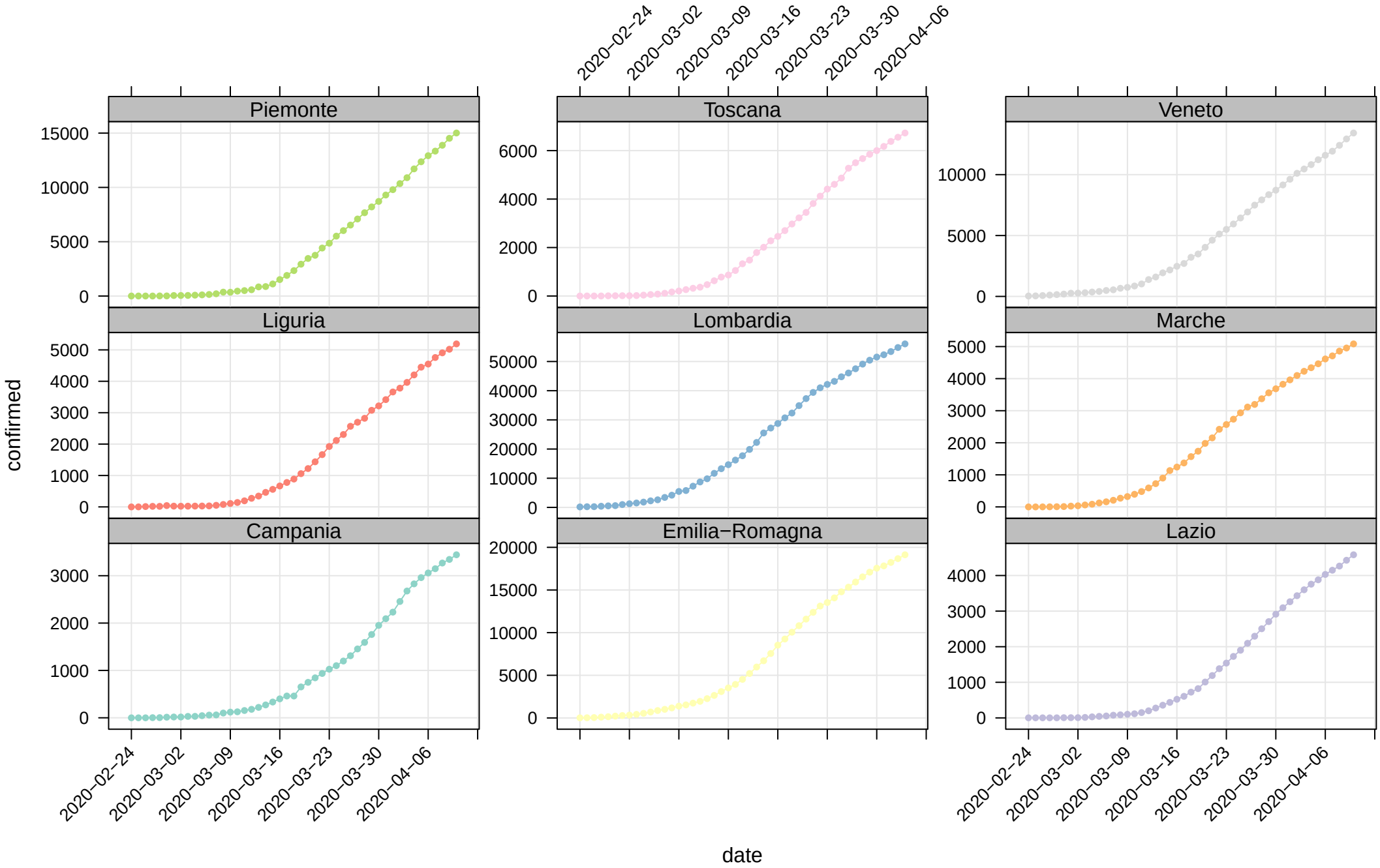
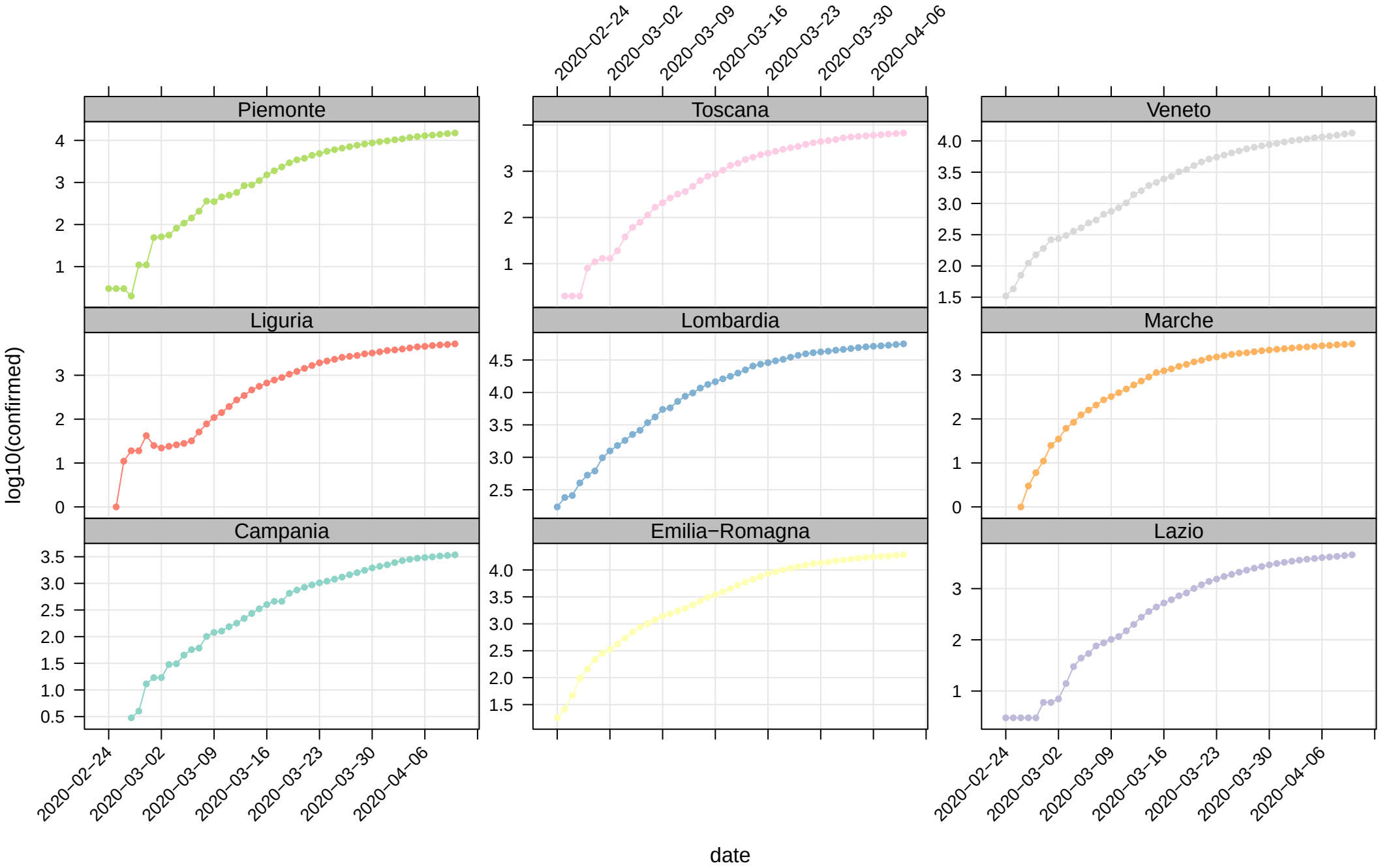
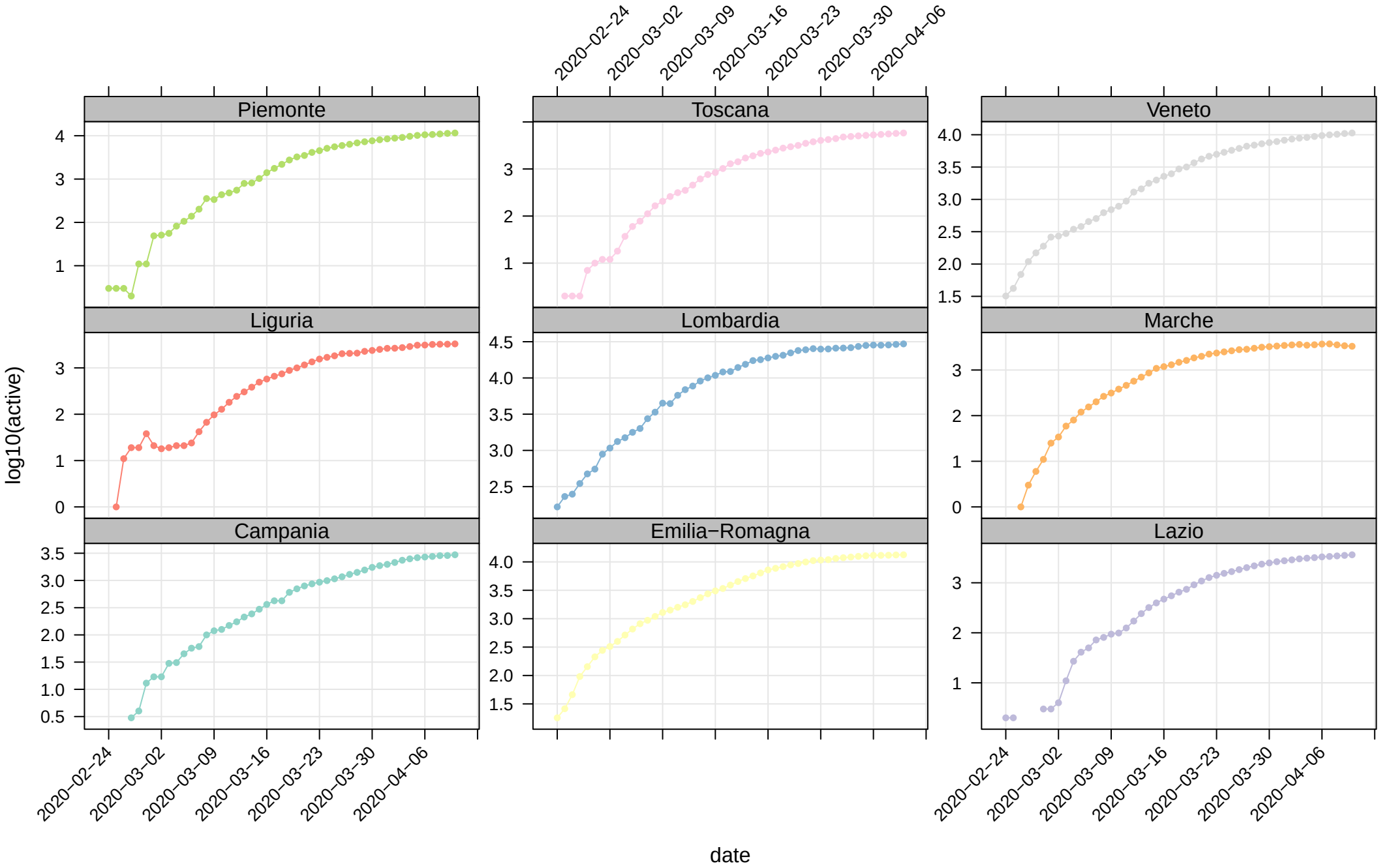
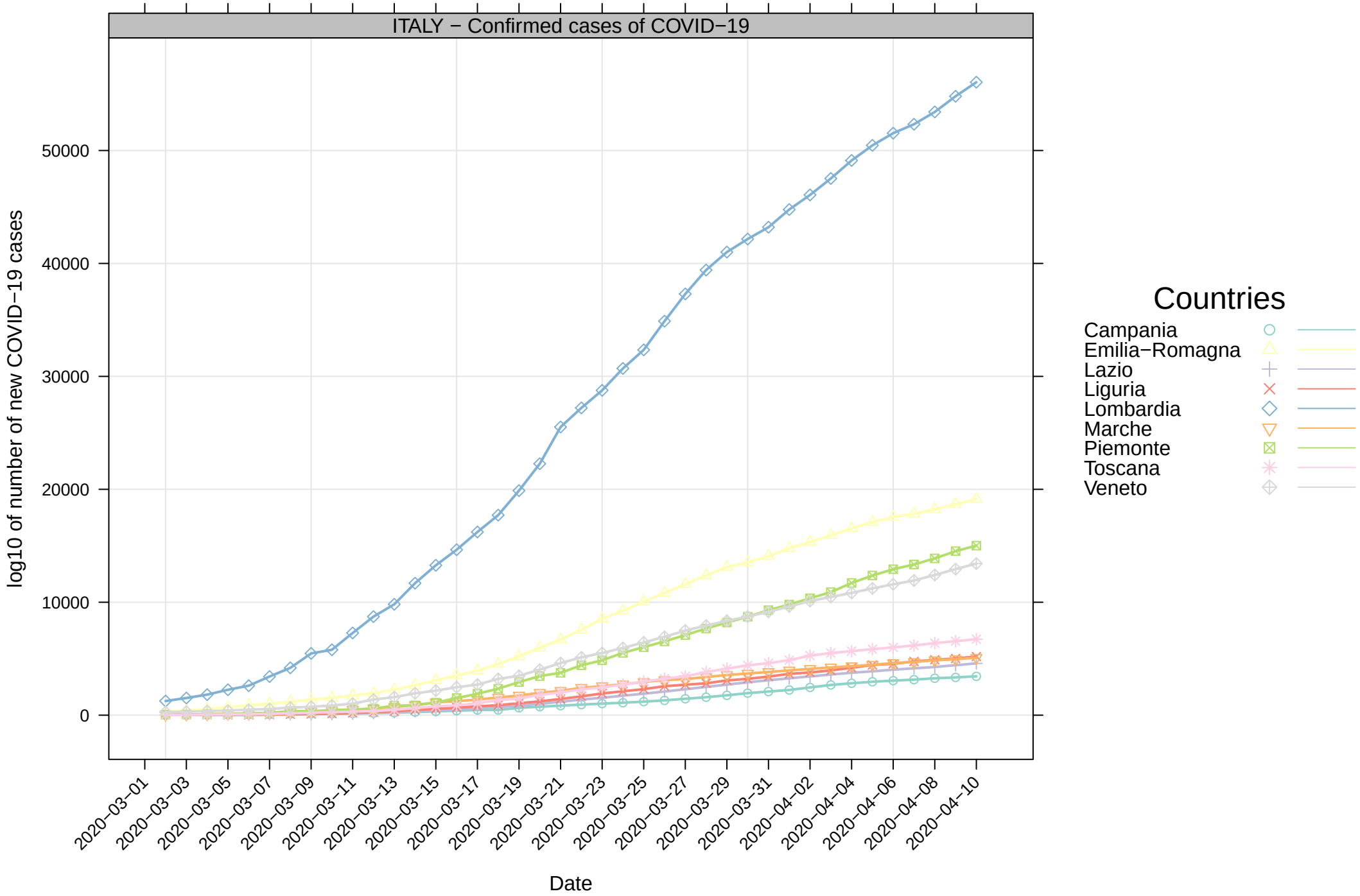
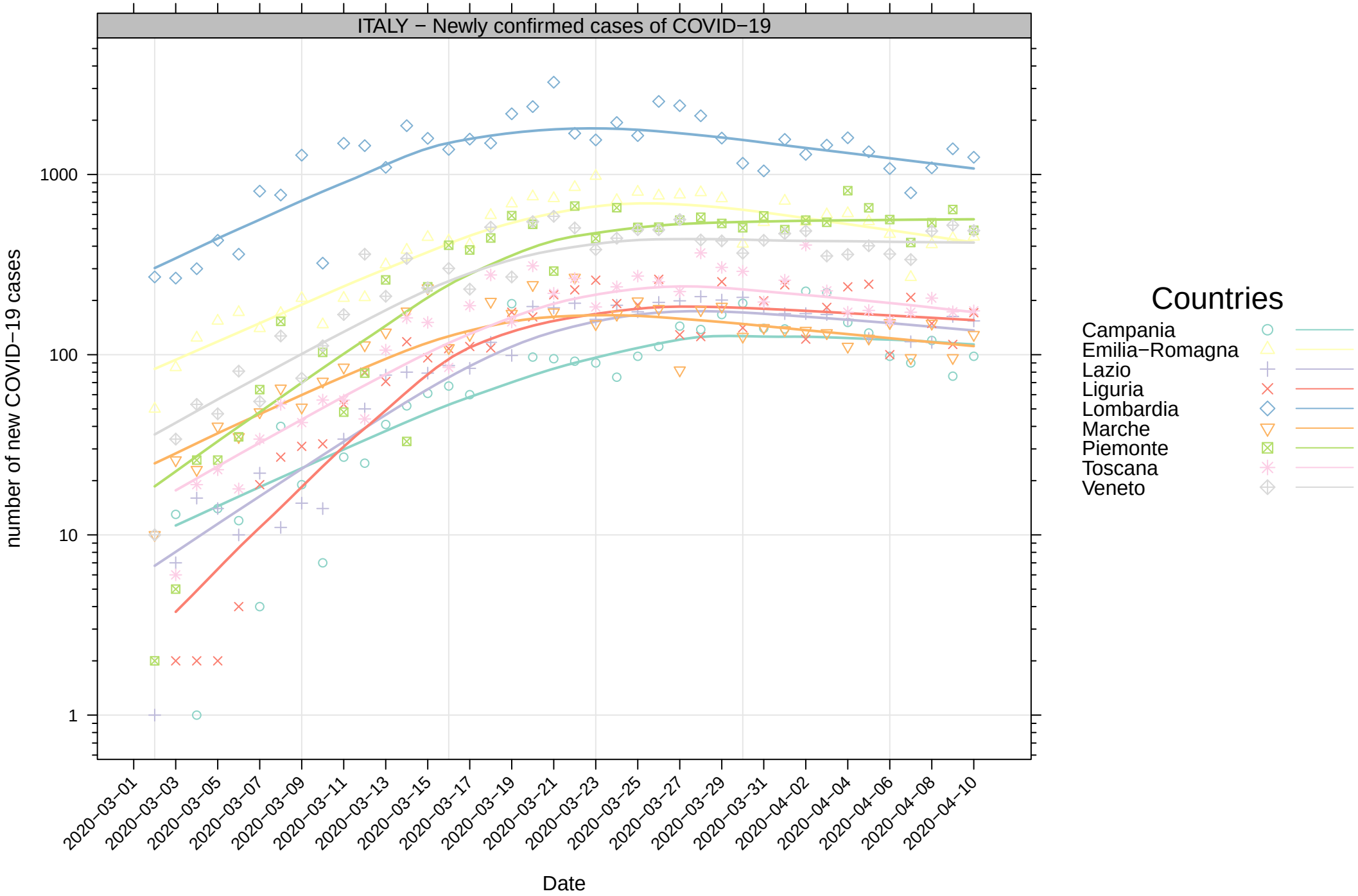
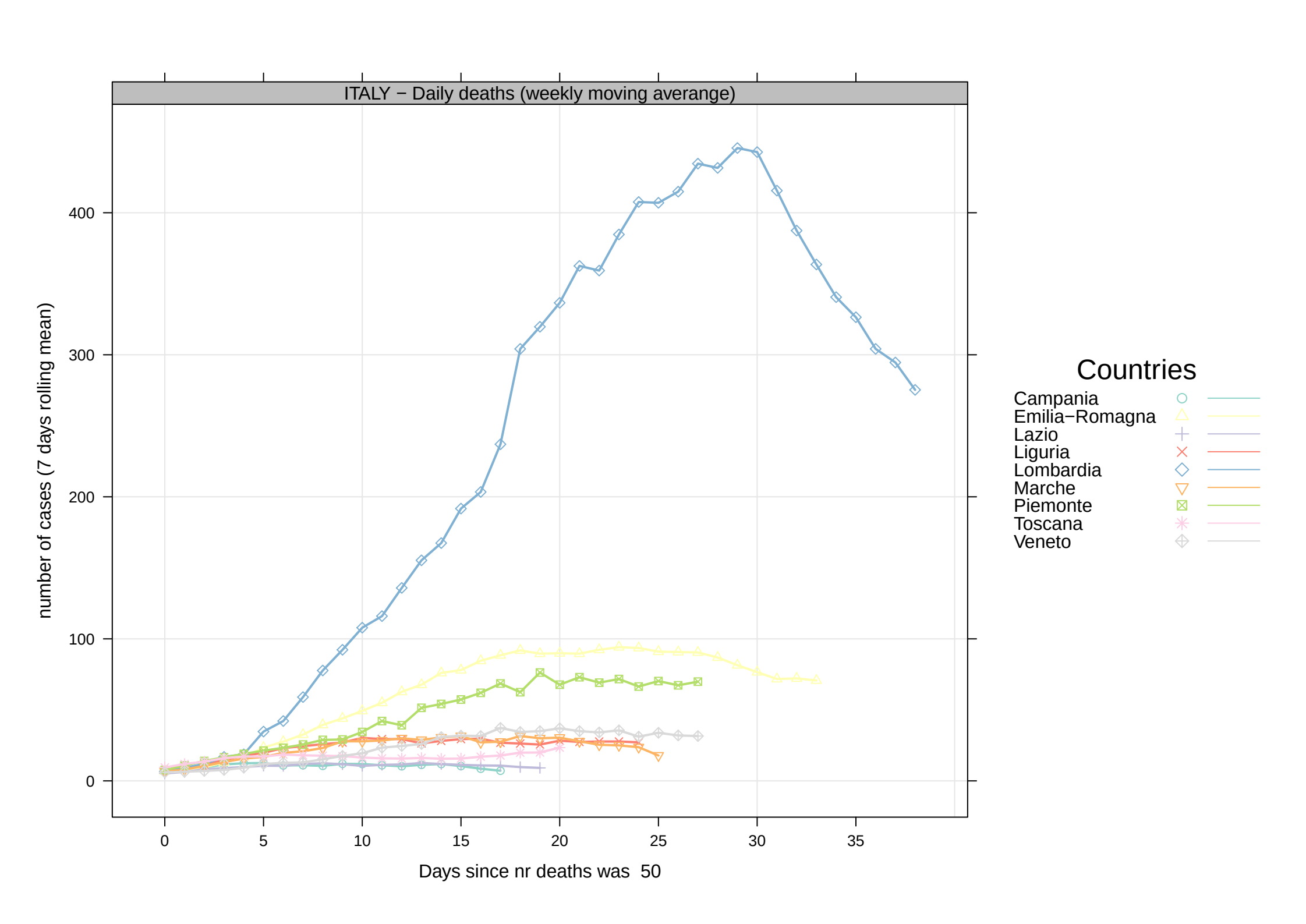

