



Universidade Federal do Ceará

Modelagem epidemiológica do COVID19 para o Estado do Ceará empregando o modelo SEIIR

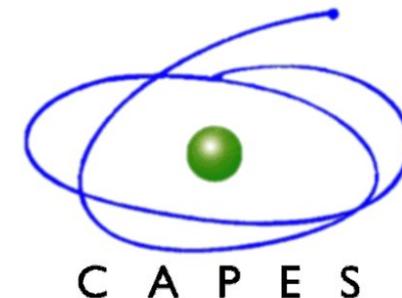
Equipe Cientista-Chefe de Dados (UFC & CAPP- IPECE):

José Soares de Andrade (UFC - Física)

Humberto Carmona (UFC- Física)

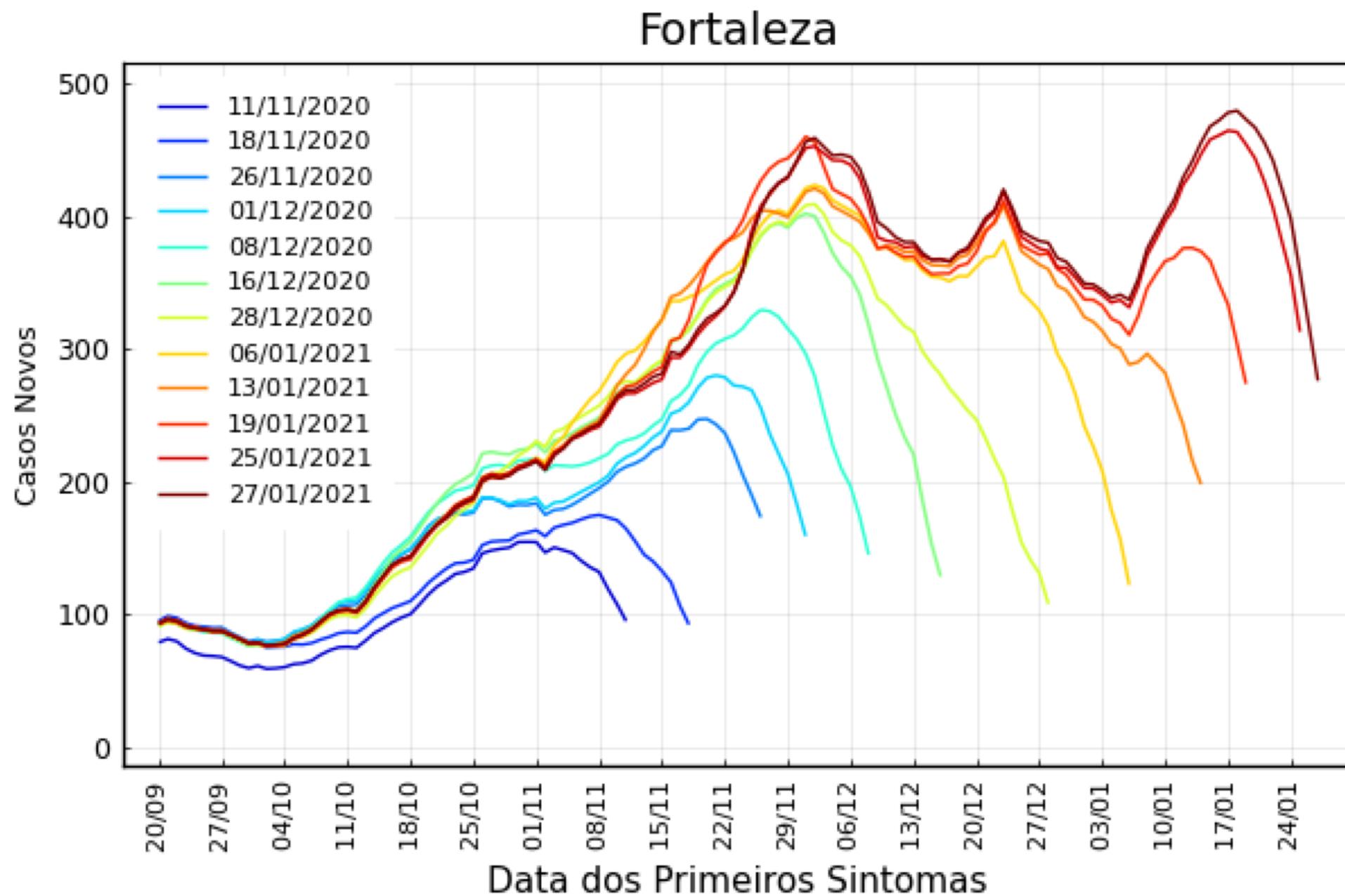
Rilder Pires (CAPP- IPECE-SEPLAG)

Saulo Reis (UFC - Física)



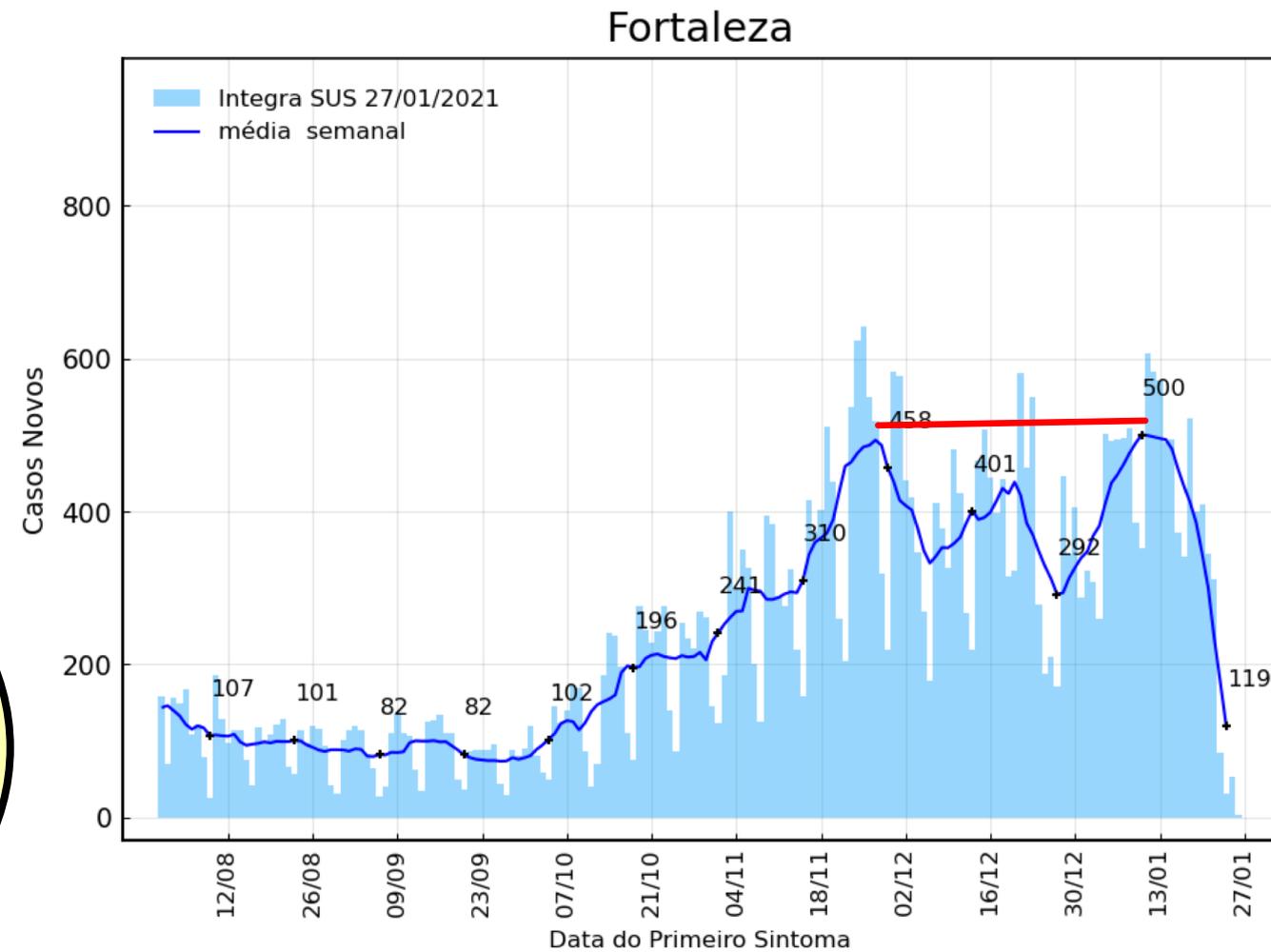
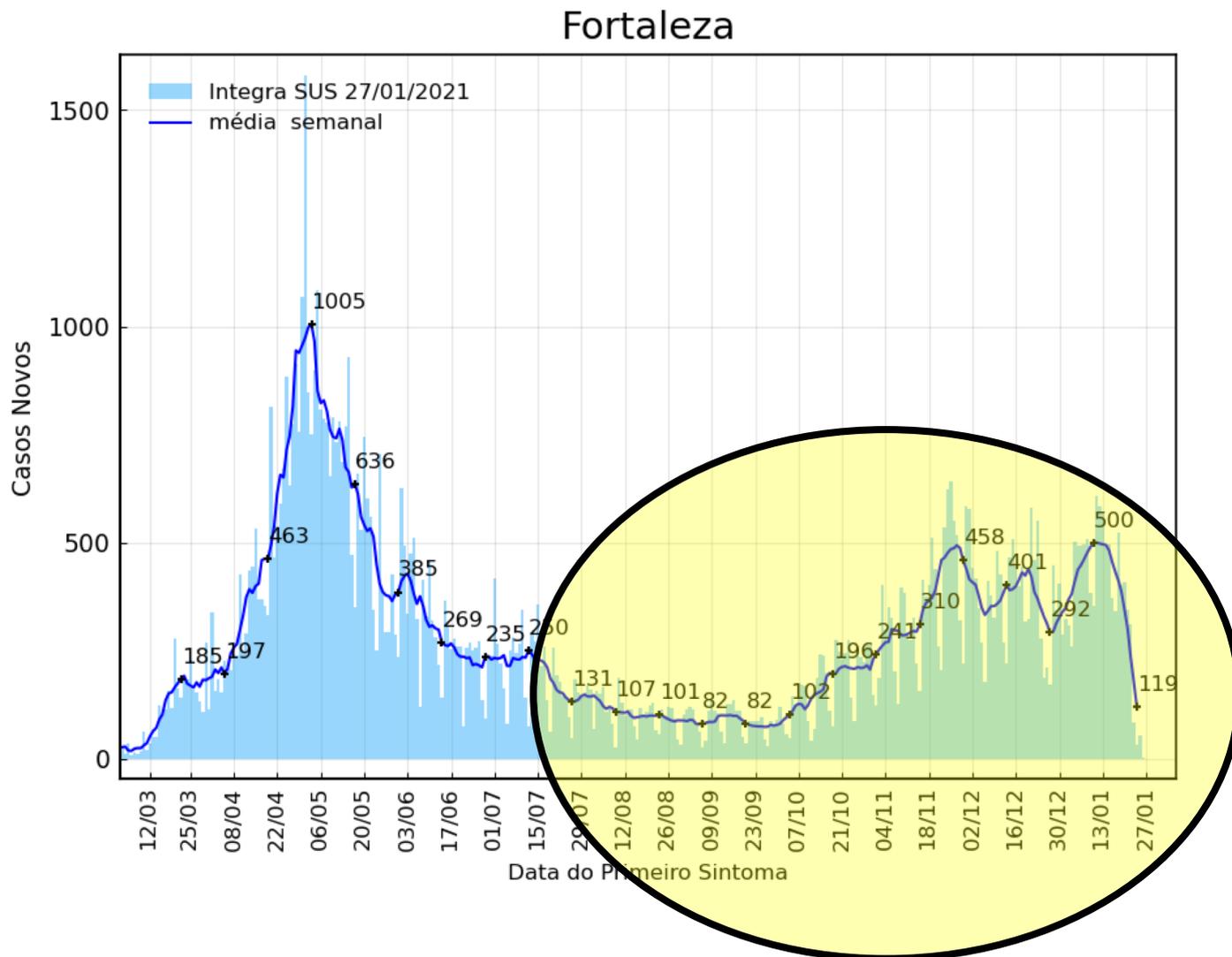
Fortaleza (capital)

