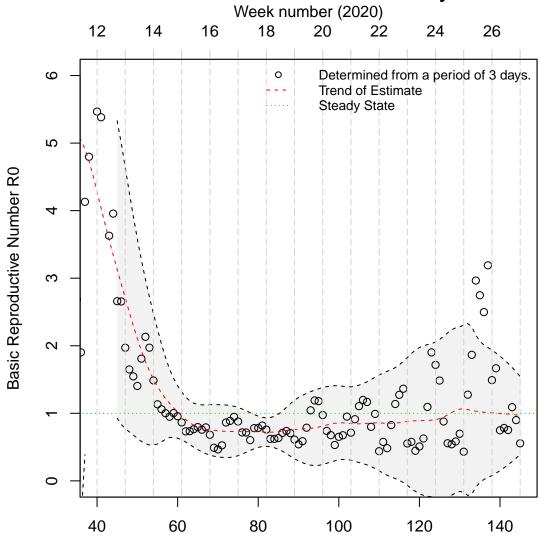
Days after 3/1/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de



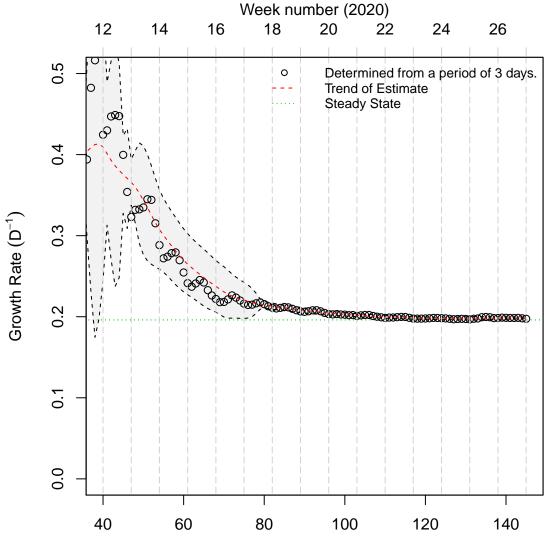
Days after 1/22/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de

#### Situation COVID-19 in Germany Week number (2020) Confirmed cases Recovered cases 1st phase (diffusion / no with 2nd phase (uncontrolled growth) 3rd phase (social distancing) 4th phase (lockdows) 4th phase (lockdows) 5th phase (exit from lockdown) $\infty$

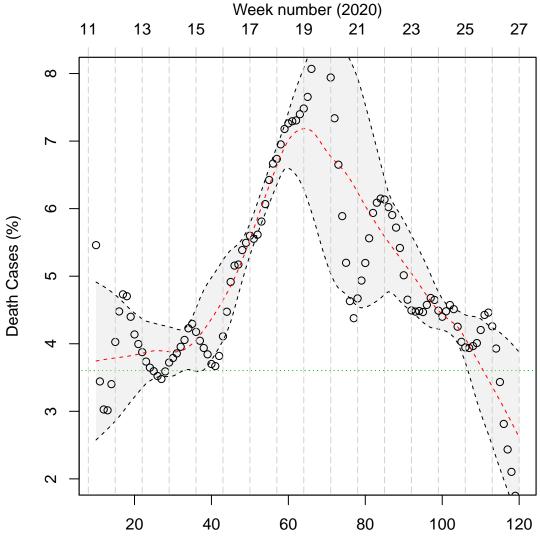
Days after 1/22/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de



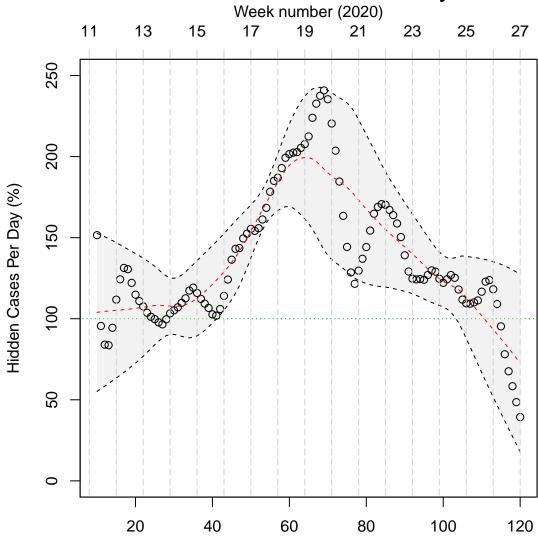
Days after 2/5/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de