ITALY − Confirmed cases of COVID−19
(last date in this graph is 2020−04−10)
Piemonte
Toscana
Veneto
Liguria
Lombardia
Marche
Campania
Emilia−Romagna
Lazio
confirmed
date
2020−02−24
2020−03−02
2020−03−09
2020−03−16
2020−03−23
2020−03−30
2020−04−06

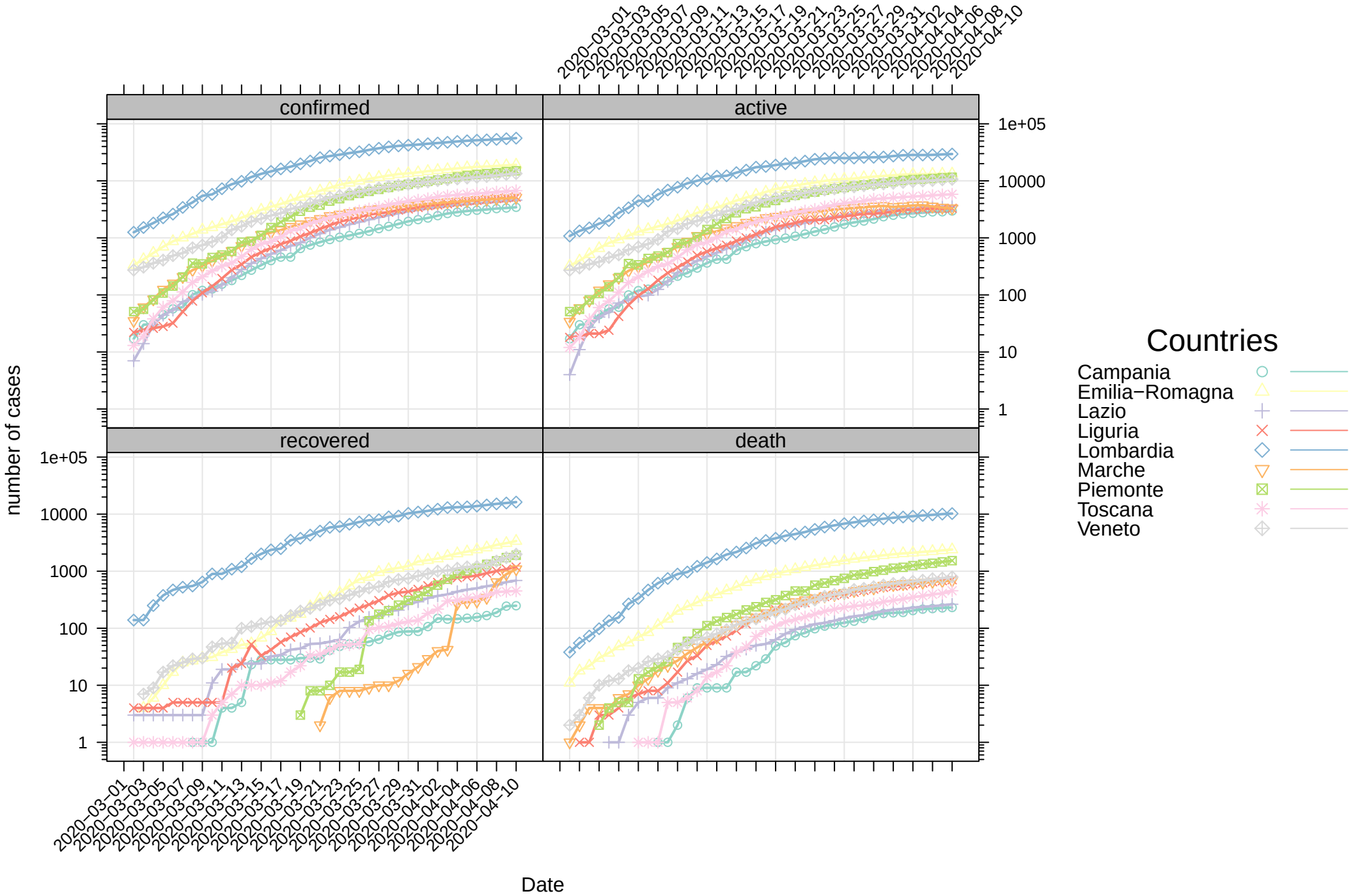

ITALY − Log 10 Confirmed cases of COVID−19
(last date in this graph is 2020−04−10)
Piemonte
Toscana
Veneto
Liguria
Lombardia
Marche
Campania
Emilia−Romagna
Lazio
log10(confirmed)
date
2020−02−24
2020−03−02
2020−03−09
2020−03−16
2020−03−23
2020−03−30
2020−04−06

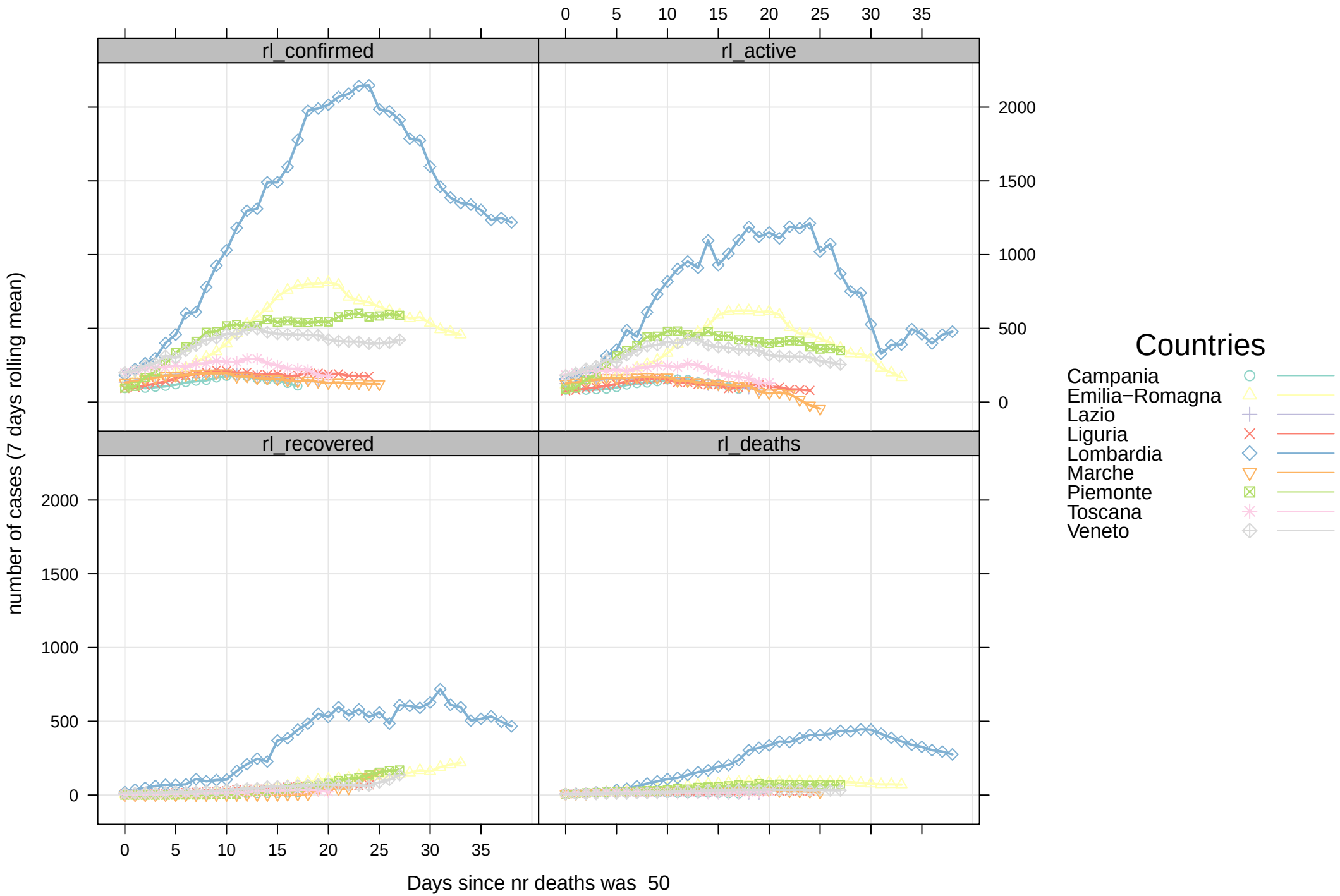

ITALY − Log 10 Active cases of COVID−19
(last date in this graph is 2020−04−10)
Piemonte
Toscana
Veneto
Liguria
Lombardia
Marche
Campania
Emilia−Romagna
Lazio
log10(active)
date
2020−02−24
2020−03−02
2020−03−09
2020−03−16
2020−03−23
2020−03−30
2020−04−06

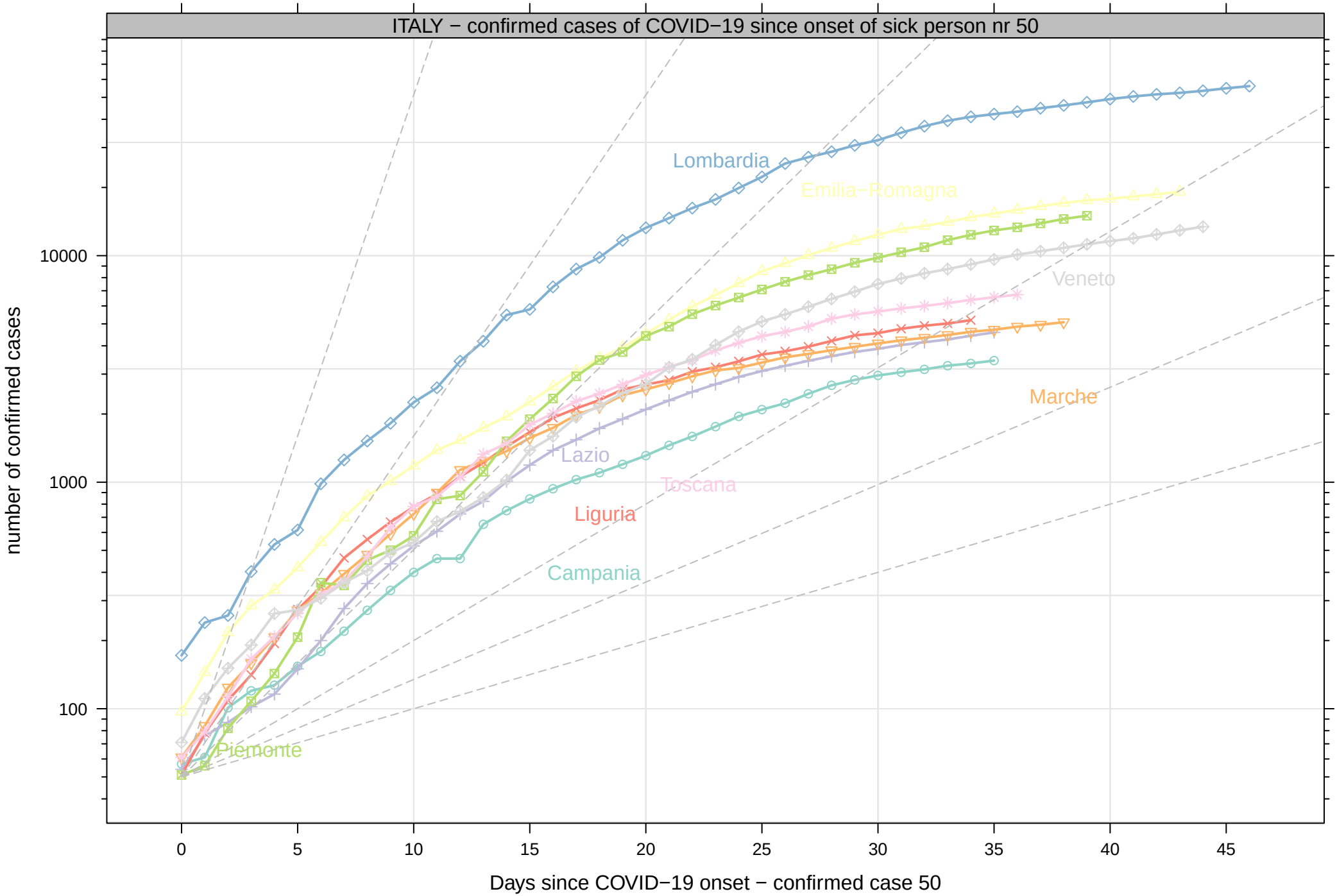

ITALY − Confirmed cases of COVID−19
log10 of number of new COVID−19 cases
50000
40000
30000
20000
10000
0
2020−03−01
2020−03−03
2020−03−05
2020−03−07
2020−03−09
2020−03−11
2020−03−13
2020−03−15
2020−03−17
2020−03−19
2020−03−21
2020−03−23
2020−03−25
2020−03−27
2020−03−29
2020−03−31
2020−04−02
2020−04−04
2020−04−06
2020−04−08
2020−04−10
Date
Countries
Campania
Emilia−Romagna
Lazio
Liguria
Lombardia
Marche
Piemonte
Toscana
Veneto