Dados atualizados em 27/01/2021



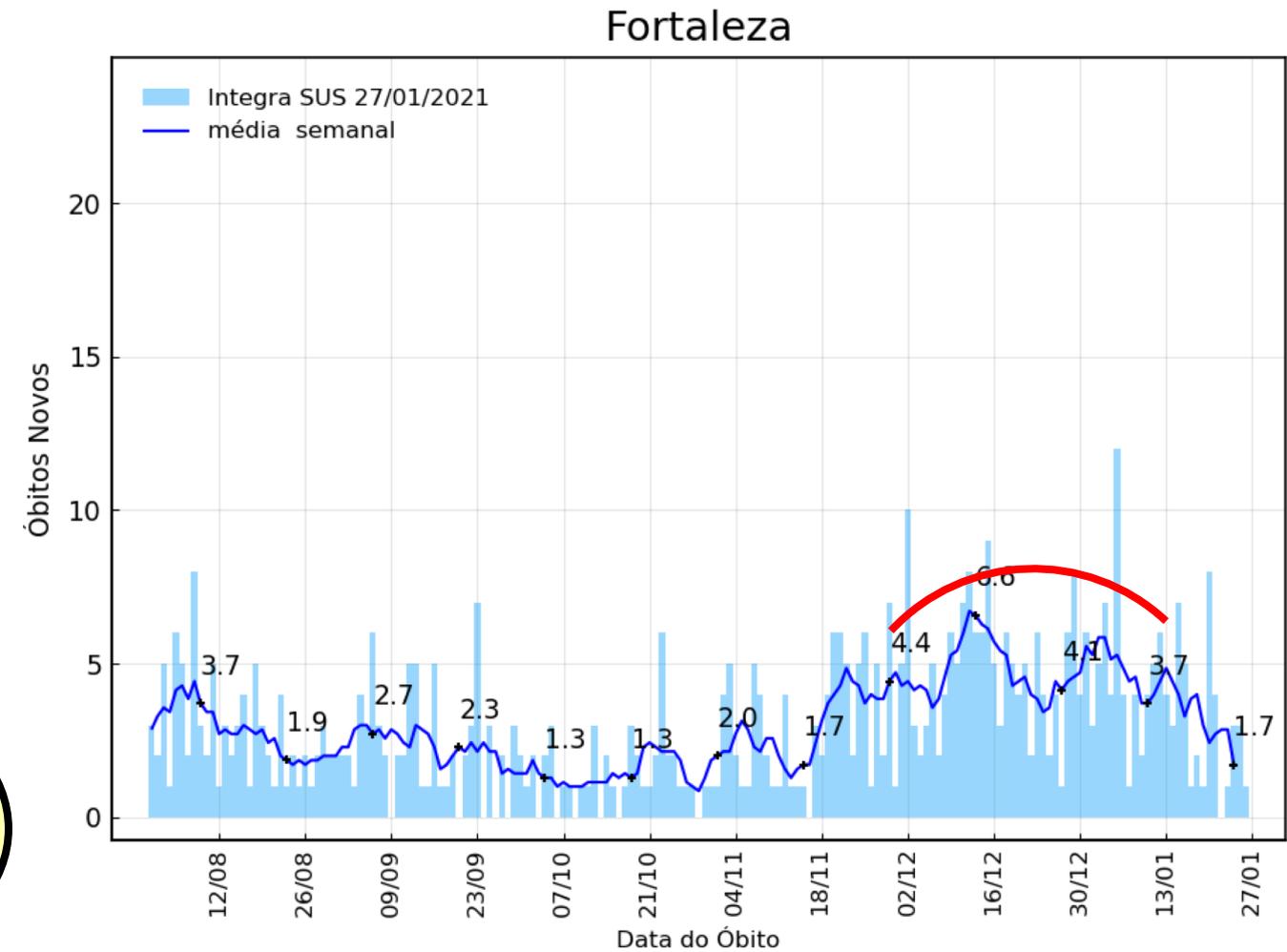
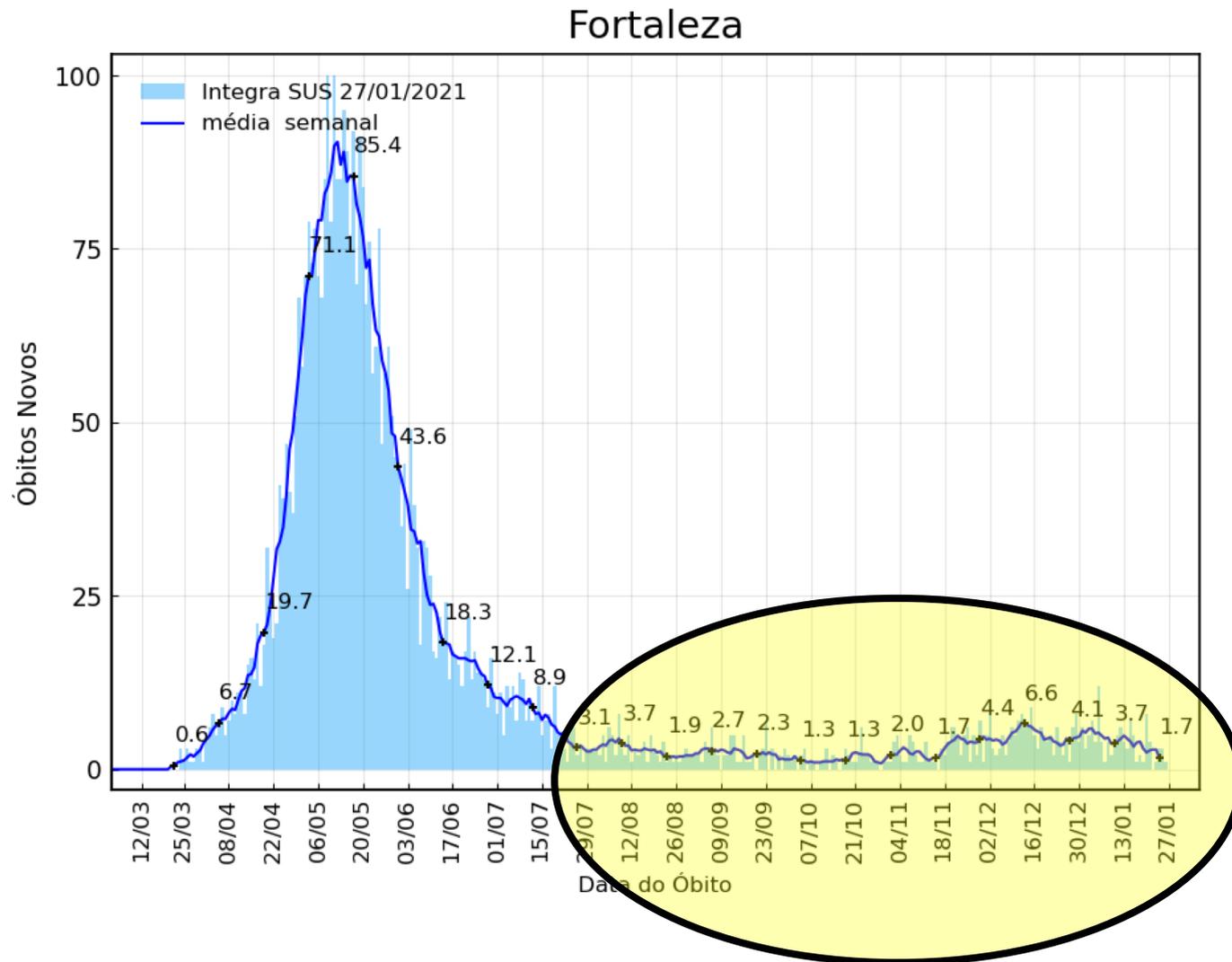
Fortaleza (capital)

Dados atualizados em 27/01/2021



Fortaleza (capital)