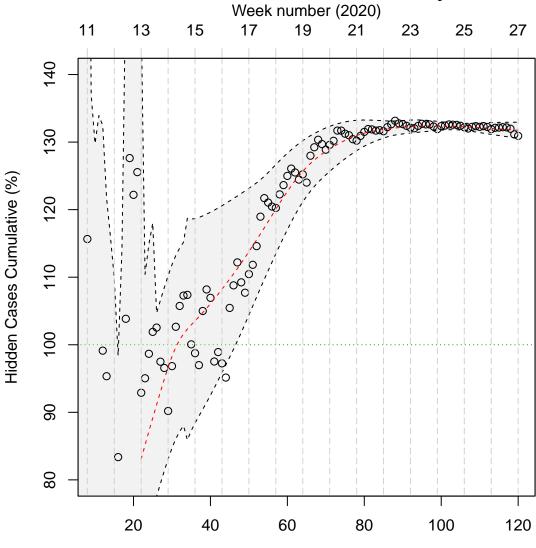
Days after 2/5/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de



Days after 3/1/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de

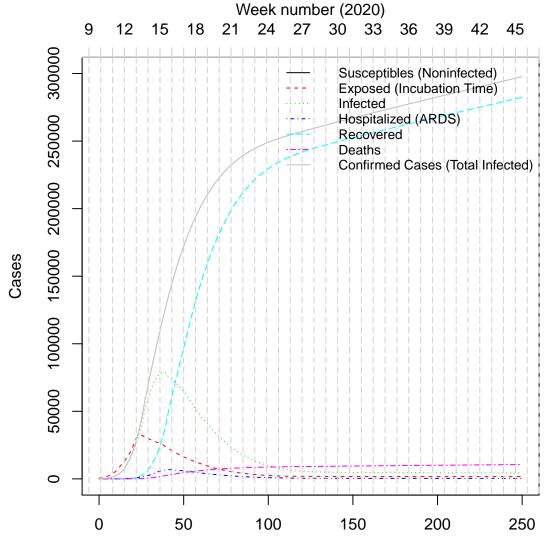


Days after 3/1/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de



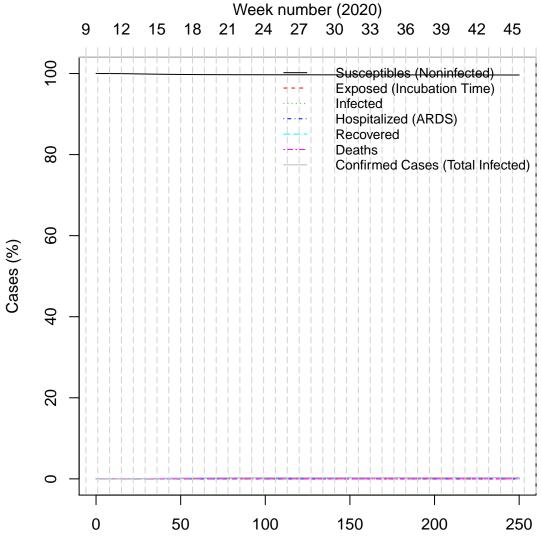
Days after 3/1/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de