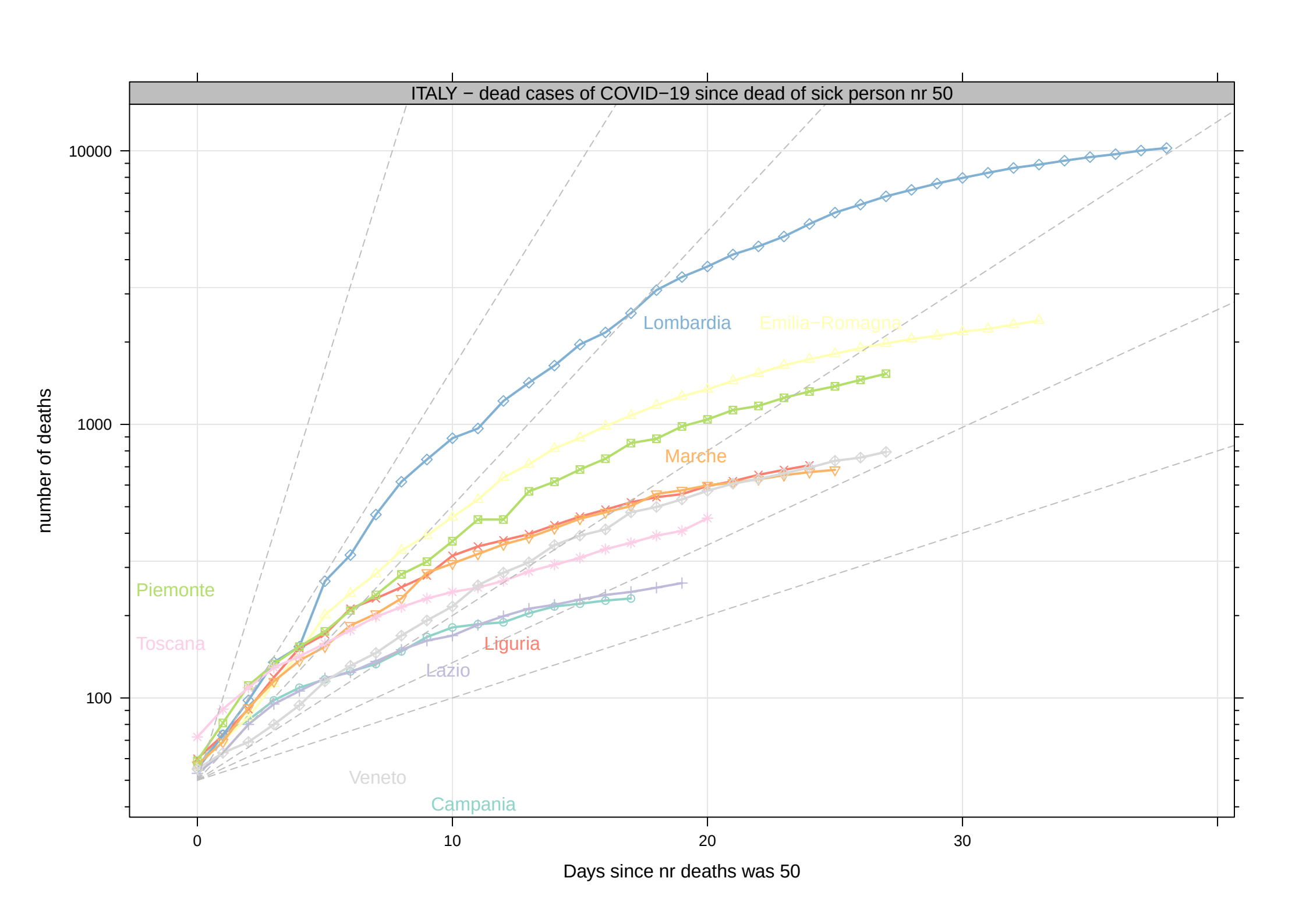

ITALY − Newly confirmed cases of COVID−19
number of new COVID−19 cases
1000
100
10
1
2020−03−01
2020−03−03
2020−03−05
2020−03−07
2020−03−09
2020−03−11
2020−03−13
2020−03−15
2020−03−17
2020−03−19
2020−03−21
2020−03−23
2020−03−25
2020−03−27
2020−03−29
2020−03−31
2020−04−02
2020−04−04
2020−04−06
2020−04−08
2020−04−10
Date
Countries
Campania
Emilia−Romagna
Lazio
Liguria
Lombardia
Marche
Piemonte
Toscana
Veneto

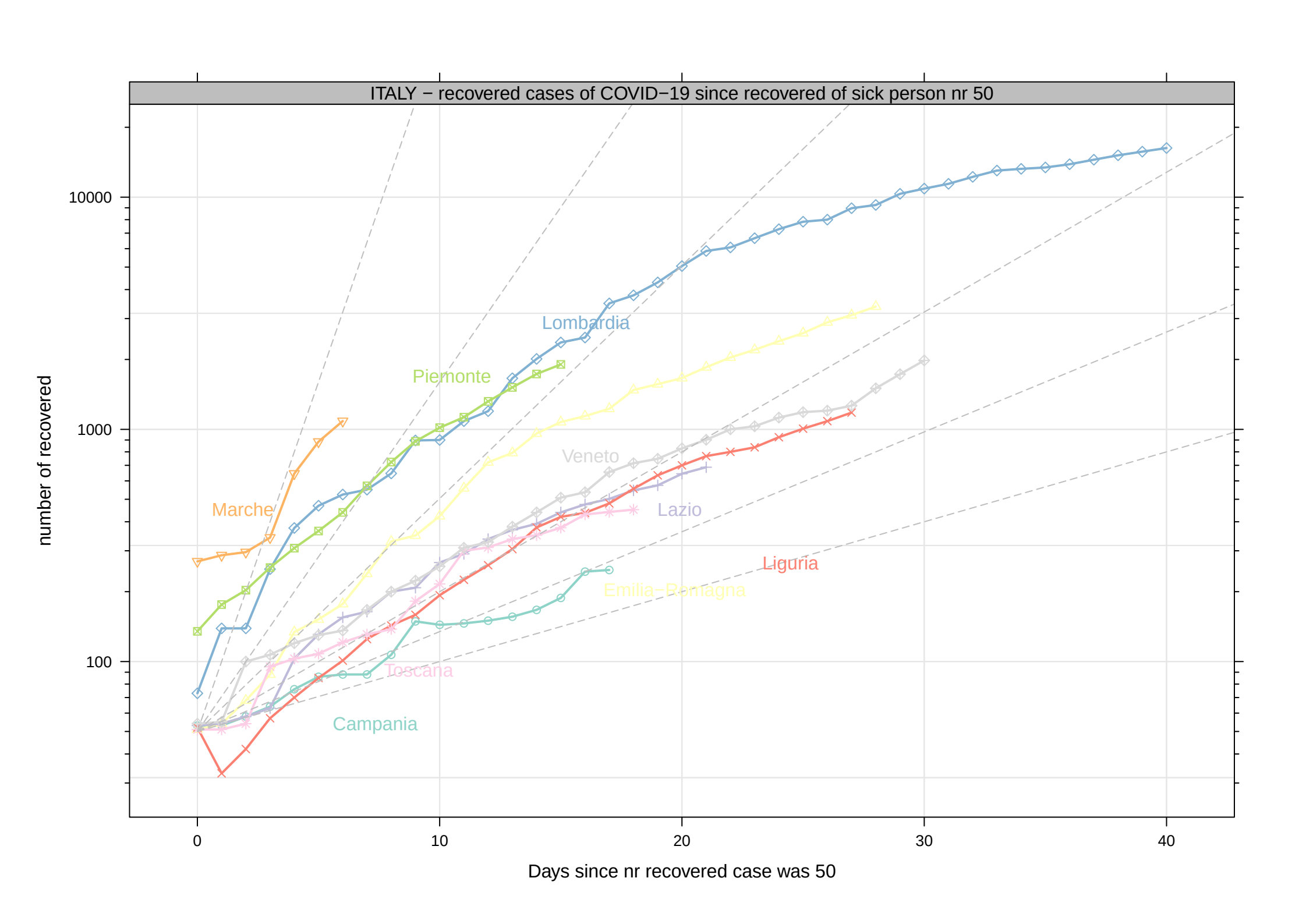

ITALY − Daily deaths (weekly moving averange)
number of cases (7 days rolling mean)
0
100
200
300
400
0
5
10
15
20
25
30
35
Days since nr deaths was 50
Countries
Campania
Emilia−Romagna
Lazio
Liguria
Lombardia
Marche
Piemonte
Toscana
Veneto

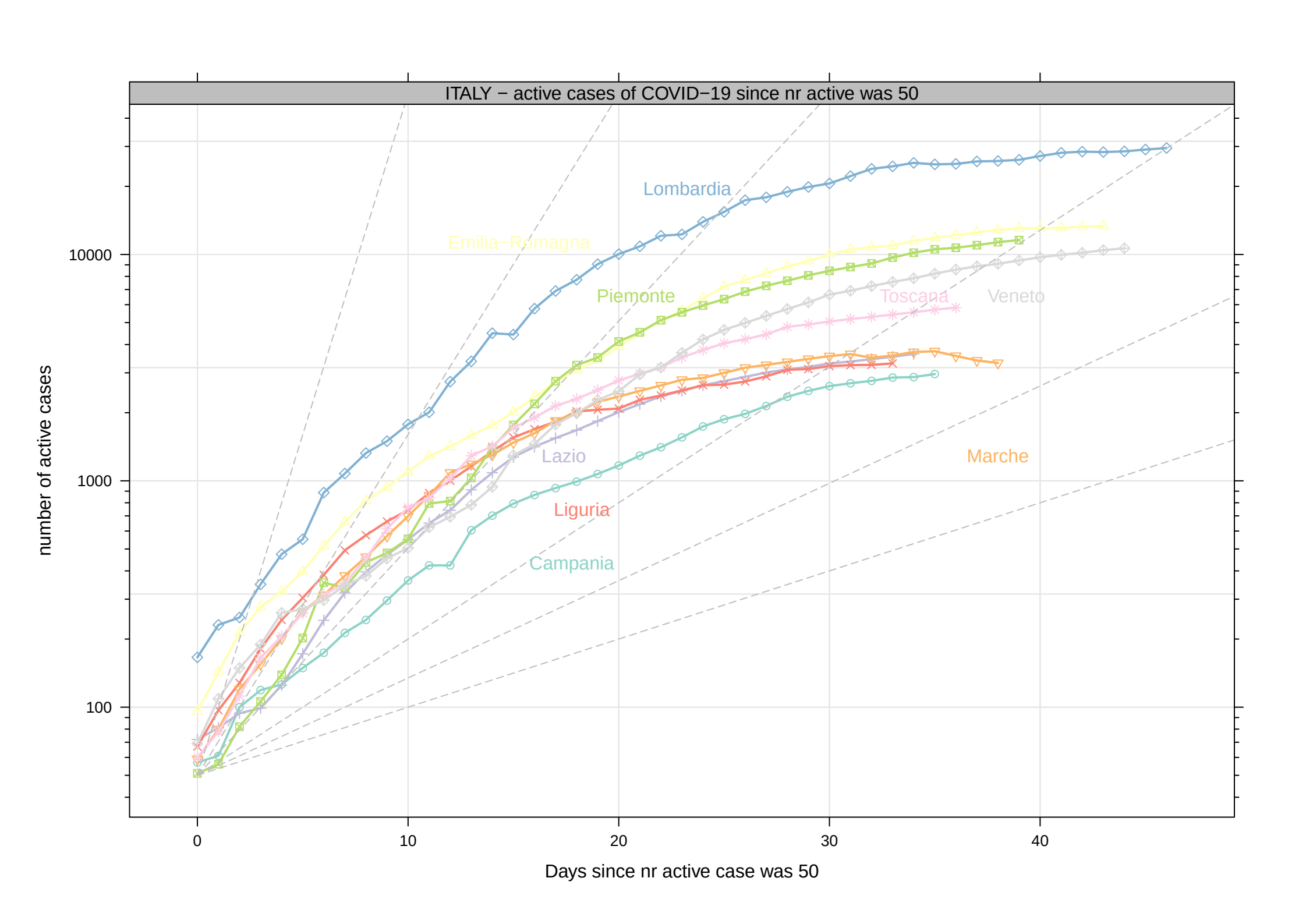

confirmed
active
recovered
death
number of cases
Date
1e+05
10000
1000
100
10
1
2020–03–01
2020–03–03
2020–03–05
2020–03–07
2020–03–09
2020–03–11
2020–03–13
2020–03–15
2020–03–17
2020–03–19
2020–03–21
2020–03–23
2020–03–25
2020–03–27
2020–03–29
2020–03–31
2020–04–02
2020–04–04
2020–04–06
2020–04–08
2020–04–10
Countries
Campania
Emilia−Romagna
Lazio
Liguria
Lombardia
Marche
Piemonte
Toscana
Veneto

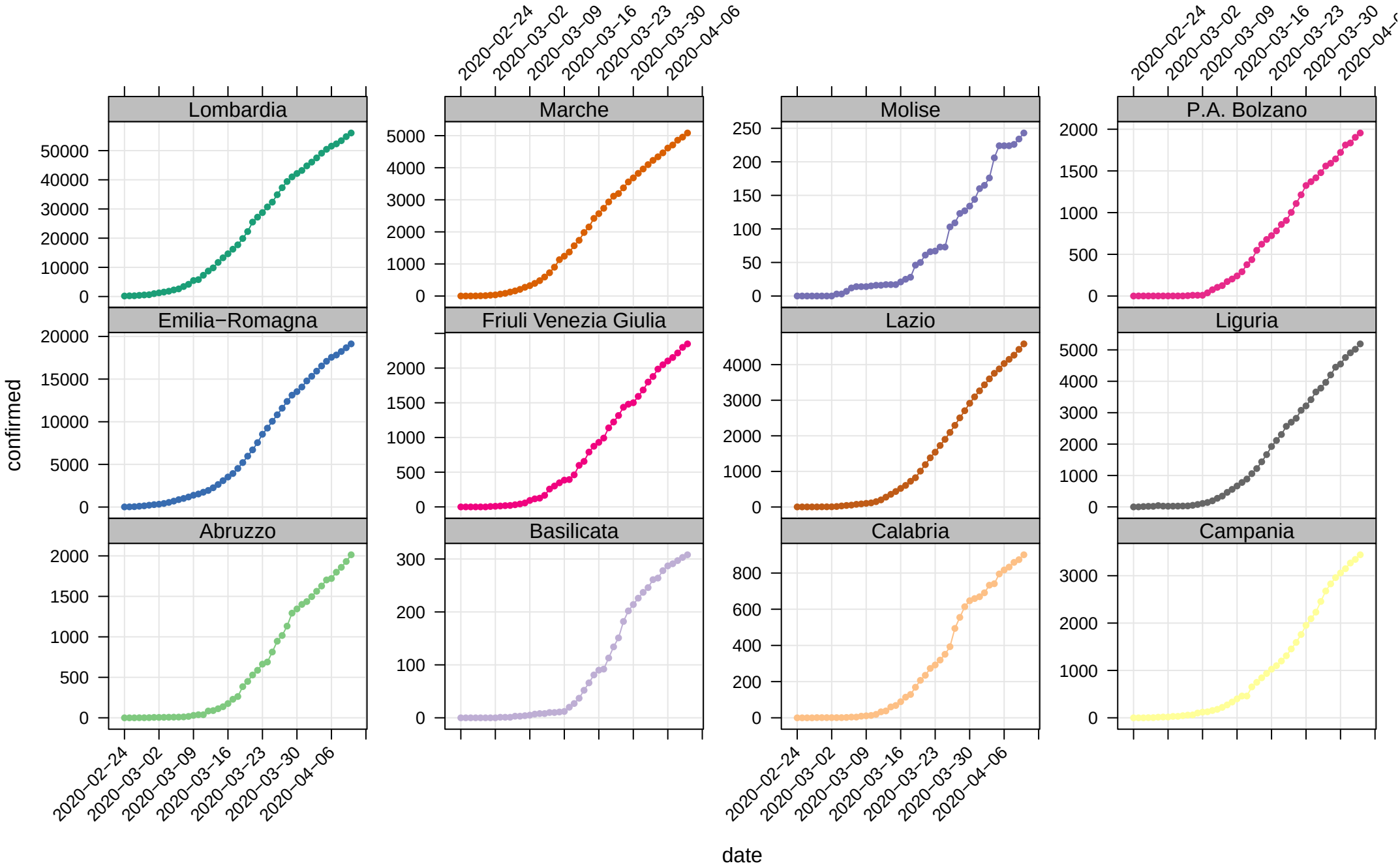

rl_confirmed
rl_active
rl_recovered
rl_deaths
number of cases (7 days rolling mean)
Days since nr deaths was 50
0
5
10
15
20
25
30
35
500
1000
1500
2000
Countries
Campania
Emilia−Romagna
Lazio
Liguria
Lombardia
Marche
Piemonte
Toscana
Veneto