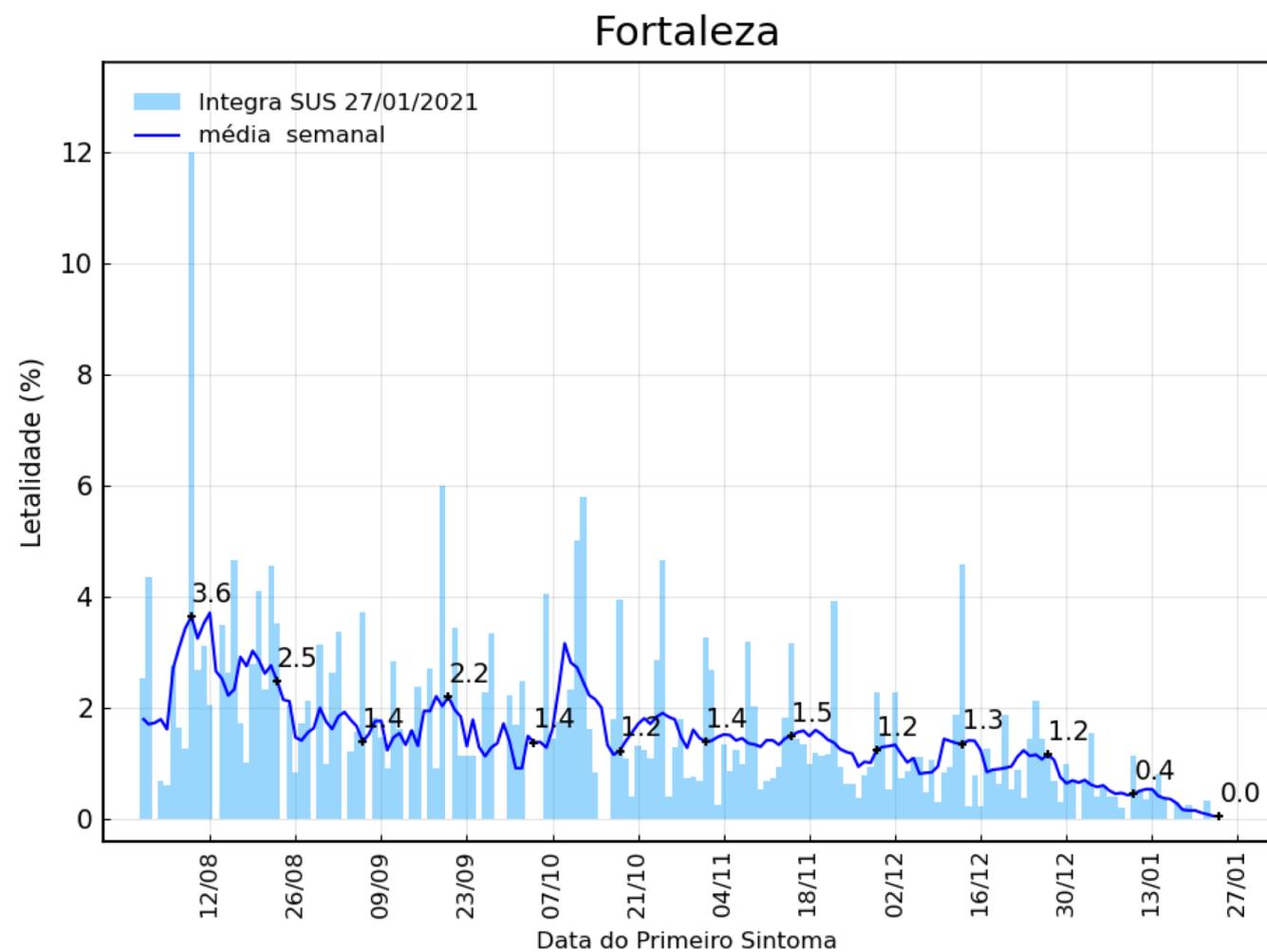
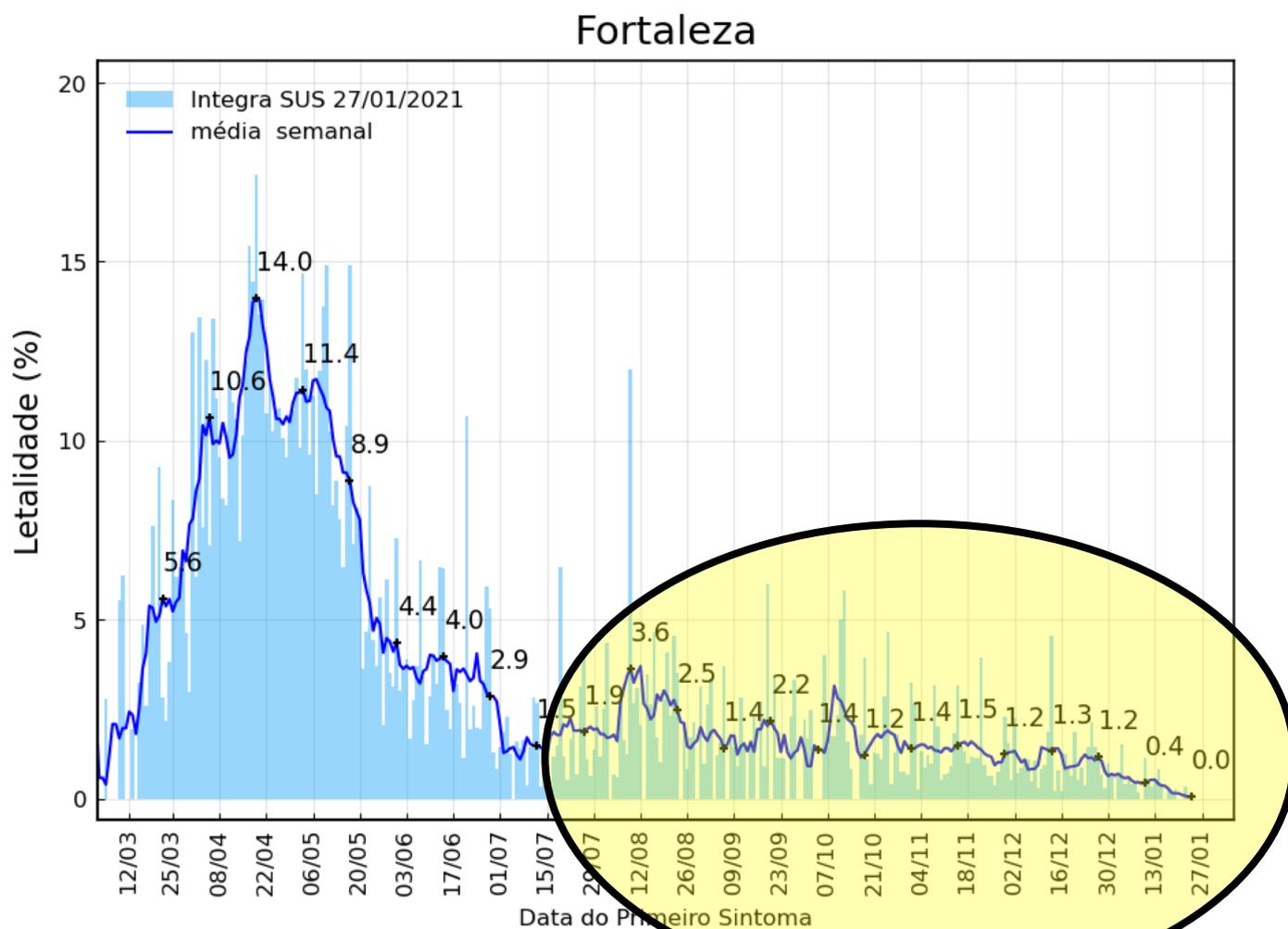
Dados atualizados em 27/01/2021



Letalidade

$$Letalidade(\%) = \frac{\# \text{ óbitos (dps)}}{\# \text{ casos (dps)}} \times 100$$