#### Forecast COVID-19 in Germany



Days after 3/1/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de

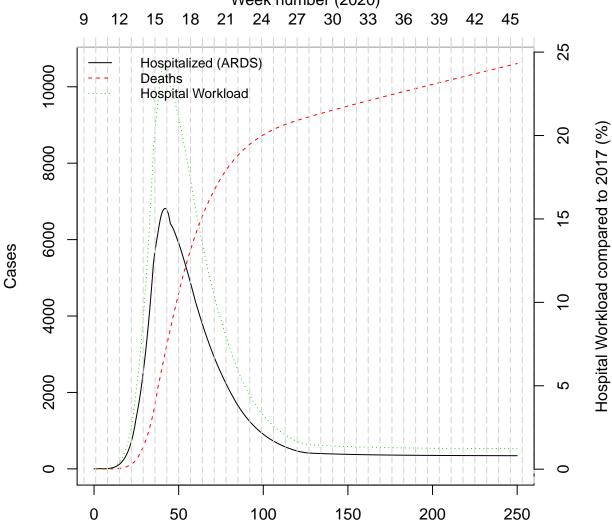
#### Forecast COVID-19 in Germany



Days after 3/1/20

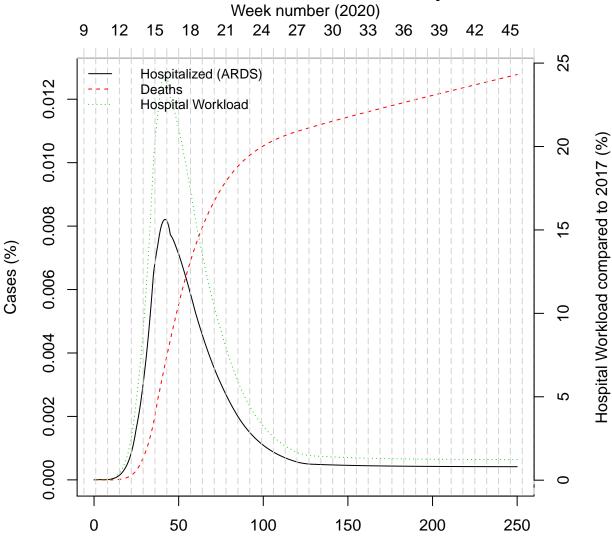
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# Forecast COVID-19 in Germany Week number (2020)



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# Forecast COVID-19 in Germany



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## Scenario 1 no social distancing and no lockdown Week number (2020) 24 45 12 15 18 21 36 39 8e+07 Susceptibles (Noninfected) Exposed (Incubation Time) Infected Hospitalized (ARDS) Recovered Deaths Confirmed Cases (Total Infected) 6e+07 Cases 4e+07 2e+07 00+<del>0</del>0

Days after 3/1/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de

150

200

250

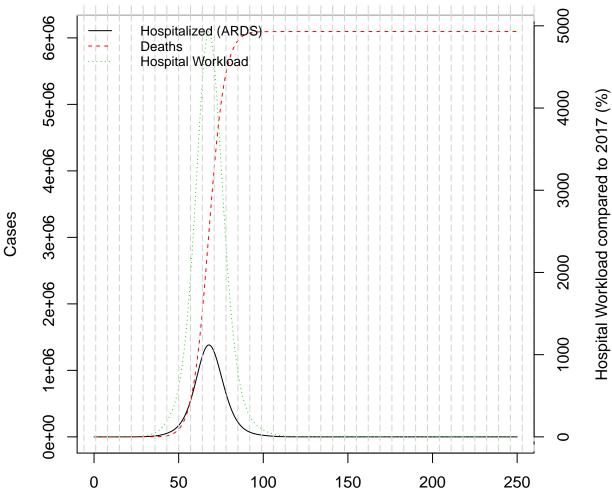
100

0

#### Scenario 1 no social distancing / no lockdown Week number (2020) Susceptibles (Noninfected) Exposed (Incubation Time) Infected Hospitalized (ARDS) Recovered Deaths Confirmed Cases (Total Infected) Cases (%)

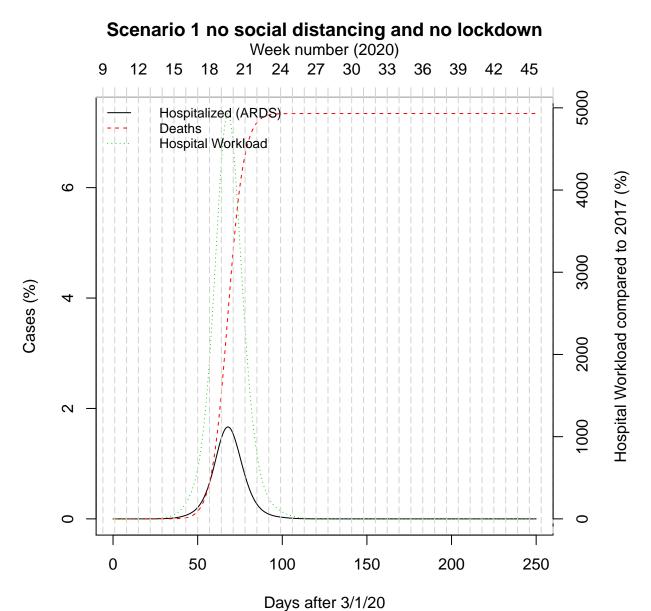
Days after 3/1/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de