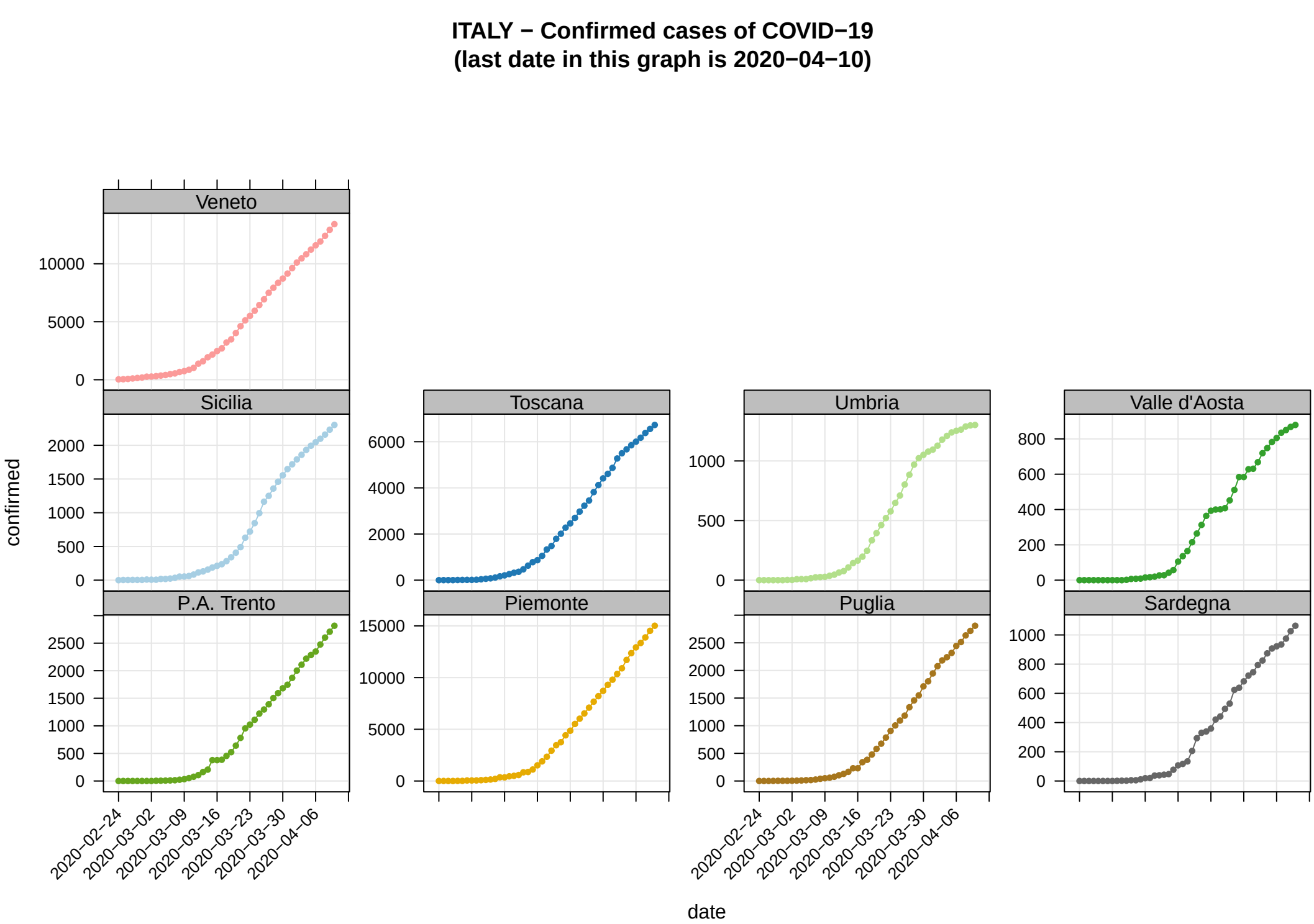

ITALY − confirmed cases of COVID−19 since onset of sick person nr 50
number of confirmed cases
10000
1000
100
0
5
10
15
20
25
30
35
40
45
Days since COVID−19 onset − confirmed case 50
Lombardia
Emilia−Romagna
Veneto
Marche
Lazio
Toscana
Liguria
Campania
Piemonte

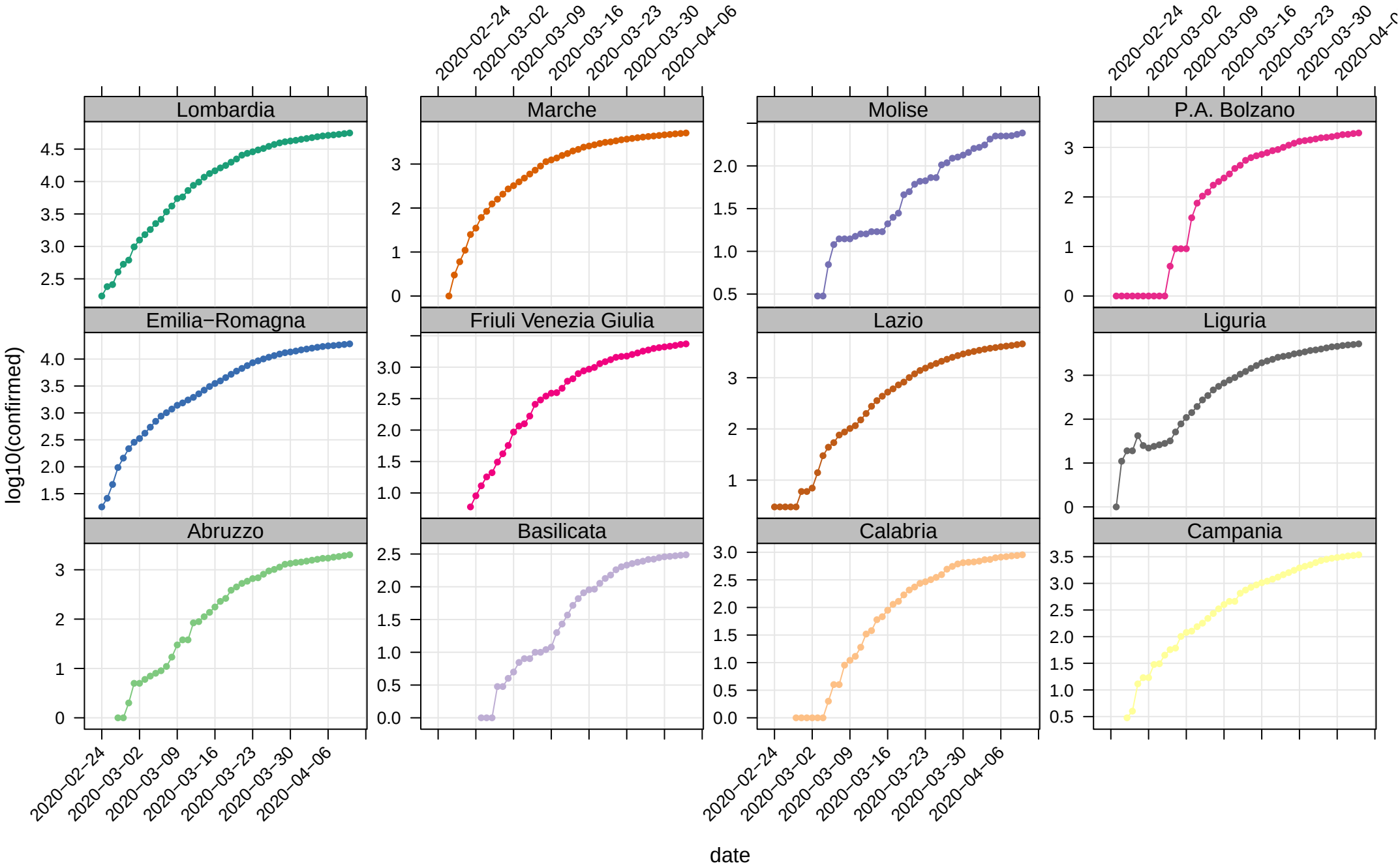

ITALY − dead cases of COVID−19 since dead of sick person nr 50
number of deaths
10000
1000
100
0
10
20
30
Days since nr deaths was 50
Lombardia
Emilia−Romagna
Marche
Piemonte
Toscana
Liguria
Lazio
Veneto
Campania

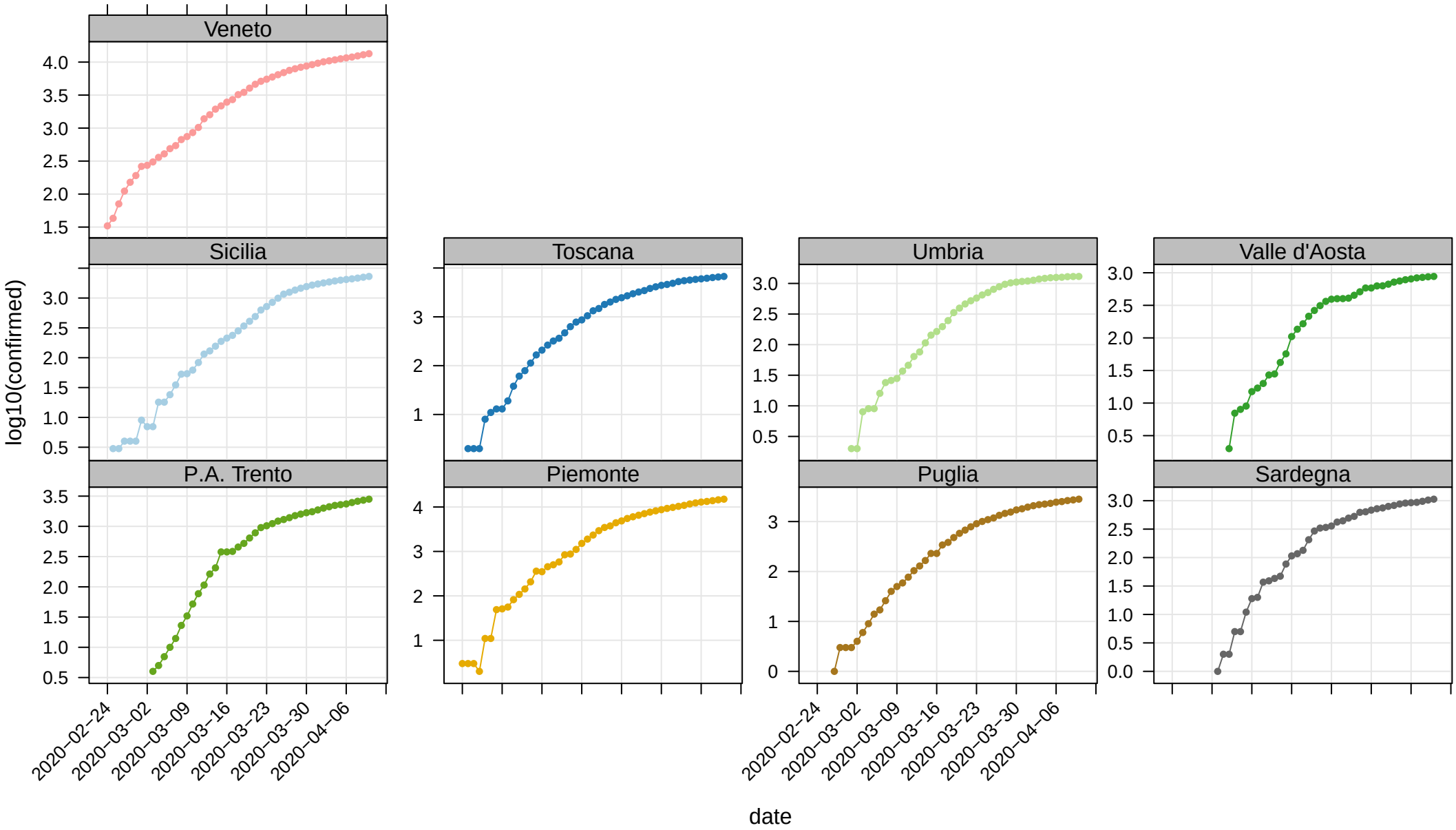

ITALY − recovered cases of COVID−19 since recovered of sick person nr 50
number of recovered
10000
1000
100
0
10
20
30
40
Days since nr recovered case was 50
Lombardia
Piemonte
Veneto
Marche
Lazio
Liguria
Emilia−Romagna
Toscana
Campania

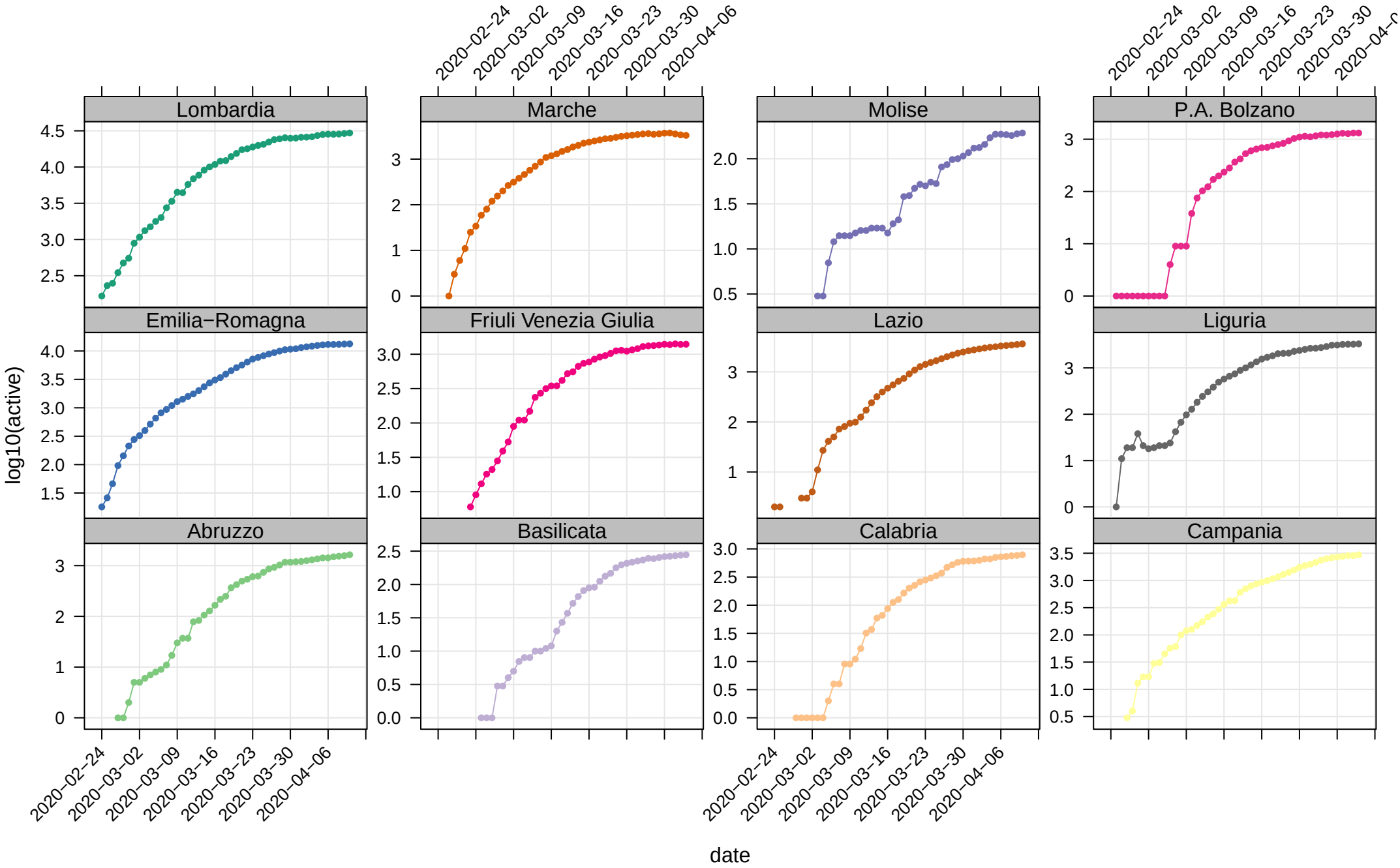

ITALY − active cases of COVID−19 since nr active was 50
Lombardia
Emilia−Romagna
Piemonte
Toscana
Veneto
Lazio
Marche
Liguria
Campania
number of active cases
10000
1000
100
0
10
20
30
40
Days since nr active case was 50