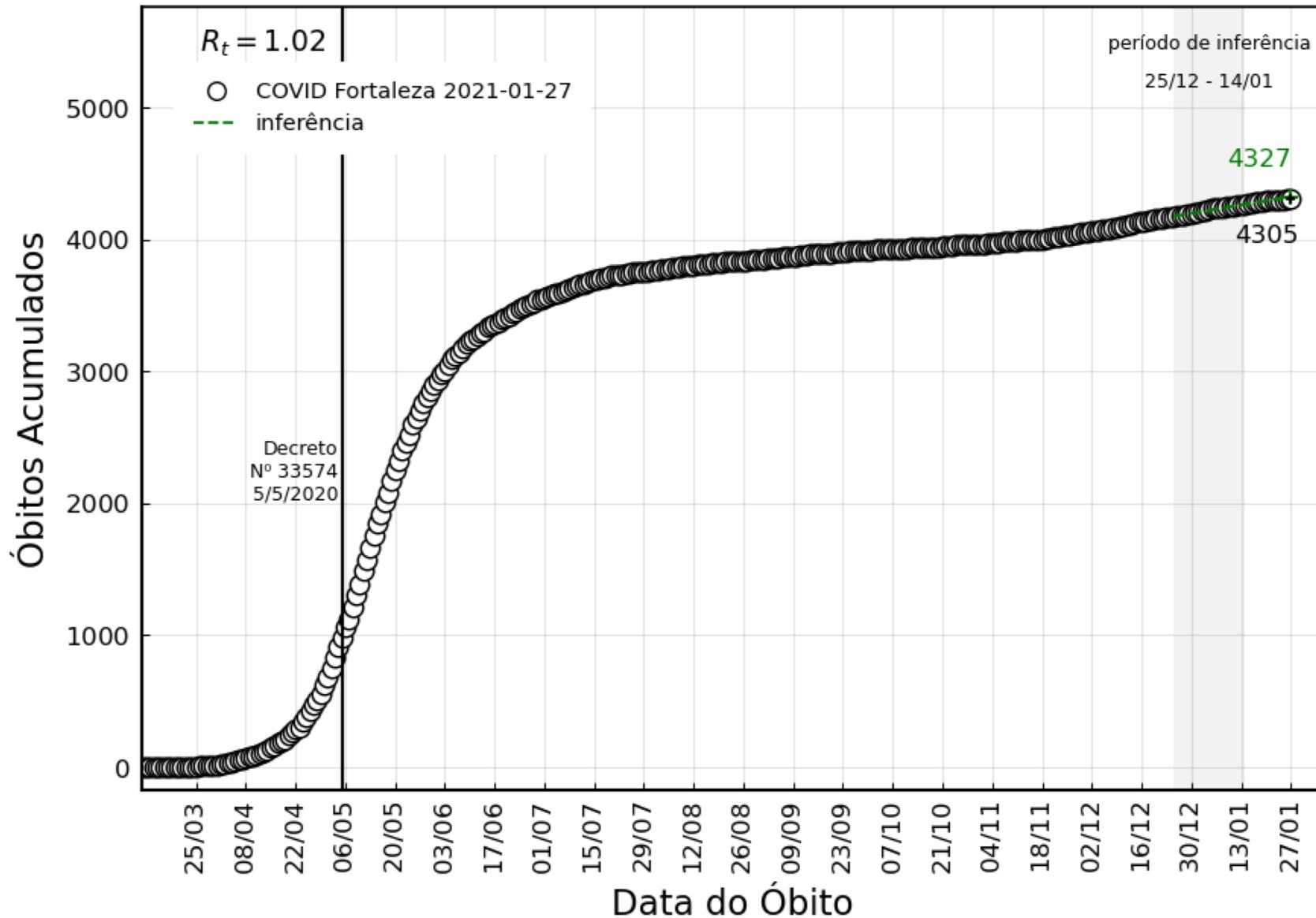
dps – data dos primeiros sintomas



Dados atualizados em 27/01/2021

Inferência com Óbitos

Fortaleza

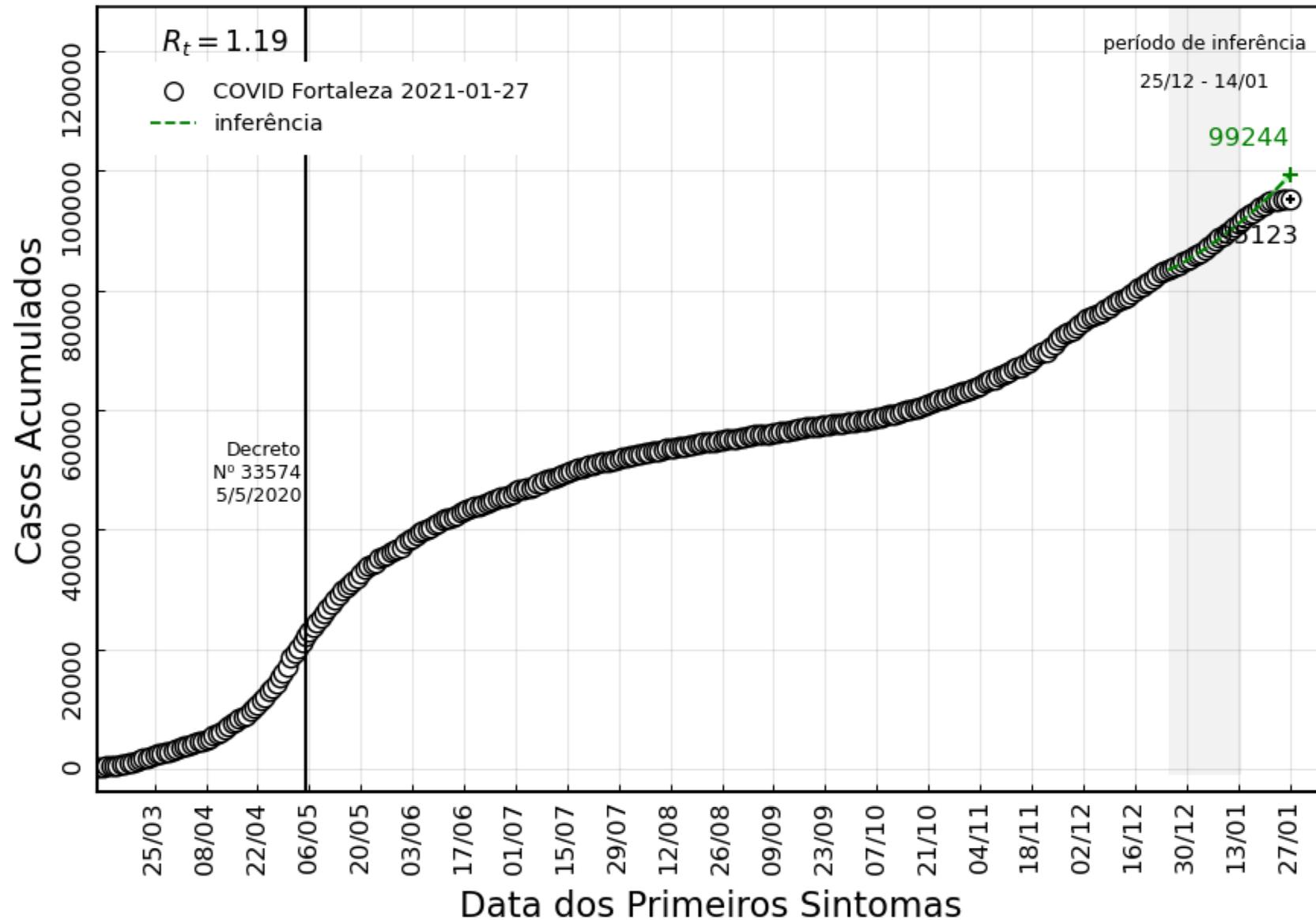


Fortaleza	
Janela de Inferência	R_t
18/11 – 08/12	1.01
04/12 – 24/12	0.88
11/12 – 31/12	0.90
18/12 – 07/01	0.90
25/12 – 14/01	1.02

Dados atualizados em 27/01/2021

Inferência com Casos

Fortaleza



Fortaleza	
Janela de Inferência	R_t
11/12 – 31/12	0.88
18/12 – 07/01	0.94
25/12 – 14/01	1.19

Ceará & Regiões

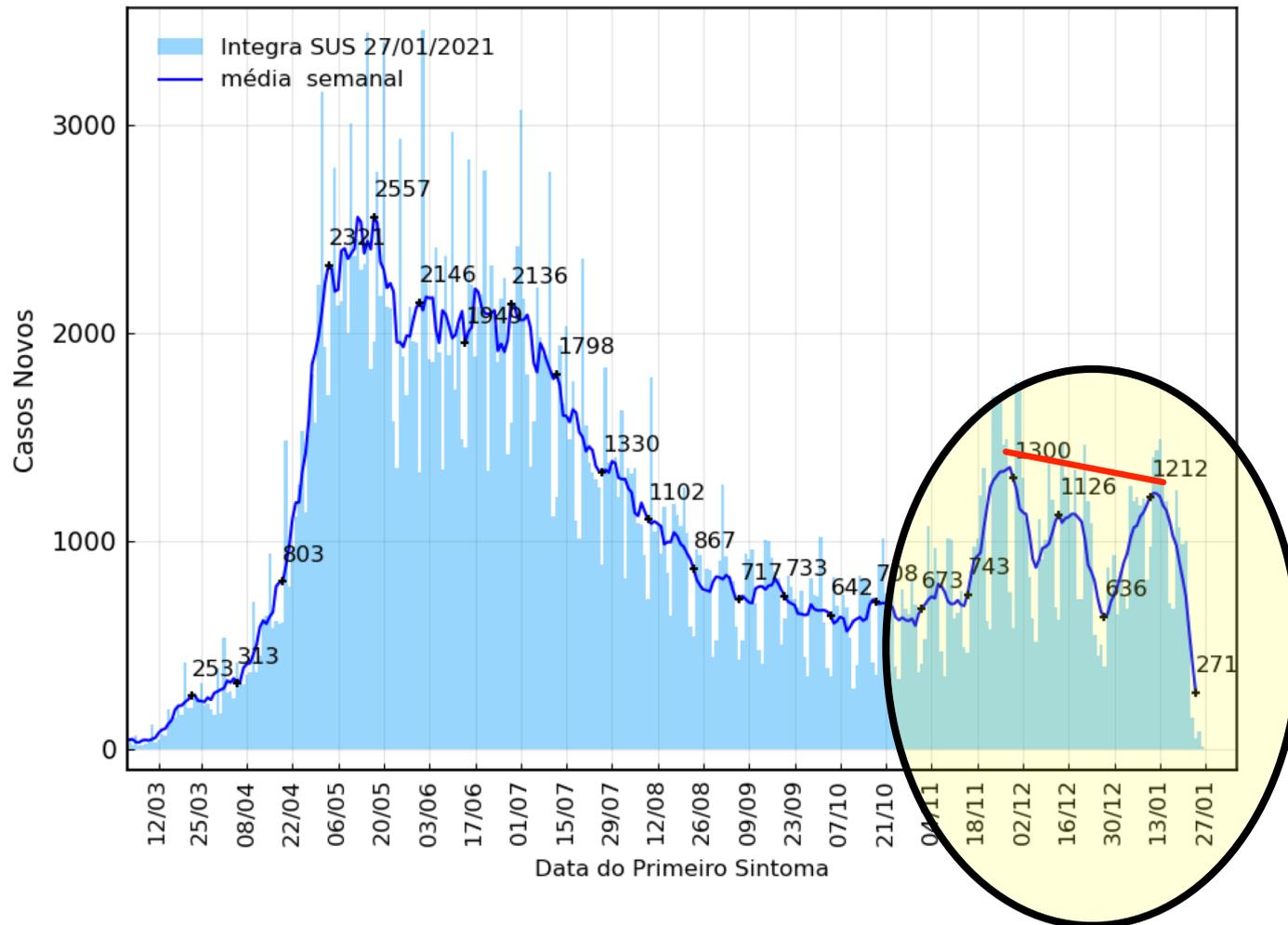
REGIÃO	POPULAÇÃO (IBGE 2020)
Fortaleza	4.817.822
Sobral	1.643.656
Cariri	1.523.245
Sertão Central	652.591
Litoral Leste/Jaguaribe	549.789