#### Scenario 1 no social distancing and no lockdown Week number (2020) 45 12 15 18 36 5000 Hospitalized (ARDS) Deaths Hospital Workload



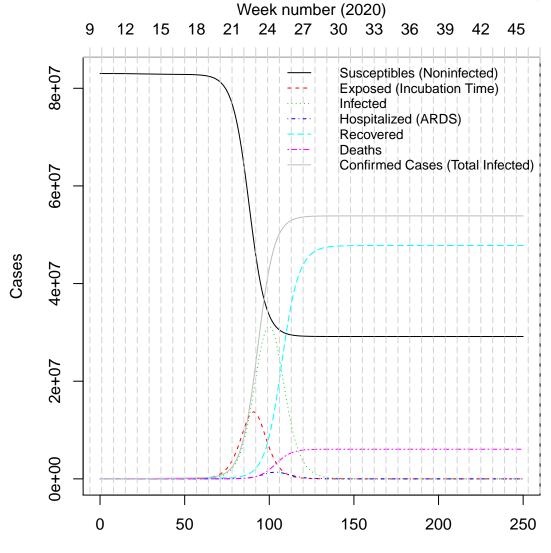
Days after 3/1/20

Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de



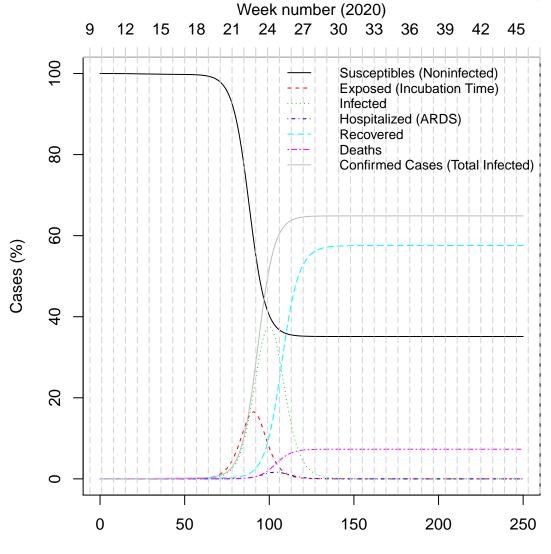
Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de

## Scenario 2 exit after day 50 without social distancing



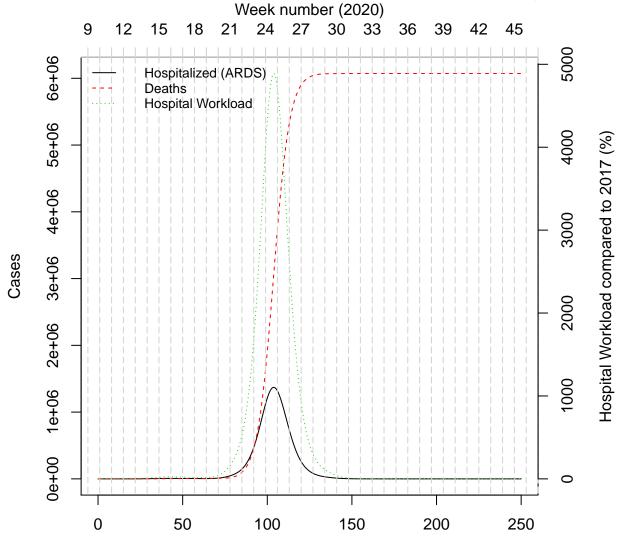
Days after 3/1/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de

## Scenario 2 exit after day 50 without social distancing



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#### Scenario 2 exit after day 50 without social distancing