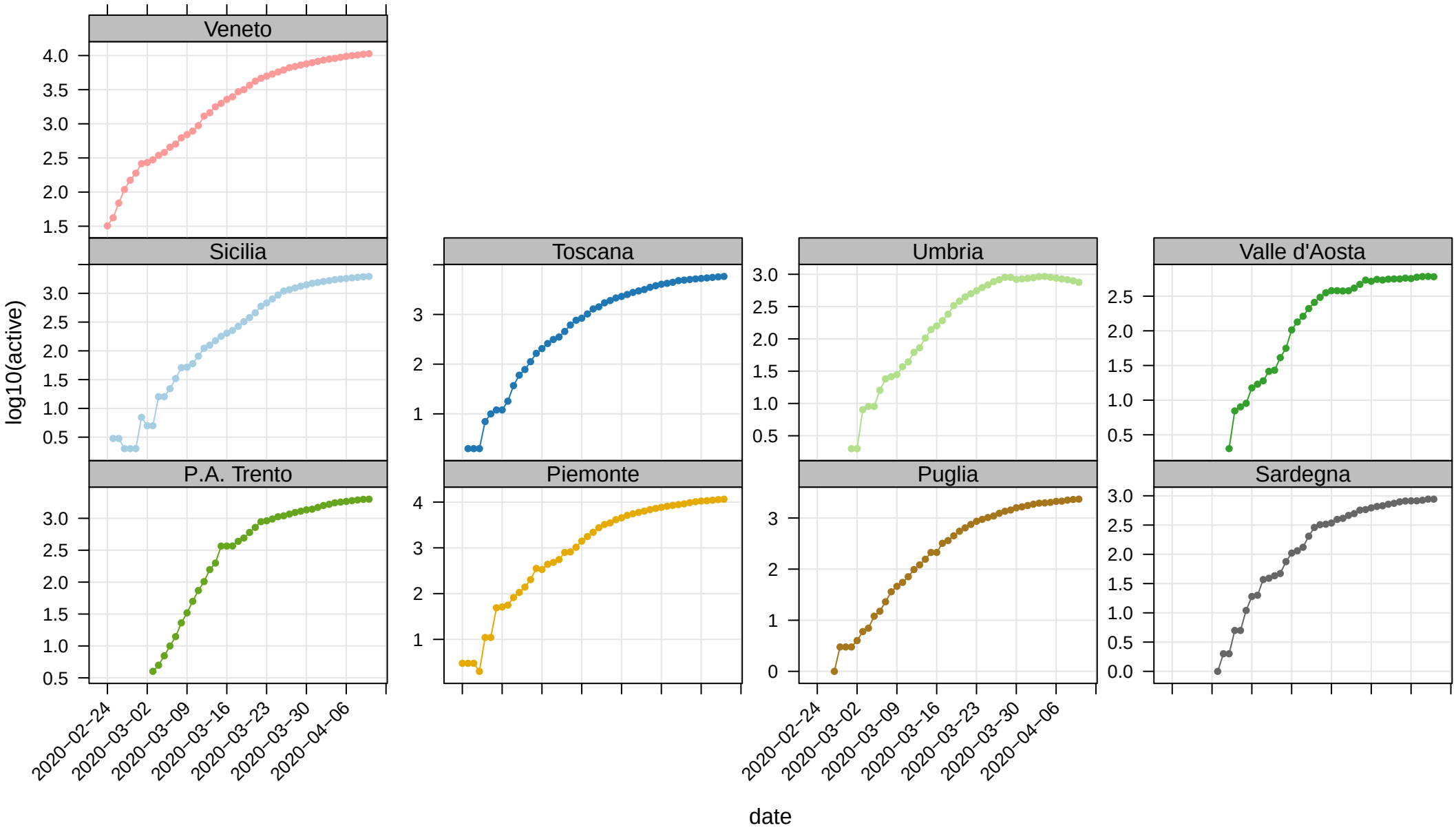

ITALY − Confirmed cases of COVID−19
(last date in this graph is 2020−04−10)
Lombardia
Marche
Molise
P.A. Bolzano
Emilia−Romagna
Friuli Venezia Giulia
Lazio
Liguria
Abruzzo
Basilicata
Calabria
Campania
confirmed
date
2020−02−24
2020−03−02
2020−03−09
2020−03−16
2020−03−23
2020−03−30
2020−04−06

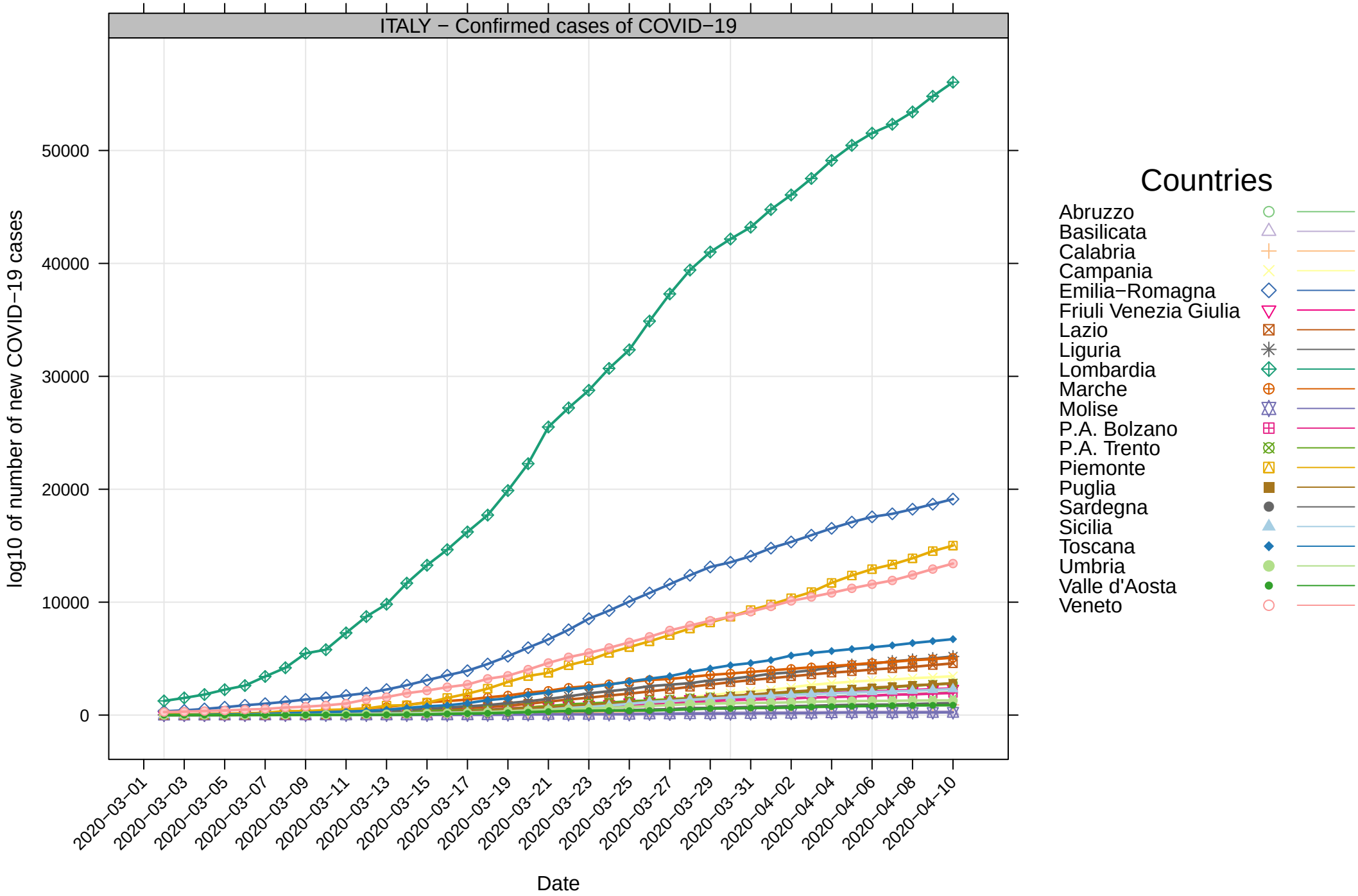

ITALY − Confirmed cases of COVID−19
(last date in this graph is 2020−04−10)
Veneto
Sicilia
P.A. Trento
Toscana
Piemonte
Umbria
Puglia
Valle d'Aosta
Sardegna
confirmed
date
2020−02−24
2020−03−02
2020−03−09
2020−03−16
2020−03−23
2020−03−30
2020−04−06

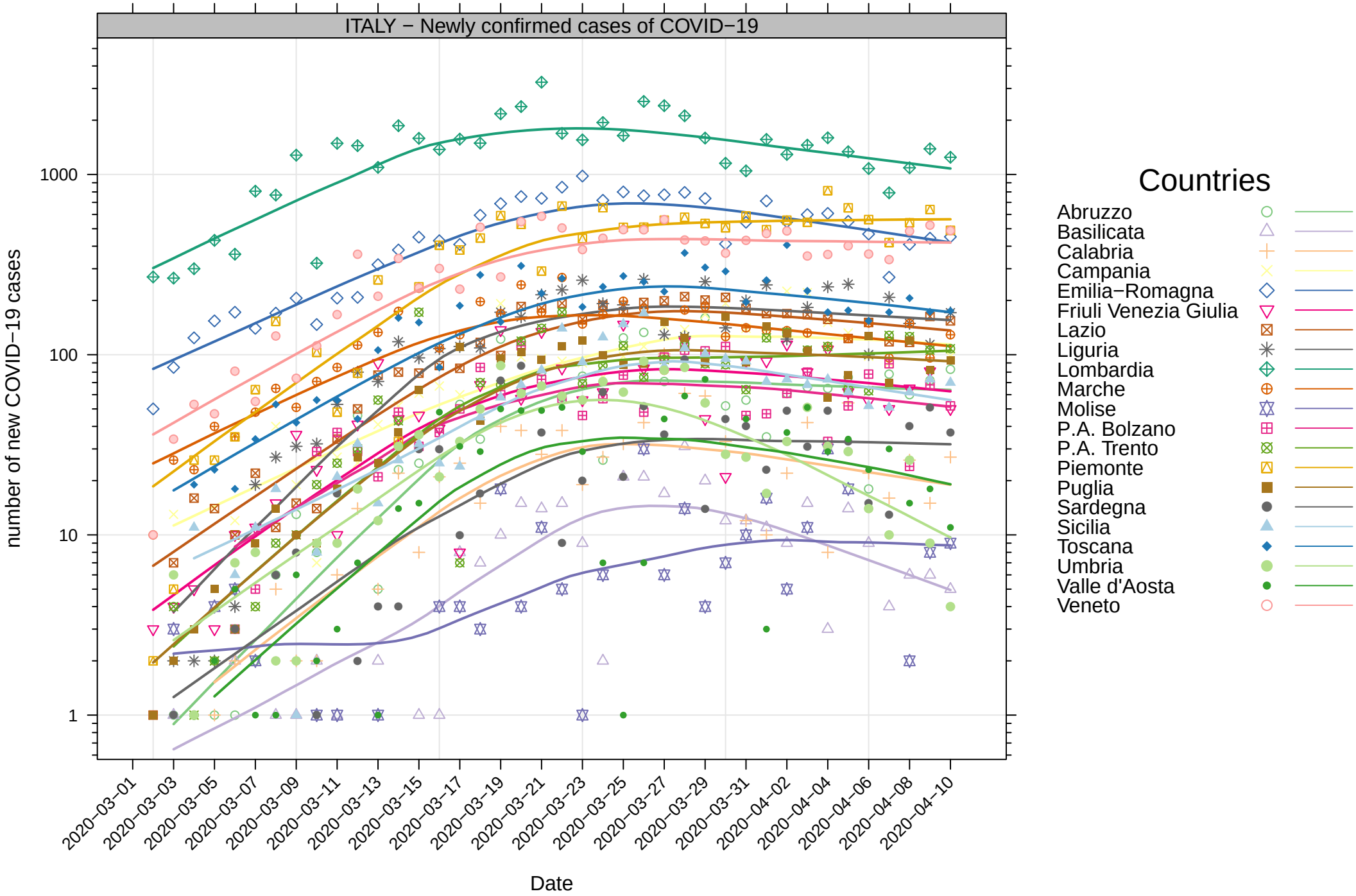

ITALY − Log 10 Confirmed cases of COVID−19
(last date in this graph is 2020−04−10)
Lombardia
Marche
Molise
P.A. Bolzano
Emilia−Romagna
Friuli Venezia Giulia
Lazio
Liguria
Abruzzo
Basilicata
Calabria
Campania
log10(confirmed)
date
2020−02−24
2020−03−02
2020−03−09
2020−03−16
2020−03−23
2020−03−30
2020−04−06

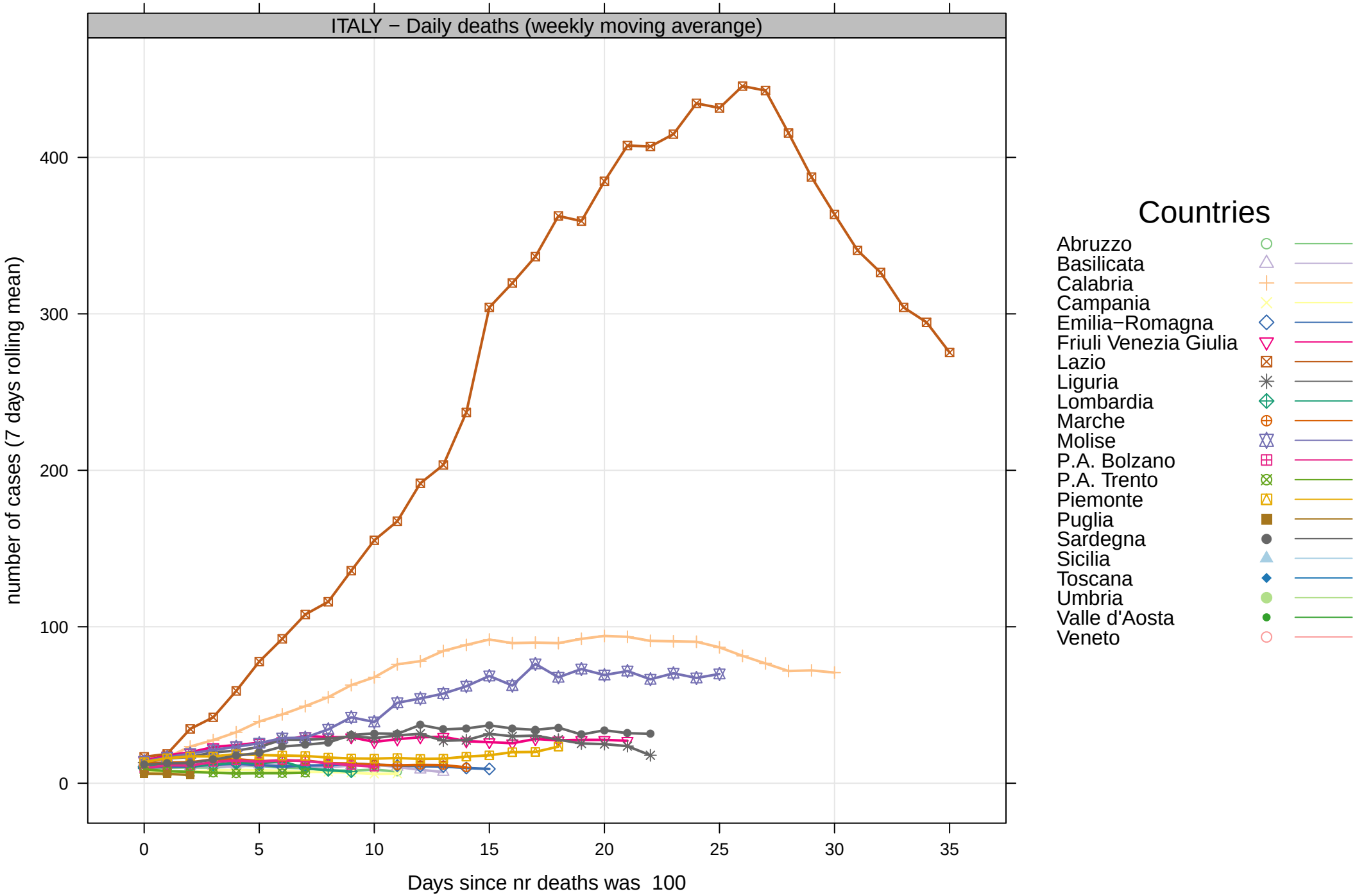

ITALY − Log 10 Confirmed cases of COVID−19
(last date in this graph is 2020−04−10)
Veneto
Sicilia
P.A. Trento
Toscana
Piemonte
Umbria
Puglia
Valle d'Aosta
Sardegna
log10(confirmed)
2020−02−24
2020−03−02
2020−03−09
2020−03−16
2020−03−23
2020−03−30
2020−04−06
date

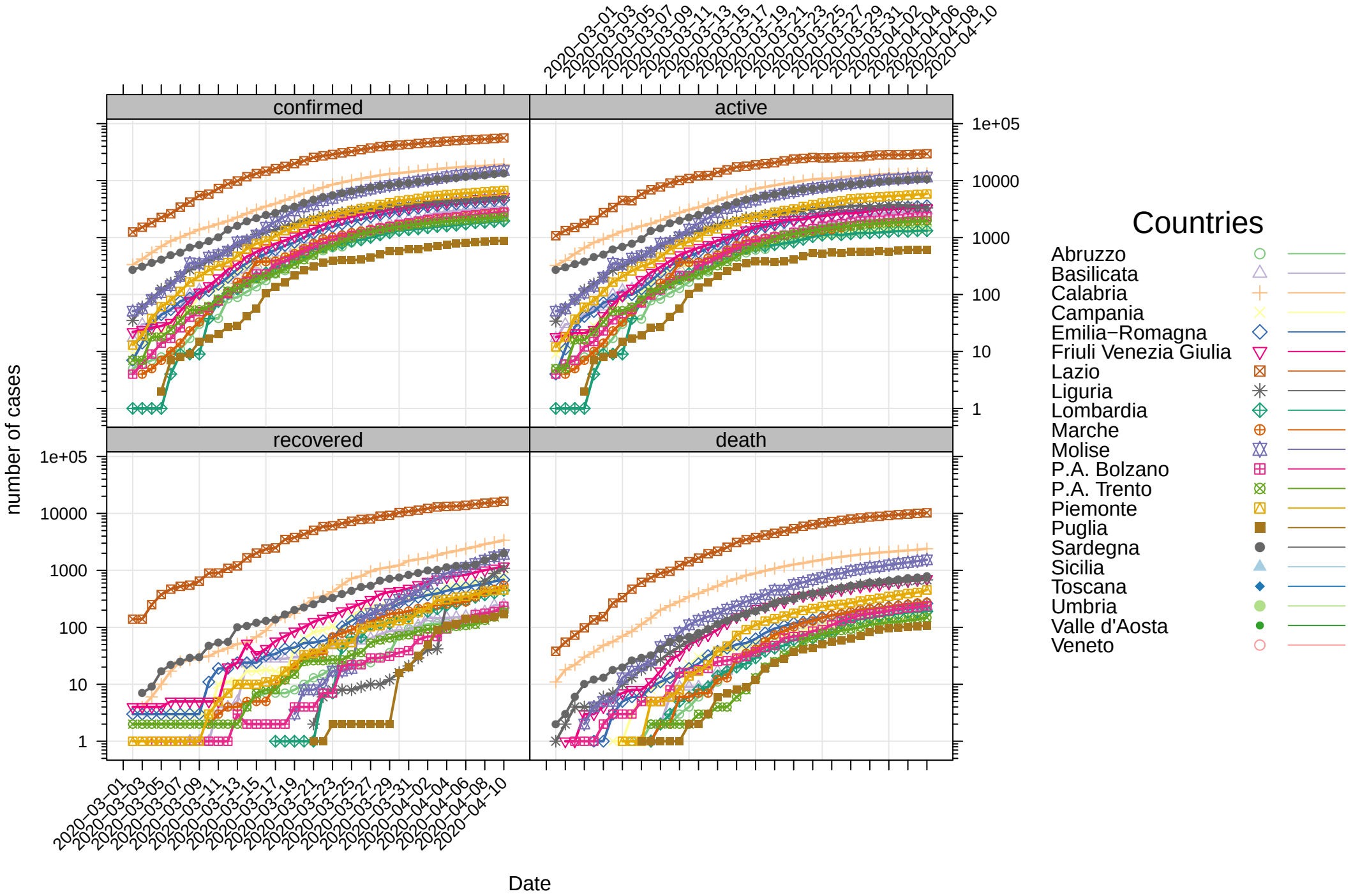

ITALY − Log 10 Active cases of COVID−19
(last date in this graph is 2020−04−10)
Lombardia
Marche
Molise
P.A. Bolzano
Emilia−Romagna
Friuli Venezia Giulia
Lazio
Liguria
Abruzzo
Basilicata
Calabria
Campania
log10(active)
date
2020−02−24
2020−03−02
2020−03−09
2020−03−16
2020−03−23
2020−03−30
2020−04−06