População do Ceará = 9.187.103 habitantes

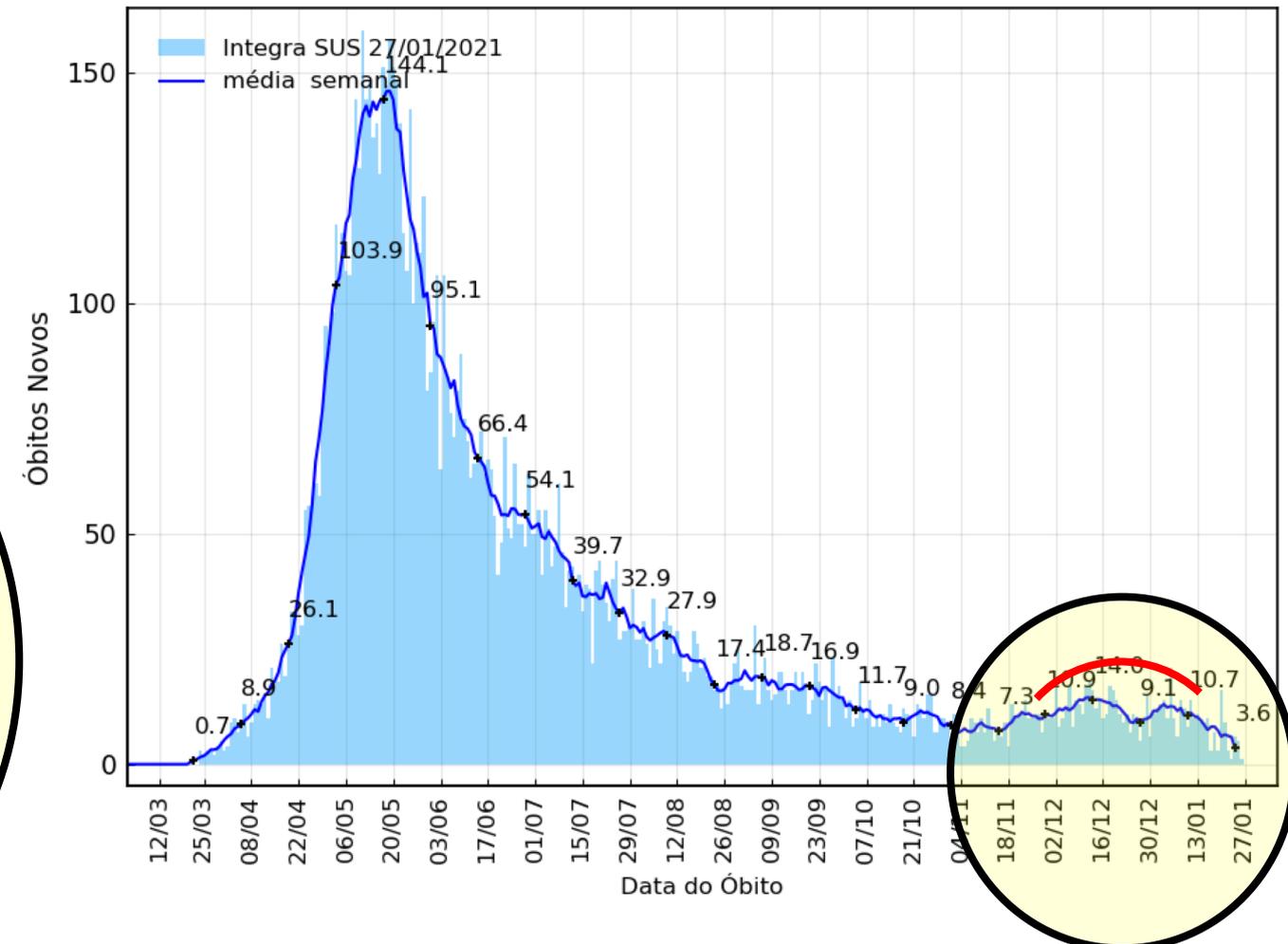
Estado do Ceará

Dados atualizados em 27/01/2021

Estado do Ceará



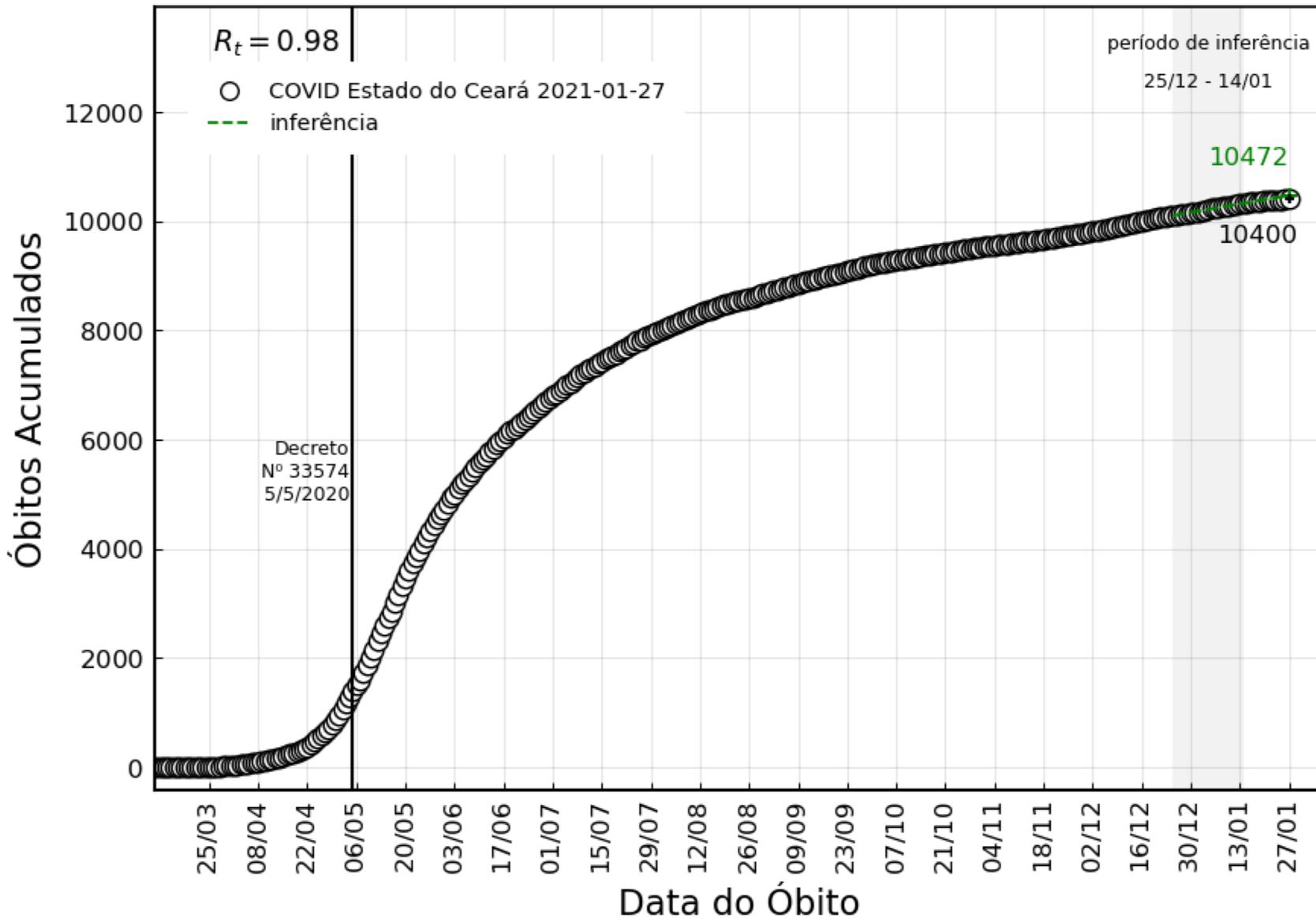
Estado do Ceará



Dados atualizados em 27/01/2021

Inferência com Óbitos

Estado do Ceará

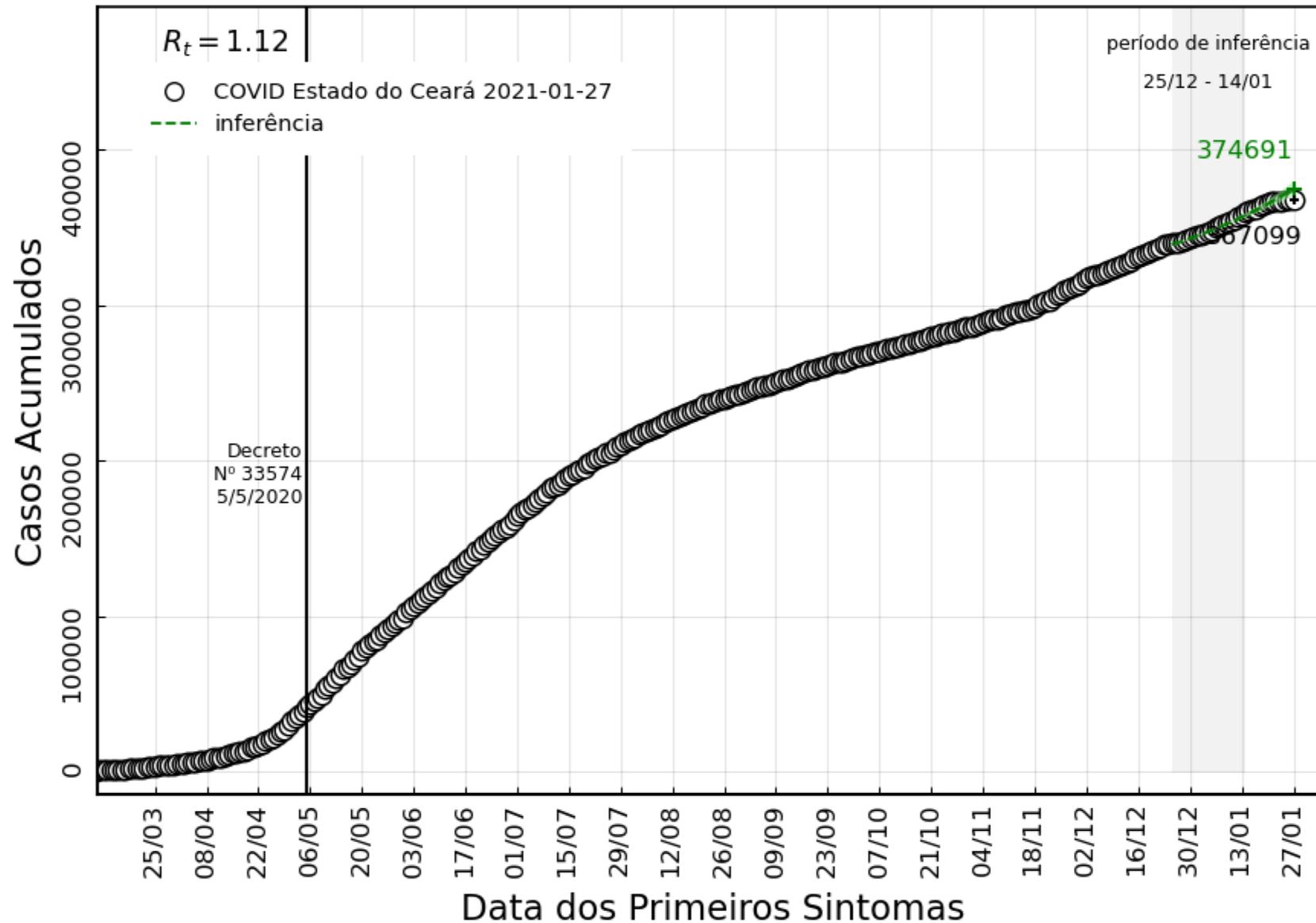


Ceará	
Janela de Inferência	R_t
18/11 – 08/12	0.97
04/12 – 24/12	0.84
11/12 – 31/12	0.82
18/12 – 07/01	0.79
25/12 – 14/01	0.98

Dados atualizados em 27/01/2021

Inferência com Casos

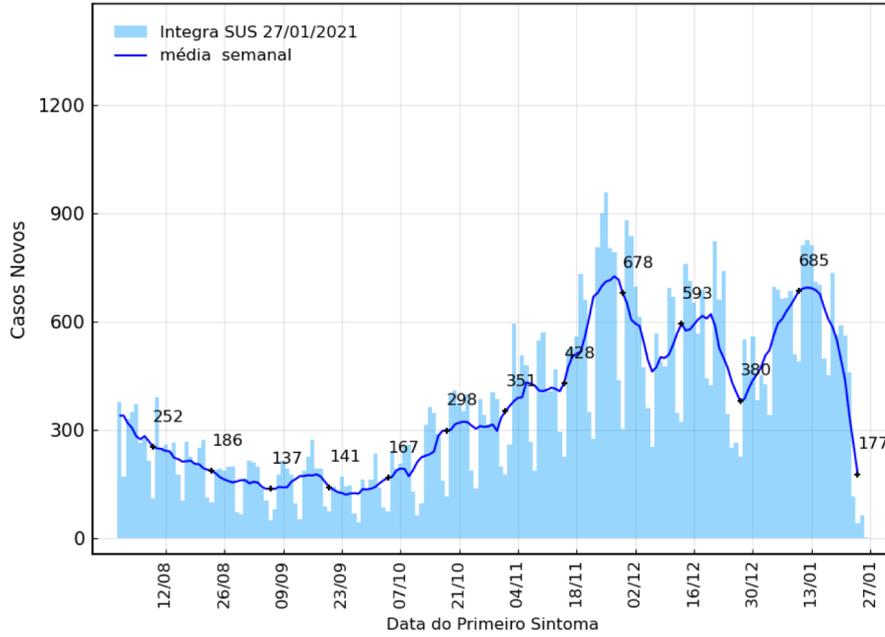
Estado do Ceará



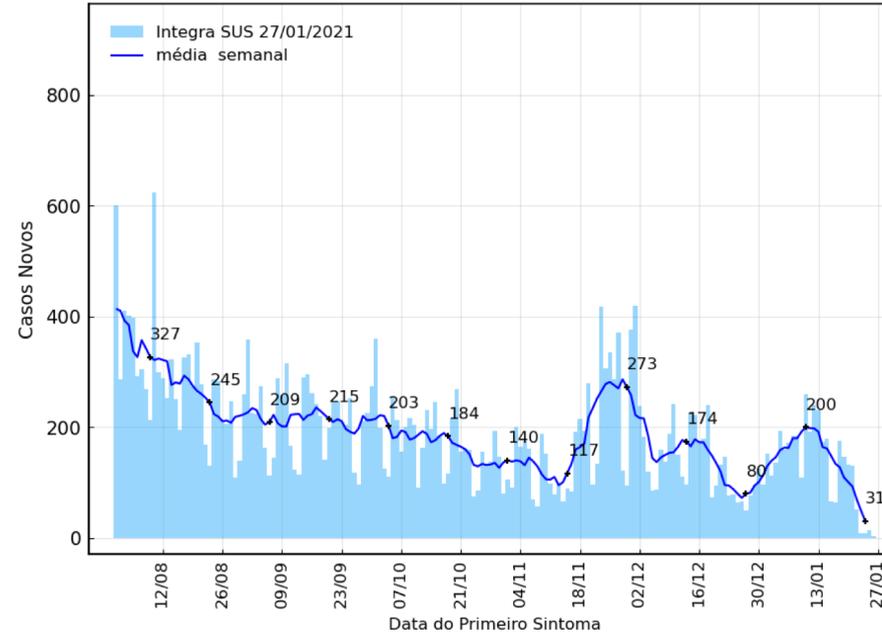
Ceará	
Janela de Inferência	R_t
11/12 – 31/12	1.00
18/12 – 07/01	0.93
25/12 – 14/01	1.12