Days after 3/1/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de

# Scenario 2 exit after day 50 without social distancing Week number (2020) 12 15 18 36 45 5000 Hospitalized (ARDS) Deaths Hospital Workload Hospital Workload compared to 2017 (%) 9 $\alpha$

Cases (%)

Days after 3/1/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de

150

200

250

100

50

#### Scenario 3 exit after day 50 with social distancing Week number (2020) 9 12 24 45 15 18 21 36 39 42 8e+07 Susceptibles (Noninfected) Exposed (Incubation Time) Infected Hospitalized (ARDS) Recovered Deaths Confirmed Cases (Total Infected) 6e+07 Cases 4e+07 2e+07 00+<del>0</del>0

Days after 3/1/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de

150

200

250

100

0

#### Scenario 3 exit after day 50 with social distancing Week number (2020) Susceptibles (Noninfected) Exposed (Incubation Time) Infected Hospitalized (ARDS) Recovered Deaths Confirmed Cases (Total Infected) Cases (%)

Days after 3/1/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de

# Scenario 3 exit after day 50 with social distancing Week number (2020) 45 12 15 18 36 4e+06 Hospitalized (ARDS) 2000 Deaths Hospital Workload Hospital Workload compared to 2017 (%) 3e+06 Cases 2e+06 1e+06 00+<del>0</del>0

Days after 3/1/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de

150

200

100

0

50

# Scenario 3 exit after day 50 with social distancing Week number (2020) Hospitalized (ARDS) Deaths Hospital Workload Hospital Workload compared to 2017 (%) Cases (%) N

Days after 3/1/20 Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de

#### Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 25 27 29 31 Hospitalized (ARDS) 6000000 Deaths R0 = 0.45500000 R0 = 0.65000000 R0 = 0.8R0 = 14500000 R0 = 1.2R0 = 1.44000000 R0 = 1.6R0 = 1.83500000 Growth Rate $(\mathsf{D}^{-1})$ R0 = 2R0 = 2.23000000 Cases R0 = 2.42500000 2000000 1500000 1000000 500000 0 0.32 0 50 100 150

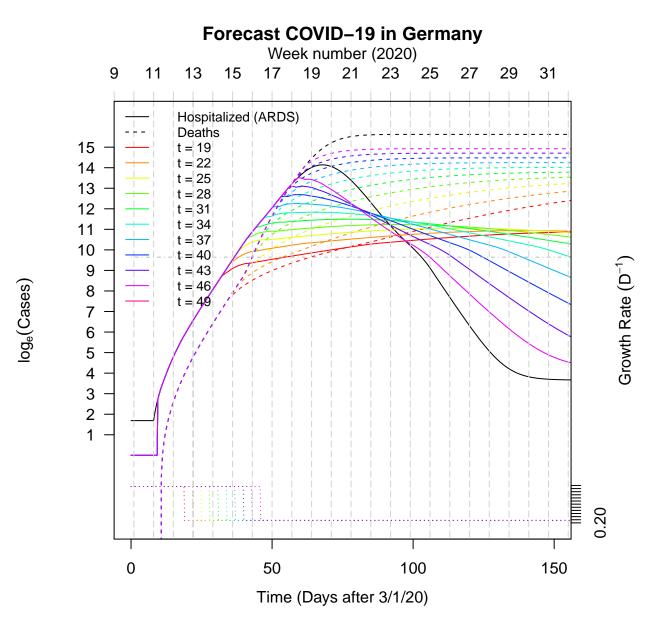
Created by Sören Thiering (06/30/2020). Email: soeren.thiering@hs-anhalt.de

Time (Days after 3/1/20)

#### Forecast COVID-19 in Germany Week number (2020) 9 11 13 15 17 19 25 27 29 31 Hospitalized (ARDS) 6000000 Deaths t = 195500000 t = 22 5000000 t = 25t = 284500000 t = 31t = 344000000 t = 37t = 403500000 Growth Rate $(\mathsf{D}^{-1})$ t = 43t = 463000000 Cases t = 492500000 2000000 1500000 1000000 500000 0 0.20 0 50 100 150

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Time (Days after 3/1/20)



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