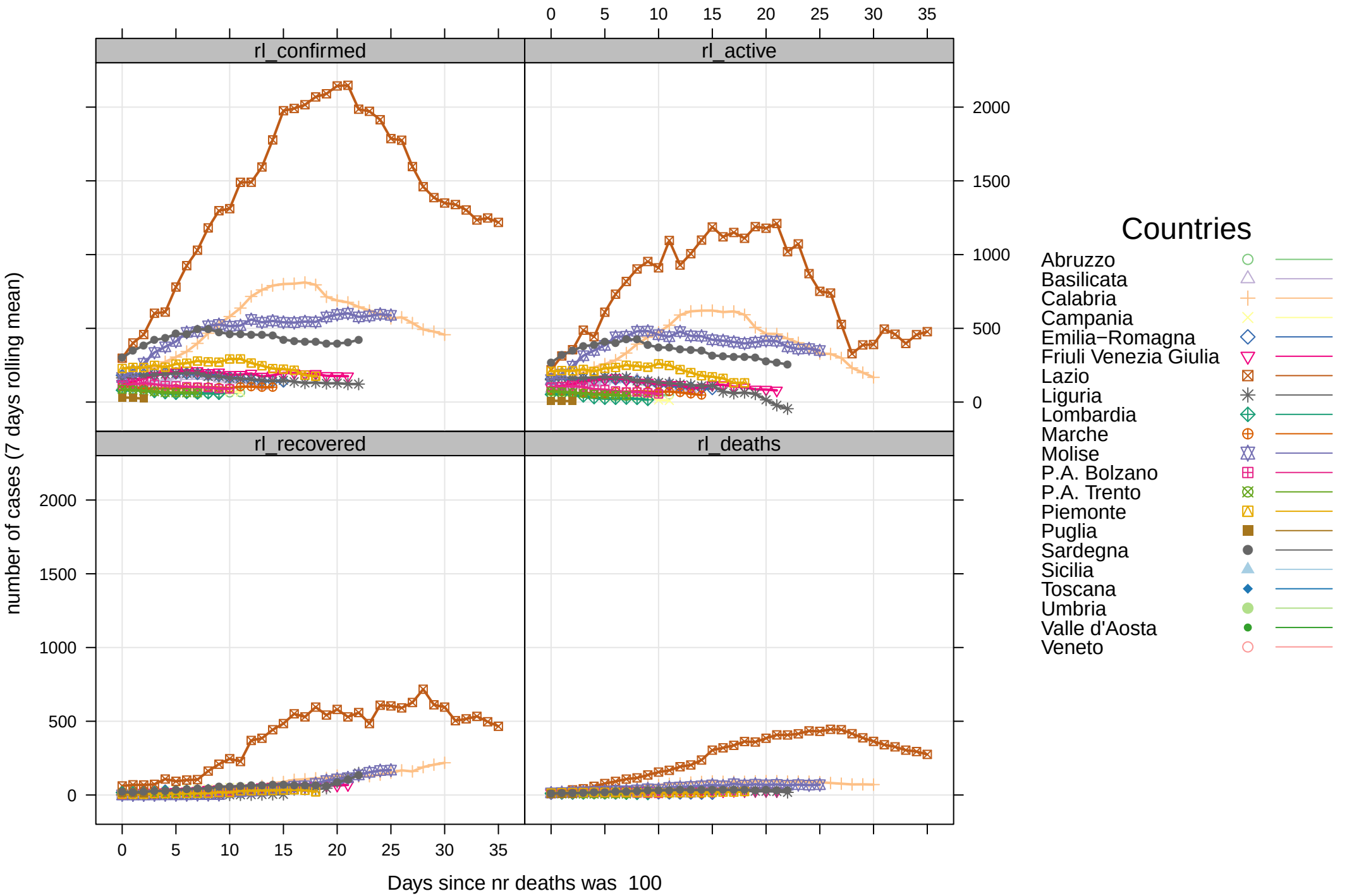

ITALY − Log 10 Active cases of COVID−19
(last date in this graph is 2020−04−10)
Veneto
Sicilia
Toscana
Umbria
Valle d'Aosta
P.A. Trento
Piemonte
Puglia
Sardegna
log10(active)
2020−02−24
2020−03−02
2020−03−09
2020−03−16
2020−03−23
2020−03−30
2020−04−06
date

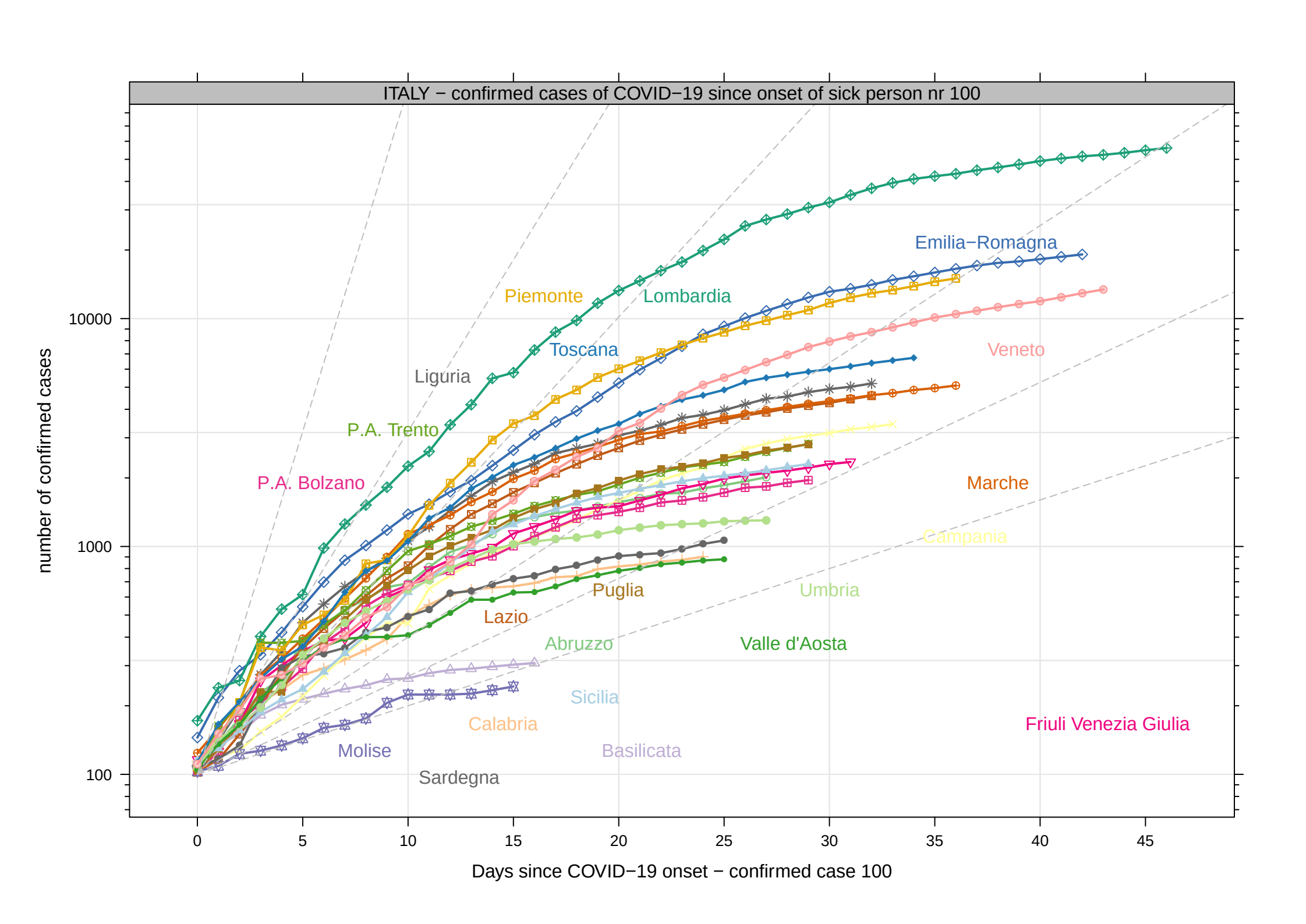

ITALY − Confirmed cases of COVID−19
log10 of number of new COVID−19 cases
50000
40000
30000
20000
10000
0
2020−03−01
2020−03−03
2020−03−05
2020−03−07
2020−03−09
2020−03−11
2020−03−13
2020−03−15
2020−03−17
2020−03−19
2020−03−21
2020−03−23
2020−03−25
2020−03−27
2020−03−29
2020−03−31
2020−04−02
2020−04−04
2020−04−06
2020−04−08
2020−04−10
Date
Countries
Abruzzo
Basilicata
Calabria
Campania
Emilia−Romagna
Friuli Venezia Giulia
Lazio
Liguria
Lombardia
Marche
Molise
P.A. Bolzano
P.A. Trento
Piemonte
Puglia
Sardegna
Sicilia
Toscana
Umbria
Valle d'Aosta
Veneto

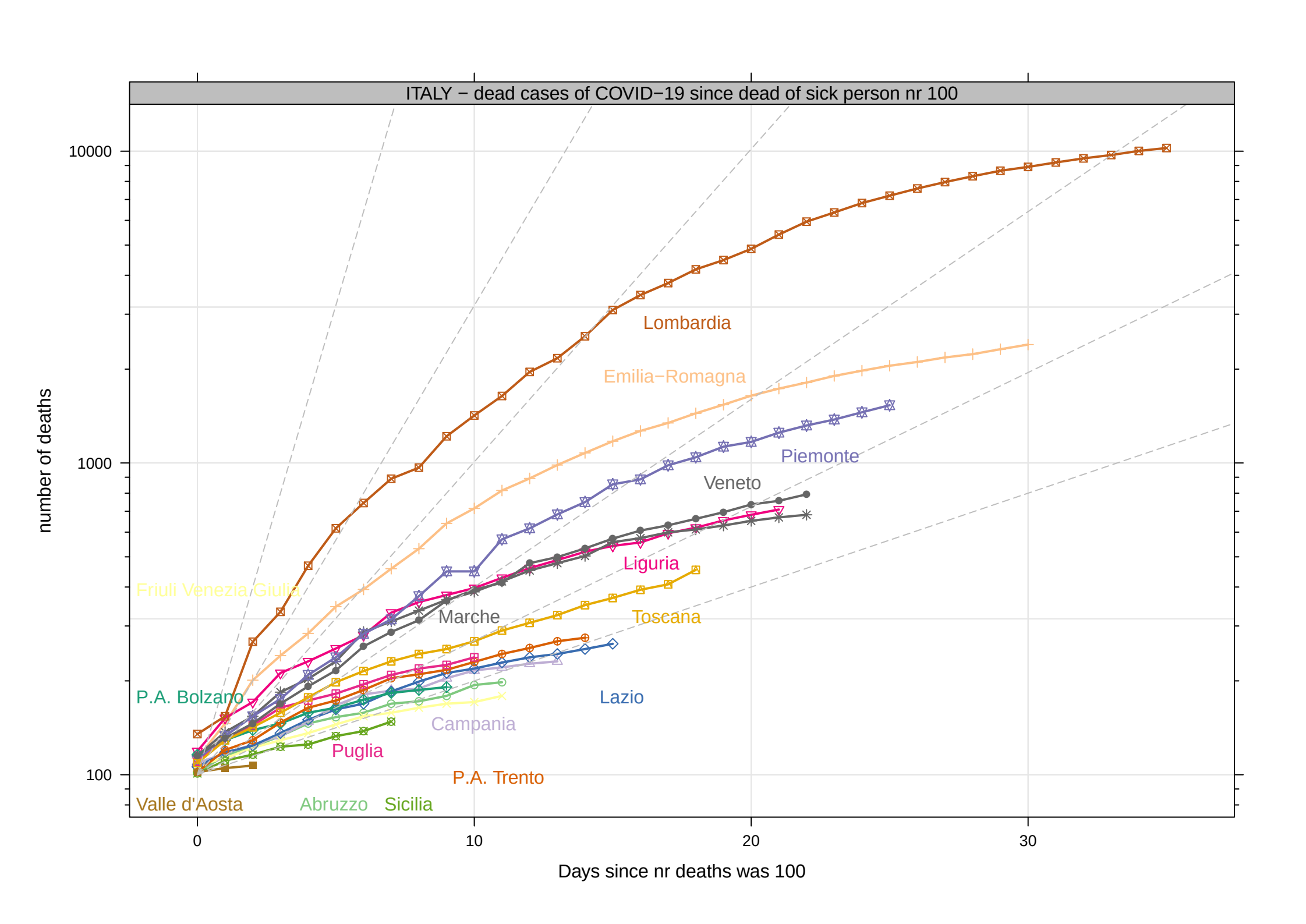

ITALY − Newly confirmed cases of COVID−19
number of new COVID−19 cases
1000
100
10
1
2020−03−01
2020−03−03
2020−03−05
2020−03−07
2020−03−09
2020−03−11
2020−03−13
2020−03−15
2020−03−17
2020−03−19
2020−03−21
2020−03−23
2020−03−25
2020−03−27
2020−03−29
2020−03−31
2020−04−02
2020−04−04
2020−04−06
2020−04−08
2020−04−10
Date
Countries
Abruzzo
Basilicata
Calabria
Campania
Emilia−Romagna
Friuli Venezia Giulia
Lazio
Liguria
Lombardia
Marche
Molise
P.A. Bolzano
P.A. Trento
Piemonte
Puglia
Sardegna
Sicilia
Toscana
Umbria
Valle d'Aosta
Veneto

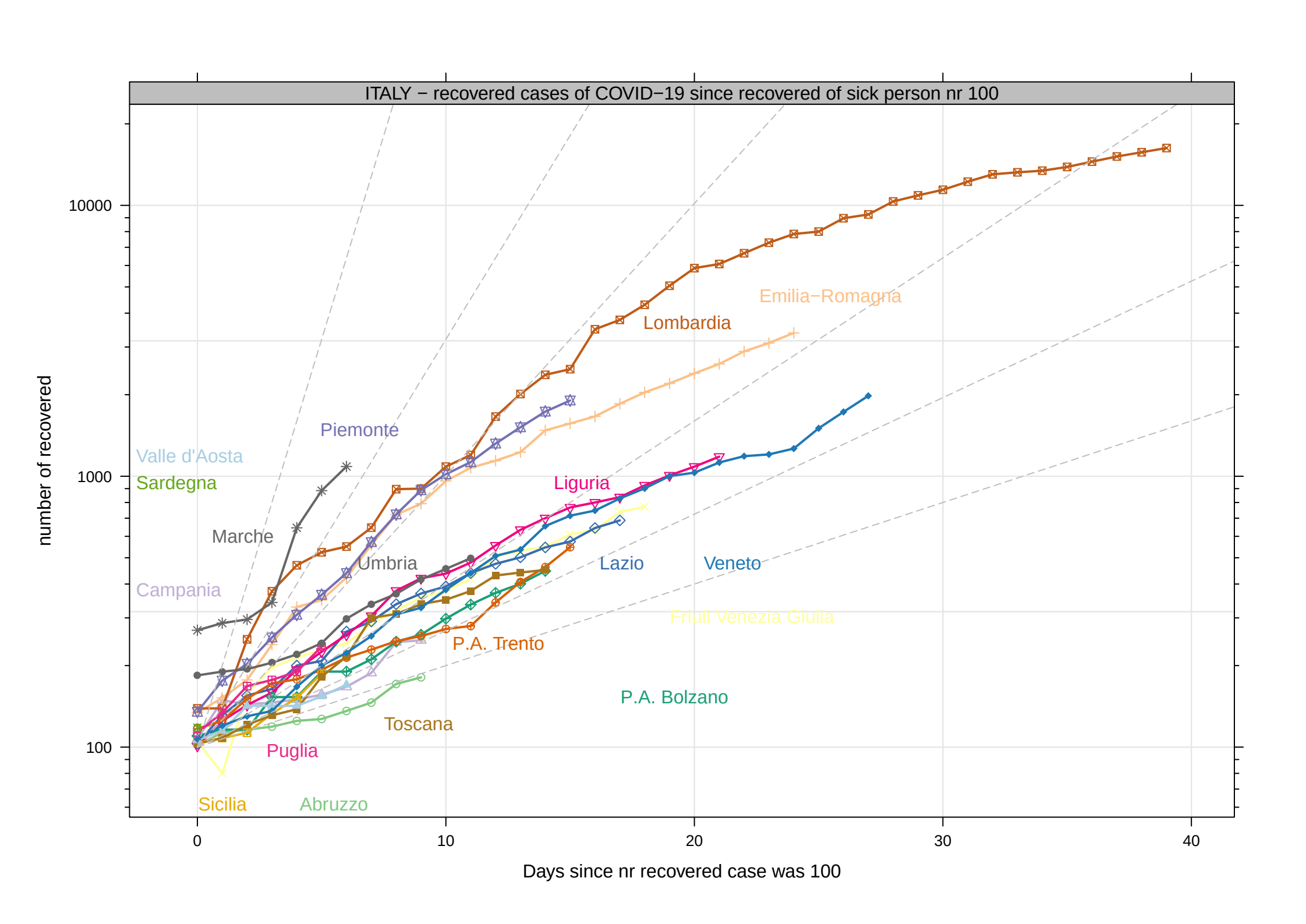

ITALY − Daily deaths (weekly moving averange)
number of cases (7 days rolling mean)
0
100
200
300
400
0
5
10
15
20
25
30
35
Days since nr deaths was 100
Countries
Abruzzo
Basilicata
Calabria
Campania
Emilia−Romagna
Friuli Venezia Giulia
Lazio
Liguria
Lombardia
Marche
Molise
P.A. Bolzano
P.A. Trento
Piemonte
Puglia
Sardegna
Sicilia
Toscana
Umbria
Valle d'Aosta
Veneto