Casos nas Regiões 27/01/2021

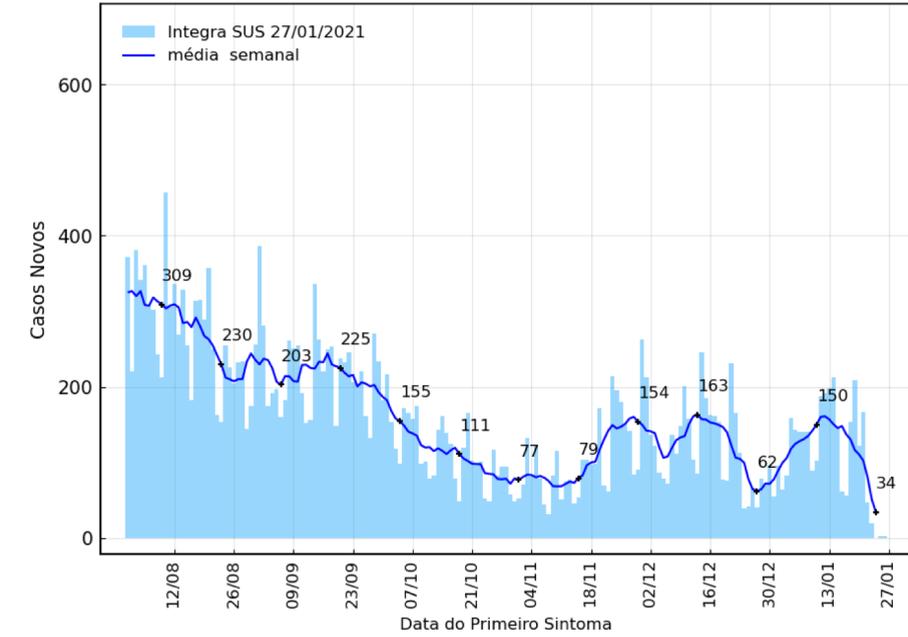
Região de Fortaleza



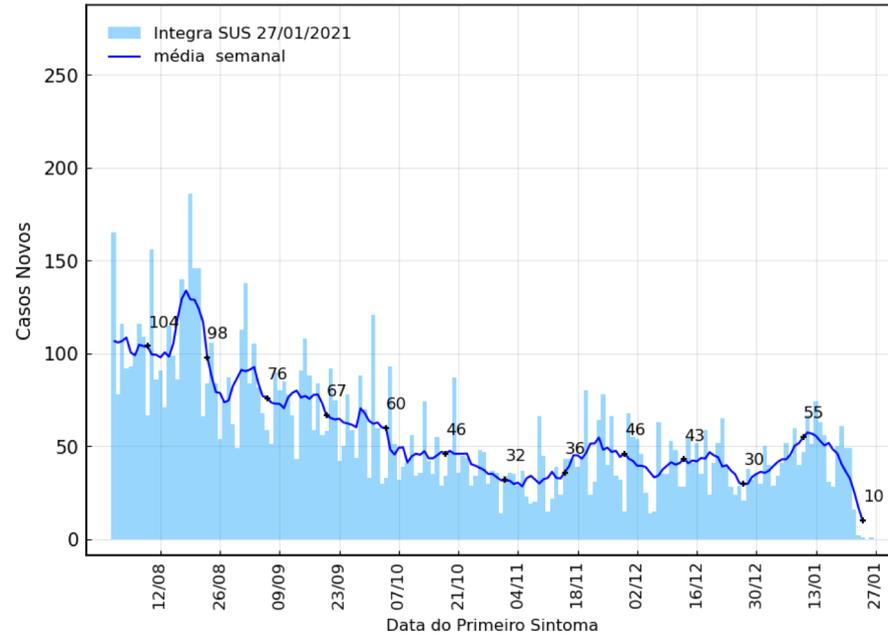
Região do Cariri



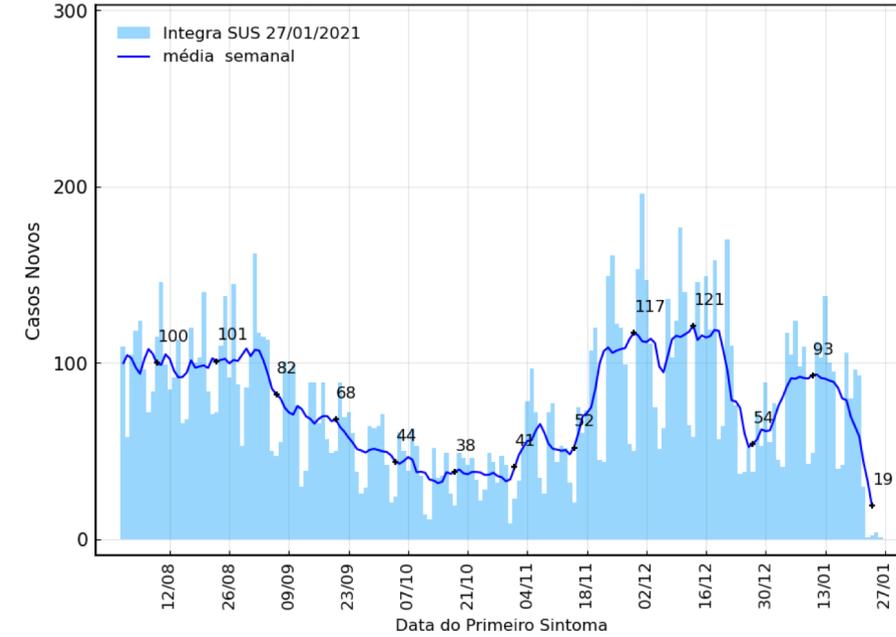
Região de Sobral



Região do Sertão Central

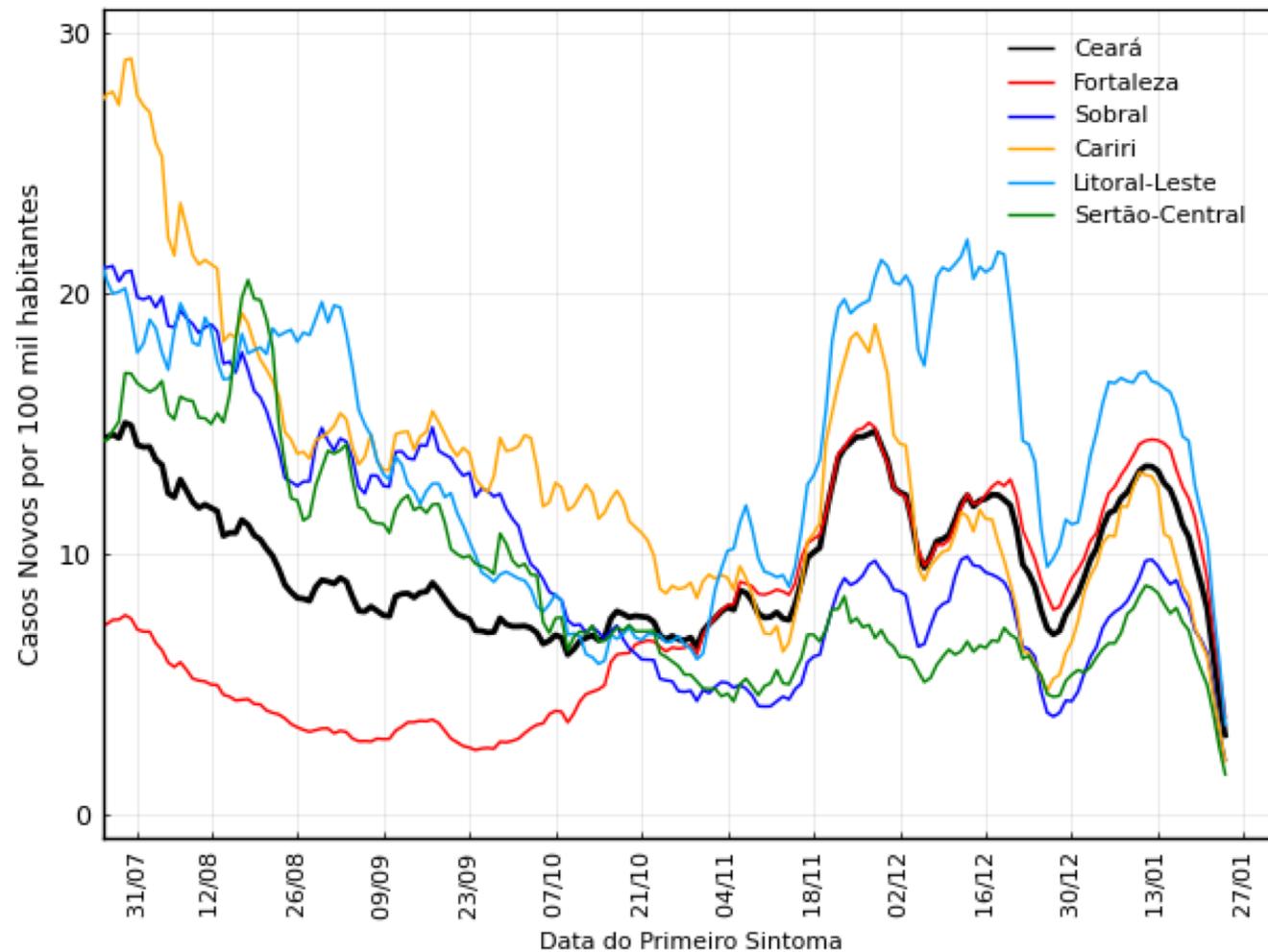
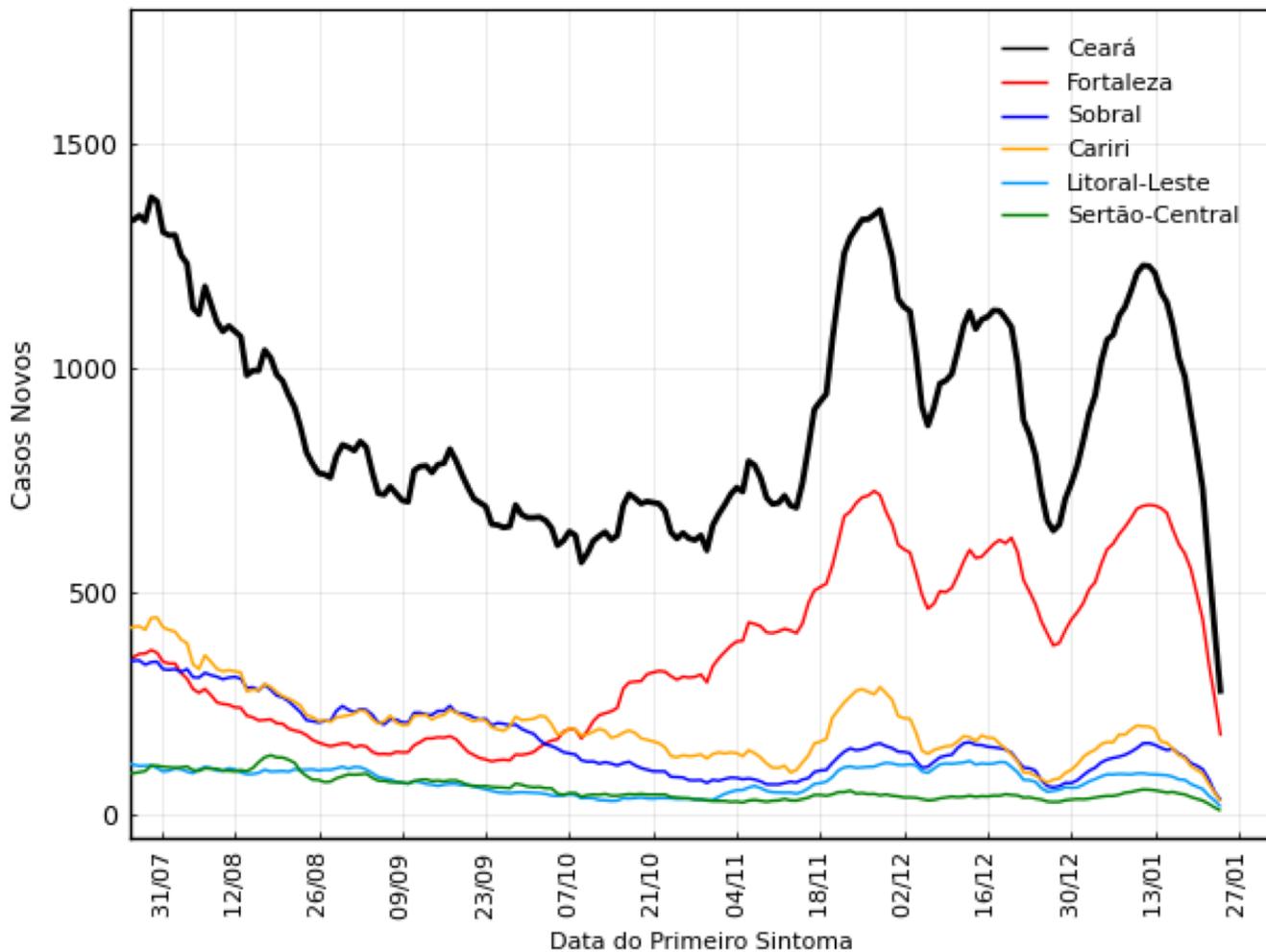