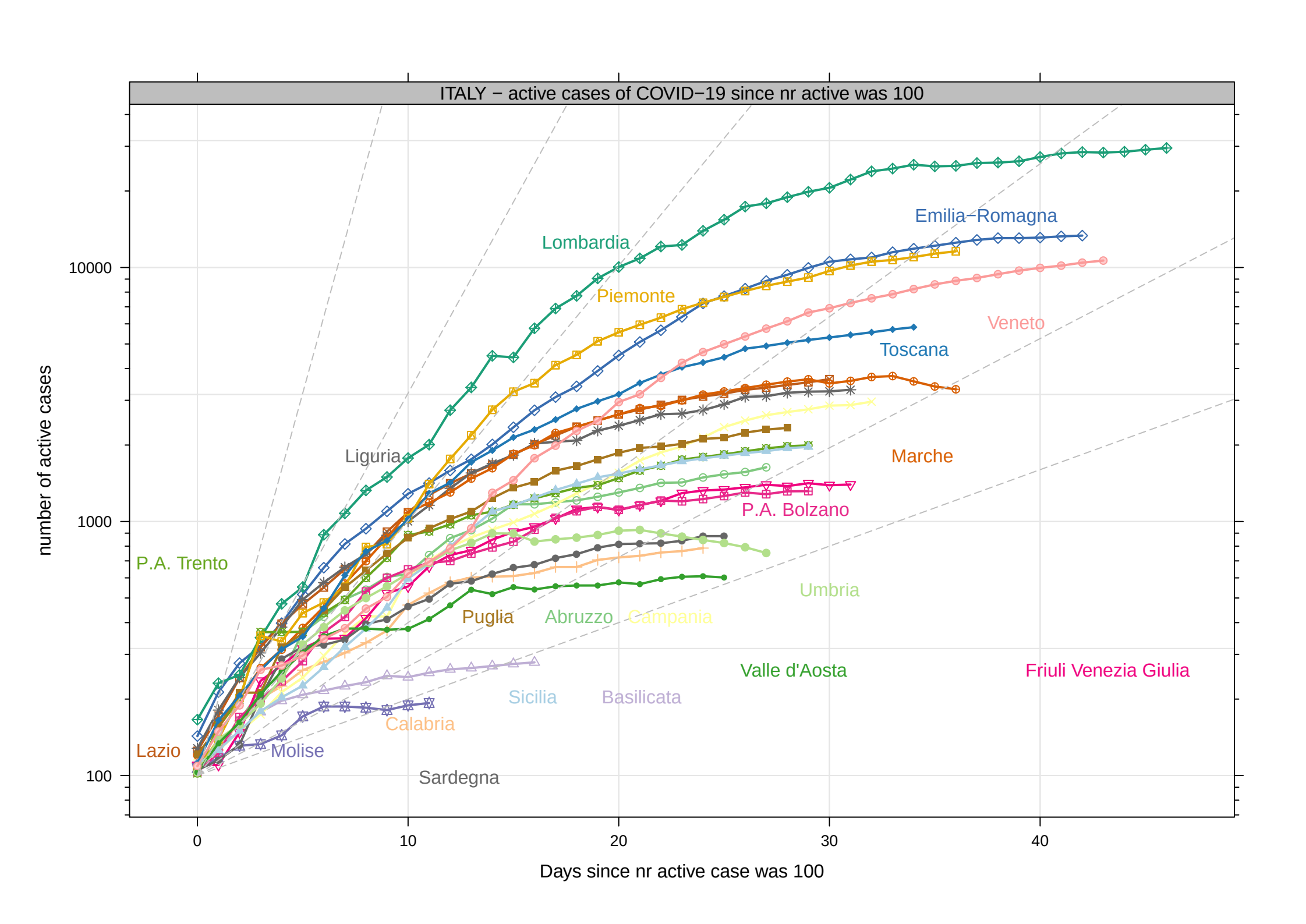

confirmed
active
recovered
death
number of cases
Date
1e+05
10000
1000
100
10
1
2020–03–01
2020–03–03
2020–03–05
2020–03–07
2020–03–09
2020–03–11
2020–03–13
2020–03–15
2020–03–17
2020–03–19
2020–03–21
2020–03–23
2020–03–25
2020–03–27
2020–03–29
2020–03–31
2020–04–02
2020–04–04
2020–04–06
2020–04–08
2020–04–10
Countries
Abruzzo
Basilicata
Calabria
Campania
Emilia−Romagna
Friuli Venezia Giulia
Lazio
Liguria
Lombardia
Marche
Molise
P.A. Bolzano
P.A. Trento
Piemonte
Puglia
Sardegna
Sicilia
Toscana
Umbria
Valle d'Aosta
Veneto

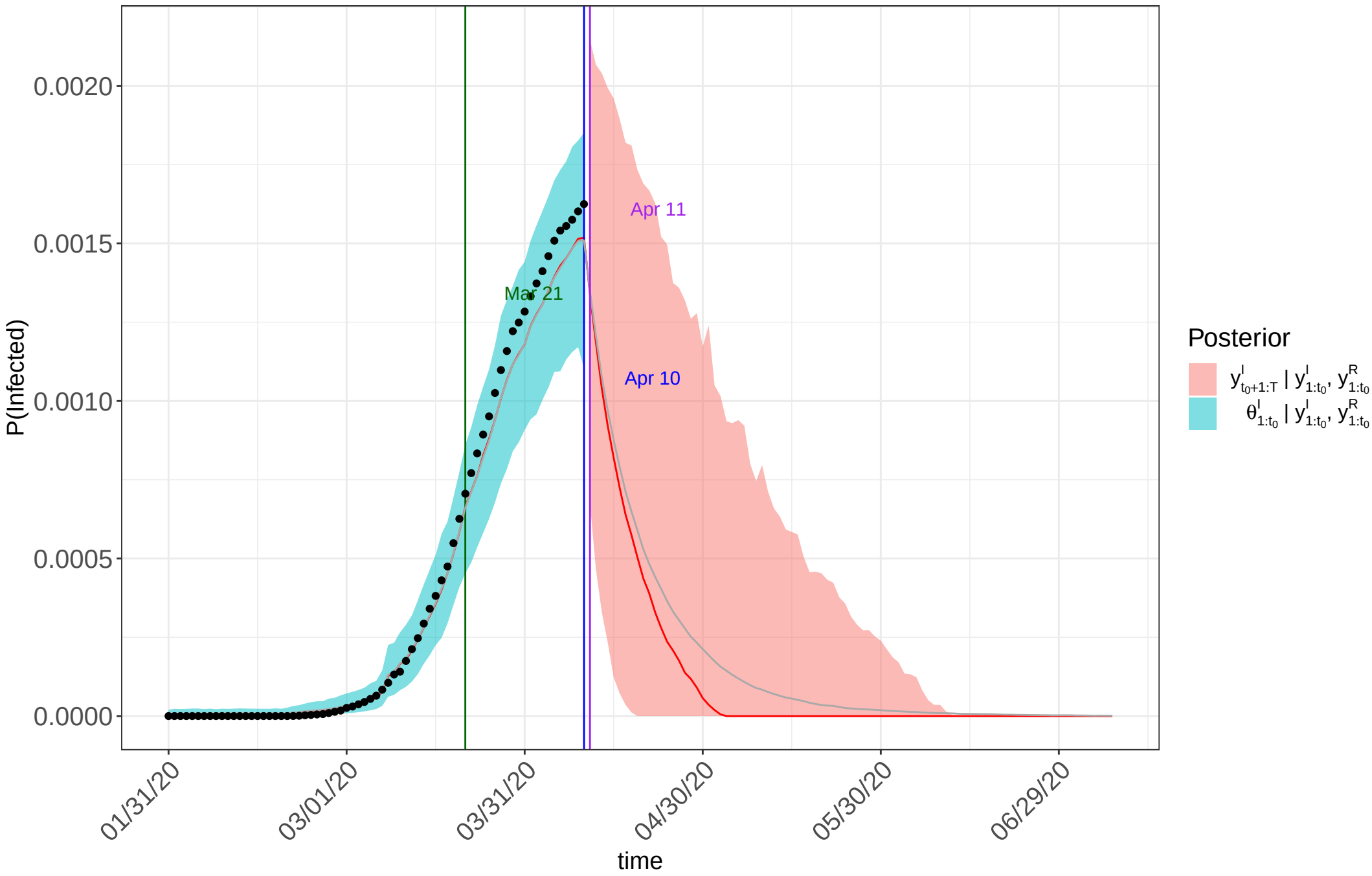

rl_confirmed
rl_active
rl_recovered
rl_deaths
number of cases (7 days rolling mean)
Days since nr deaths was 100
0
5
10
15
20
25
30
35
0
500
1000
1500
2000
Countries
Abruzzo
Basilicata
Calabria
Campania
Emilia−Romagna
Friuli Venezia Giulia
Lazio
Liguria
Lombardia
Marche
Molise
P.A. Bolzano
P.A. Trento
Piemonte
Puglia
Sardegna
Sicilia
Toscana
Umbria
Valle d'Aosta
Veneto

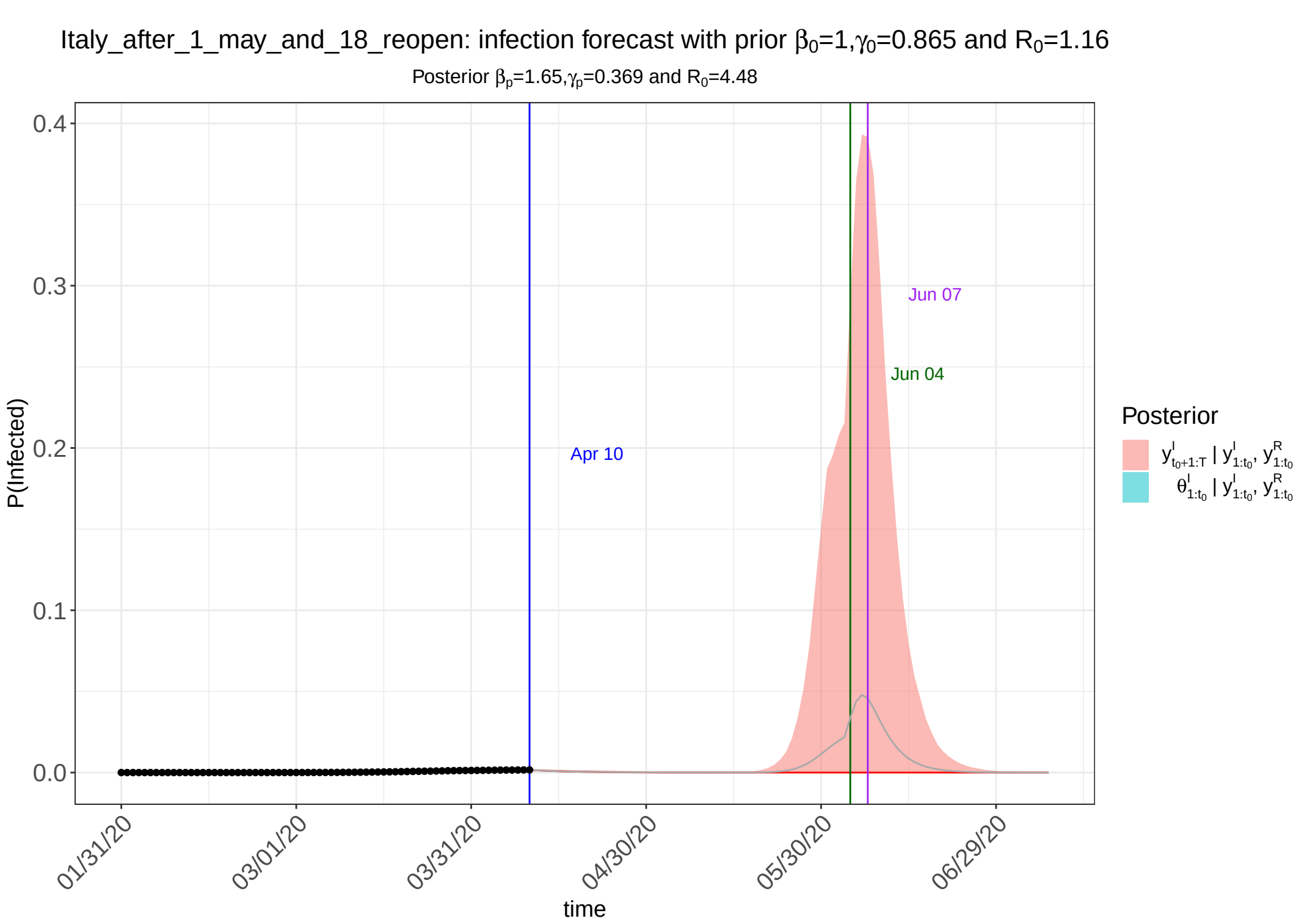

ITALY − confirmed cases of COVID−19 since onset of sick person nr 100
number of confirmed cases
10000
1000
100
0
5
10
15
20
25
30
35
40
45
Days since COVID−19 onset − confirmed case 100
Emilia−Romagna
Piemonte
Lombardia
Toscana
Veneto
Liguria
P.A. Trento
P.A. Bolzano
Marche
Campania
Puglia
Umbria
Lazio
Abruzzo
Valle d'Aosta
Sicilia
Calabria
Friuli Venezia Giulia
Molise
Basilicata
Sardegna

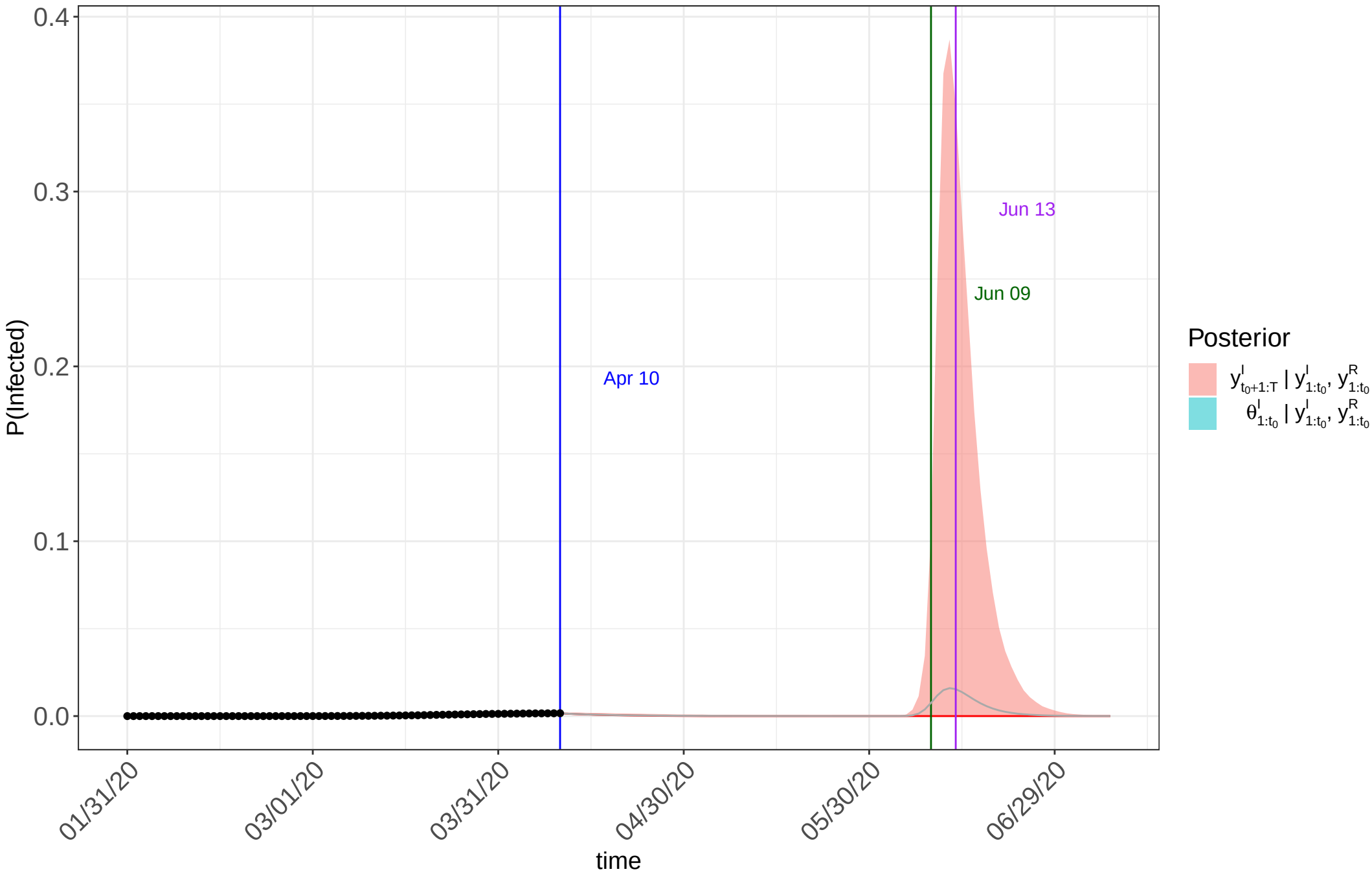

ITALY − dead cases of COVID−19 since dead of sick person nr 100
number of deaths
10000
1000
100
0
10
20
30
Days since nr deaths was 100
Lombardia
Emilia−Romagna
Piemonte
Veneto
Liguria
Toscana
Marche
Friuli Venezia Giulia
P.A. Bolzano
Lazio
Campania
Puglia
P.A. Trento
Valle d'Aosta
Abruzzo
Sicilia