Região do Litoral Leste/Jaguaribe



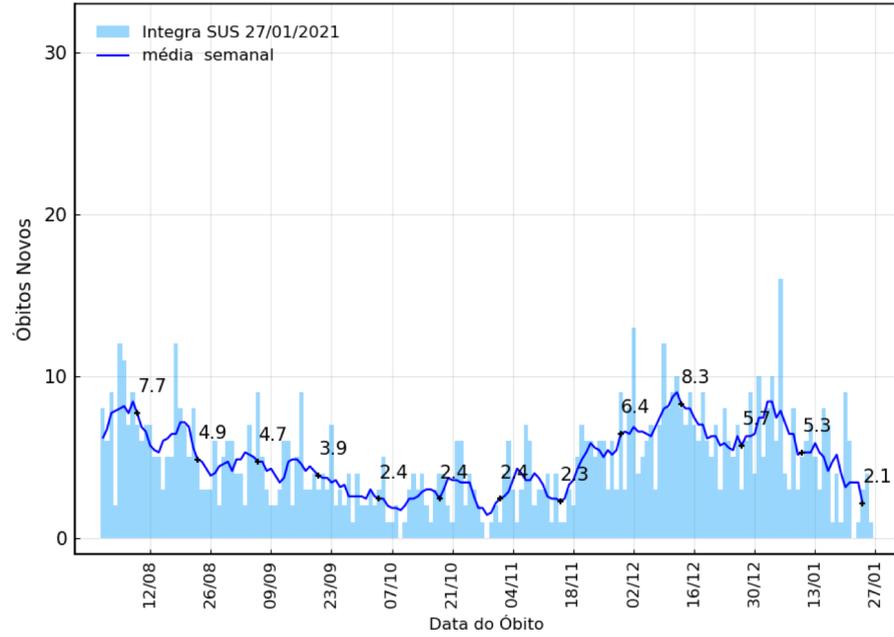
Evolução da Epidemia no Ceará por Regiões