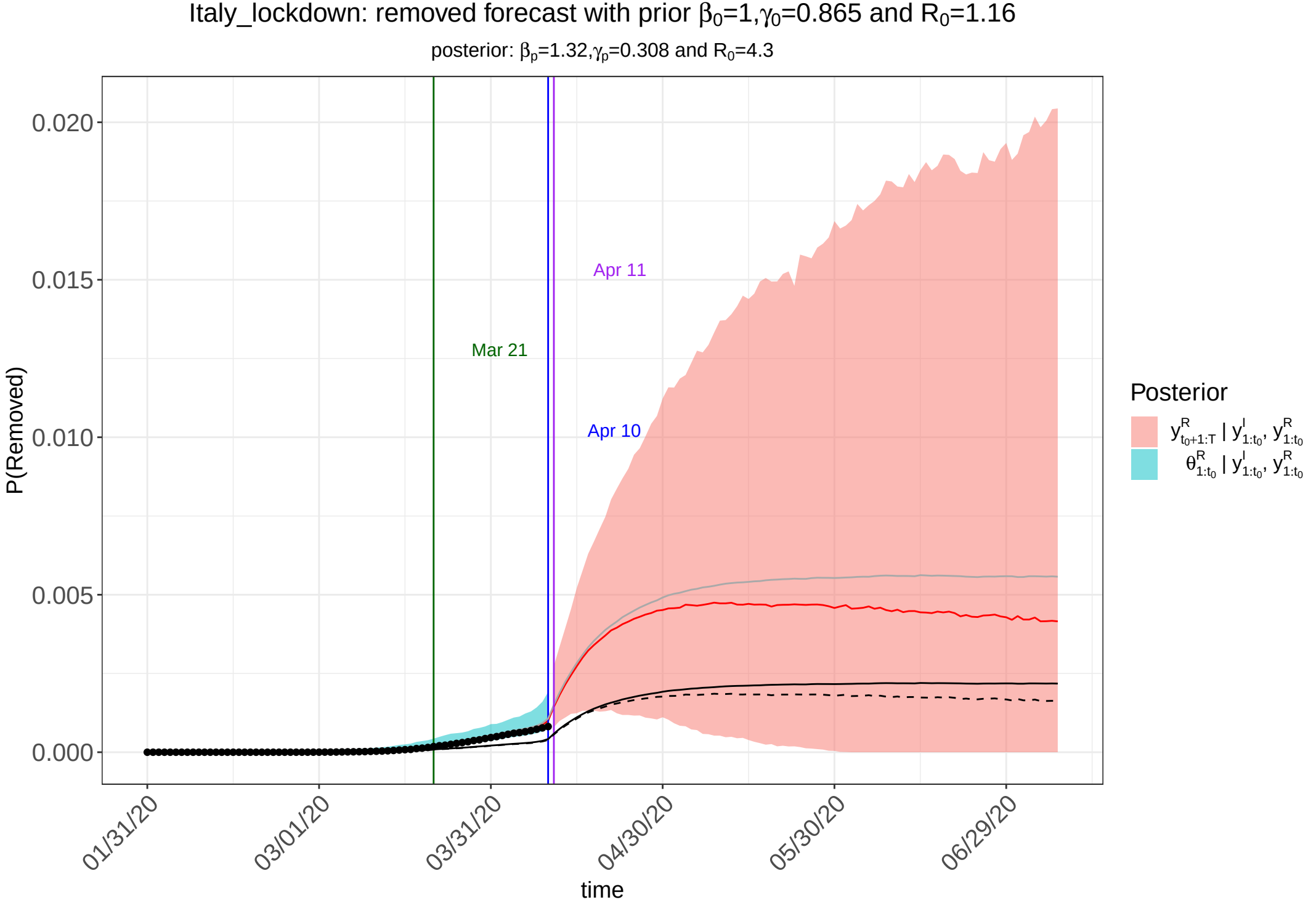

ITALY − recovered cases of COVID−19 since recovered of sick person nr 100
number of recovered
10000
1000
100
0
10
20
30
40
Days since nr recovered case was 100
Lombardia
Emilia−Romagna
Piemonte
Valle d'Aosta
Sardegna
Liguria
Marche
Umbria
Lazio
Veneto
Campania
Friuli Venezia Giulia
P.A. Trento
P.A. Bolzano
Toscana
Puglia
Sicilia
Abruzzo

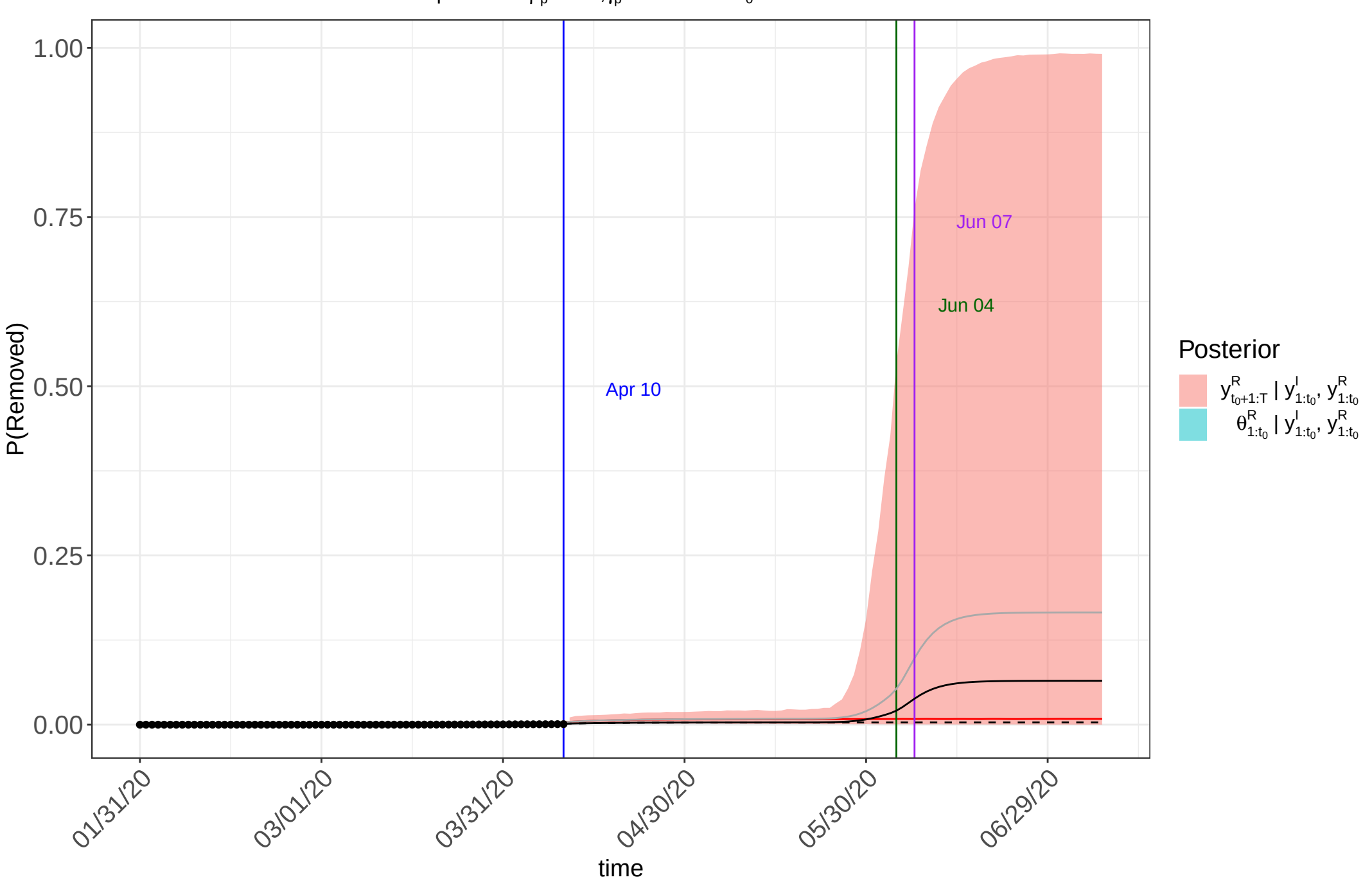

ITALY − active cases of COVID−19 since nr active was 100
number of active cases
10000
1000
100
0
10
20
30
40
Days since nr active case was 100
Lombardia
Emilia−Romagna
Piemonte
Veneto
Toscana
Liguria
Marche
P.A. Bolzano
P.A. Trento
Umbria
Puglia
Abruzzo
Campania
Valle d'Aosta
Friuli Venezia Giulia
Sicilia
Basilicata
Calabria
Lazio
Molise
Sardegna

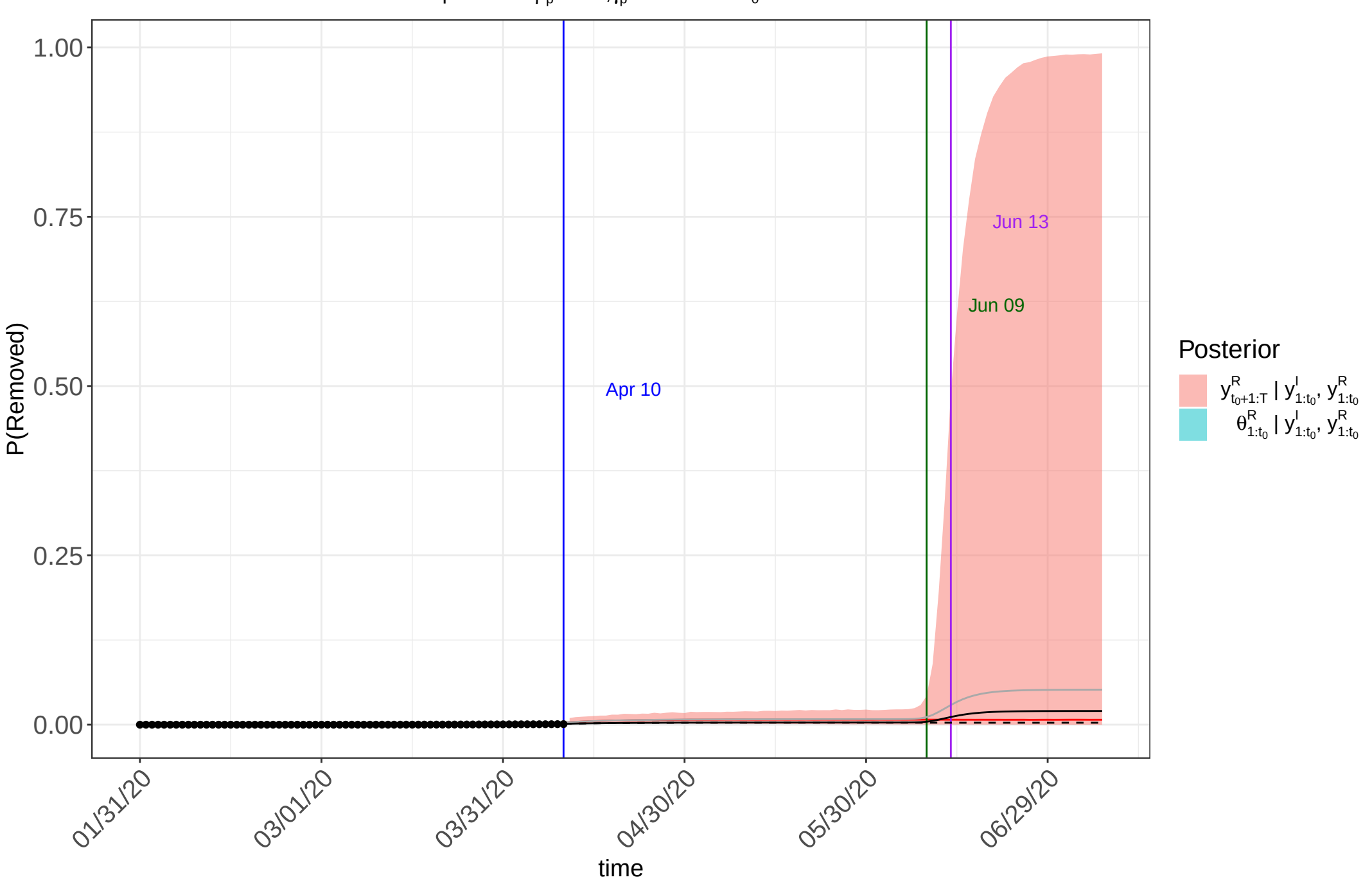

Italy_lockdown: infection forecast with prior β_0=1,γ_0=0.865 and R_0=1.16
Posterior β_p=1.32,γ_p=0.308 and R_0=4.3
P(Infected)
0.0020
0.0015
0.0010
0.0005
0.0000
Mar 21
Apr 11
Apr 10
01/31/20
03/01/20
03/31/20
04/30/20
05/30/20
06/29/20
time
Posterior
$y^I_{t_0+1:T} \mid y^I_{1:t_0}, y^R_{1:t_0}$
$\theta^I_{1:t_0} \mid y^I_{1:t_0}, y^R_{1:t_0}$


Italy_after_1_may_and_18_reopen: infection forecast with prior β_0=1,γ_0=0.865 and R_0=1.16
Posterior β_p=1.65,γ_p=0.369 and R_0=4.48
P(Infected)
0.4
0.3
0.2
0.1
0.0
Apr 10
Jun 04
Jun 07
01/31/20
03/01/20
03/31/20
04/30/20
05/30/20
06/29/20
time
Posterior
$y^I_{t_0+1:T} \mid y^I_{1:t_0}, y^R_{1:t_0}$
$\theta^I_{1:t_0} \mid y^I_{1:t_0}, y^R_{1:t_0}$


Italyafter_2_june_reopen: infection forecast with prior β_0=1,γ_0=0.865 and R_0=1.16
Posterior β_p=1.59,γ_p=0.356 and R_0=4.5
P(Infected)
0.4
0.3
0.2
0.1
0.0
Apr 10
Jun 09
Jun 13
01/31/20
03/01/20
03/31/20
04/30/20
05/30/20
06/29/20
time
Posterior
$y^I_{t_0+1:T} \mid y^I_{1:t_0}, y^R_{1:t_0}$
$\theta^I_{1:t_0} \mid y^I_{1:t_0}, y^R_{1:t_0}$


Italy_lockdown: removed forecast with prior β_0=1,γ_0=0.865 and R_0=1.16
posterior: β_p=1.32,γ_p=0.308 and R_0=4.3
P(Removed)
0.020
0.015
0.010
0.005
0.000
Mar 21
Apr 11
Apr 10
01/31/20
03/01/20
03/31/20
04/30/20
05/30/20
06/29/20
time
Posterior
$y^R_{t_0+1:T} \mid y^I_{1:t_0}, y^R_{1:t_0}$
$\theta^R_{1:t_0} \mid y^I_{1:t_0}, y^R_{1:t_0}$


Italy_after_1_may_and_18_reopen: removed forecast with prior β_0=1,γ_0=0.865 and R_0=1.16
posterior: β_p=1.65,γ_p=0.369 and R_0=4.48
P(Removed)
1.00
0.75
0.50
0.25
0.00
Apr 10
Jun 04
Jun 07
01/31/20
03/01/20
03/31/20
04/30/20
05/30/20
06/29/20
time
Posterior
$y^R_{t_0+1:T} \mid y^I_{1:t_0}, y^R_{1:t_0}$
$\theta^R_{1:t_0} \mid y^I_{1:t_0}, y^R_{1:t_0}$


Italyafter_2_june_reopen: removed forecast with prior β_0=1,γ_0=0.865 and R_0=1.16
posterior: β_p=1.59,γ_p=0.356 and R_0=4.5
P(Removed)
1.00
0.75
0.50
0.25
0.00
Apr 10
Jun 09
Jun 13
01/31/20
03/01/20
03/31/20
04/30/20
05/30/20
06/29/20
time
Posterior
$y^R_{t_0+1:T} \mid y^I_{1:t_0}, y^R_{1:t_0}$
$\theta^R_{1:t_0} \mid y^I_{1:t_0}, y^R_{1:t_0}$