Casos Novos & Casos Novos por 100 mil habitantes

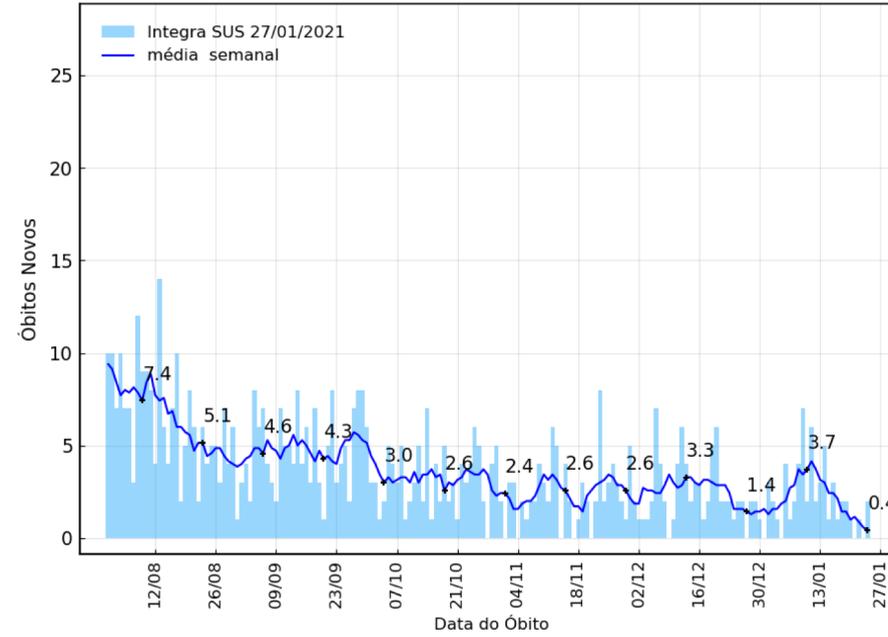


Óbitos nas Regiões 27/01/2021

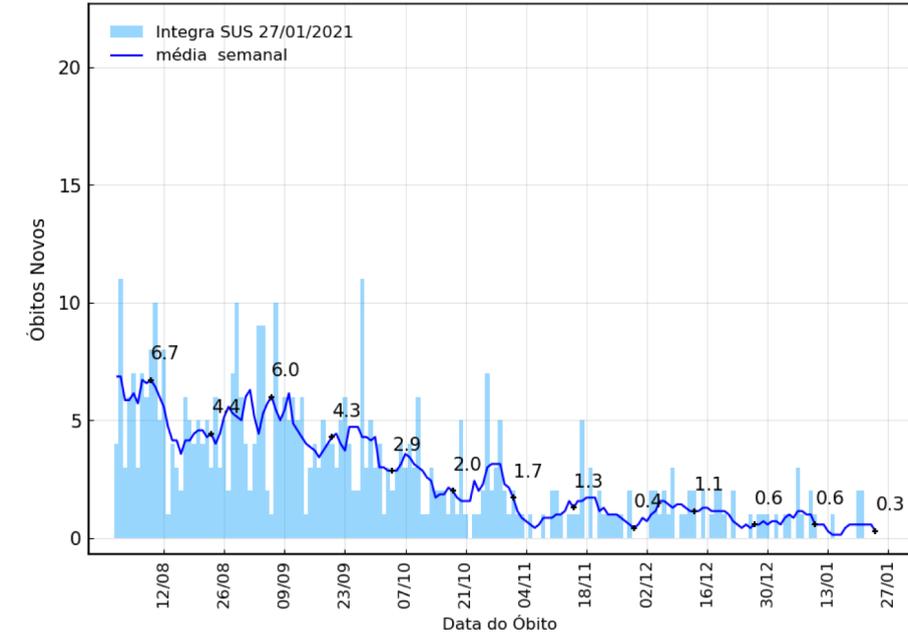
Região de Fortaleza



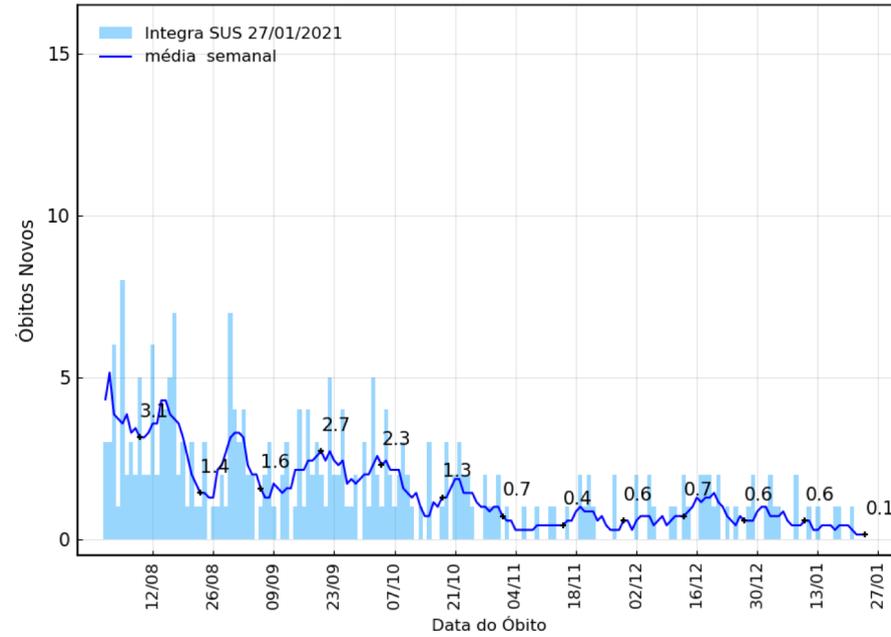
Região do Cariri



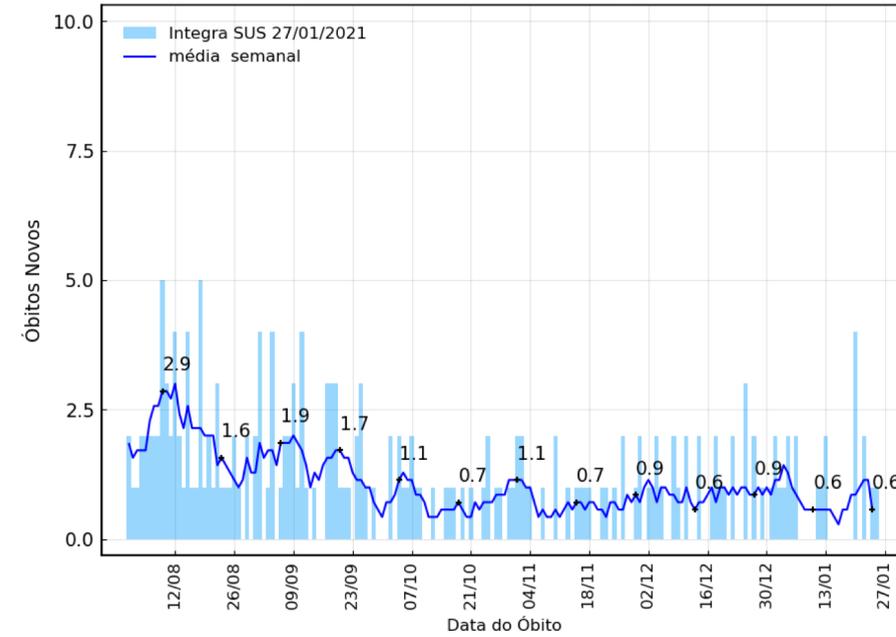
Região de Sobral



Região do Sertão Central

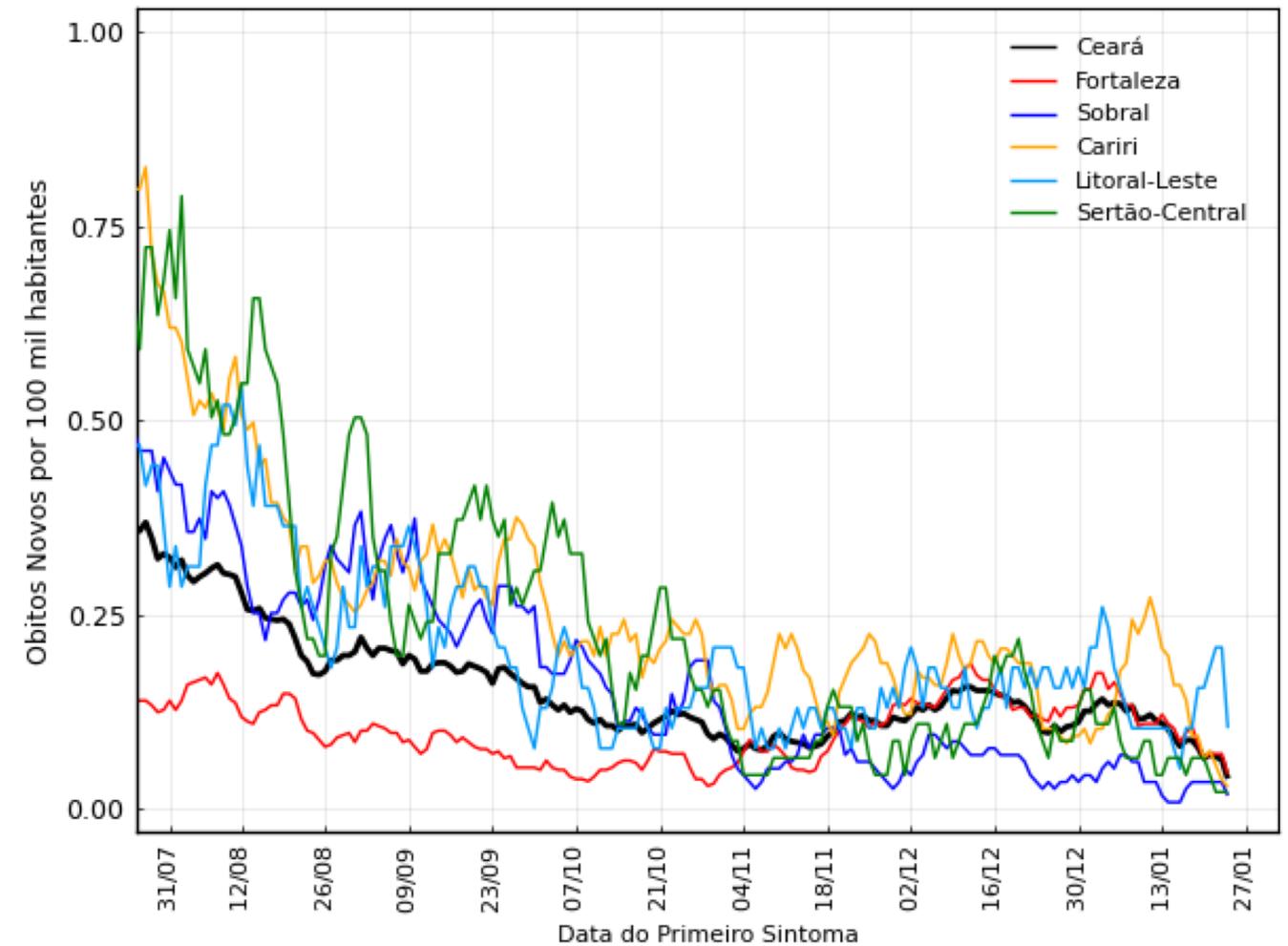
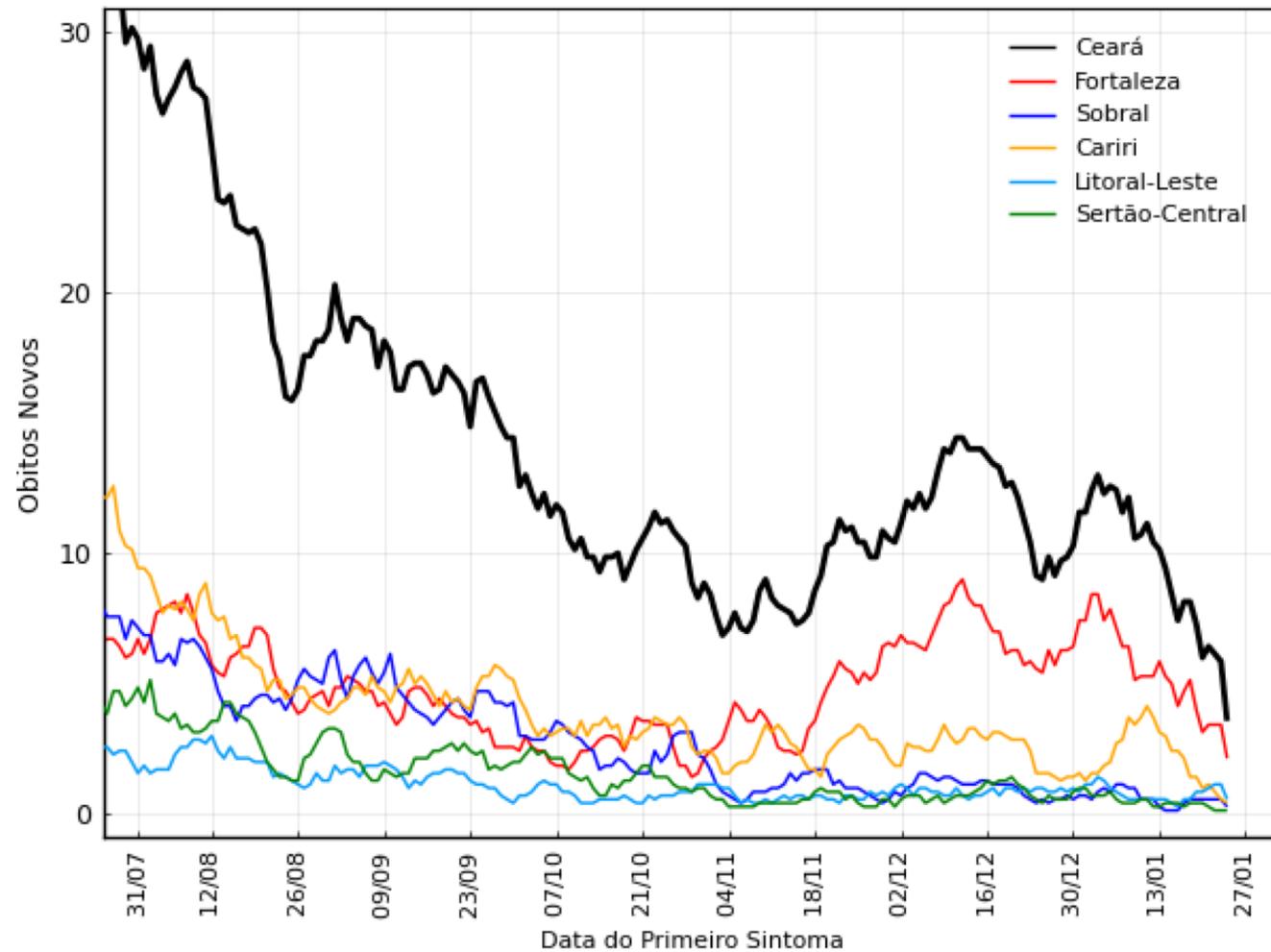


Região do Litoral Leste/Jaguaribe



Evolução da Epidemia no Ceará por Regiões

Óbitos Novos & Óbito Novos por 100 mil habitantes



Inferências com Óbitos nas Regiões

Fortaleza	
Período	R_t
18/11 – 08/12	1.05
04/12 – 24/12	0.97
11/12 – 31/12	0.88
18/12 – 07/01	0.85
25/12 – 14/01	0.92

Cariri	
Período	R_t
02/11 – 02/12	1.00
04/12 – 24/12	0.95
11/12 – 31/12	0.93
18/12 – 07/01	0.90
25/12 – 14/01	0.97

Sobral	
Período	R_t
18/11 – 08/12	0.88
04/12 – 24/12	0.87
11/12 – 31/12	0.77
18/12 – 07/01	0.78
25/12 – 14/01	0.89

Sertão Central	
Período	R_t
02/11 – 02/12	1.07
04/12 – 24/12	1.05
11/12 – 31/12	1.06
18/12 – 07/01	1.05
25/12 – 14/01	1.05

Litoral Leste/Jaguaribe	
Período	R_t
02/11 – 02/12	0.99
04/12 – 24/12	0.99
11/12 – 31/12	0.99
18/12 – 07/01	0.98
25/12 – 14/01	1.09