

Predicciones sobre CoViD-19

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DEPARTAMENTO DE ESTATÍSTICA,
ANÁLISE MATEMÁTICA E OPTIMIZACIÓN



- Predicciones

- Predicciones Fallecidos

3 Panorama internacional

► Mod Lineal ► Mod NP ► Mod Aditivo

	$10^2 \sigma_R^2$			$10^2 \sigma_R^2(rob.)$			r^2		
Horiz	FLM	NP	SAM	FLM	NP	SAM	FLM	NP	SAM
H1	0.016	0.003	0.013	0.004	0.002	0.005	0.479	0.898	0.573
H4	0.051	0.027	0.046	0.04	0.022	0.04	0.816	0.91	0.834
H8	0.211	0.127	0.197	0.182	0.1	0.173	0.824	0.903	0.835
H12	0.617	0.391	0.58	0.665	0.348	0.604	0.797	0.882	0.809
H15	1.347	0.888	1.273	1.399	0.735	1.266	0.755	0.852	0.768

C **D** **E** **F** **G** **H** **I** **J** **K** **L** **M** **N** **O** **P** **Q** **R** **S** **T** **U** **V** **W** **X** **Y** **Z**

Tabla Previsión Confirmados: Mod. No Paramétrico.

Last=20/04/2021

	Last	IA14	IA7	H1	H4	H8	H12	H15
España	3446141	192	79	3454171	3476133	3510468	3546261	3579584
Andalucía	537946	211	90	539560	543841	550560	557328	563748
Aragón	115718	227	95	115975	116687	117795	118963	120050
Asturias	49803	134	46	49929	50265	50795	51338	51847
Canarias	51143	110	44	51347	51913	52718	53524	54270
Cantabria	27781	194	103	27878	28138	28545	28962	29365
Castilla.y.León	220127	178	75	220519	221632	223332	225174	226875
Castilla.La.Mancha	181916	172	62	182239	183150	184542	186050	187442
Cataluña	566447	210	83	567888	571773	577876	584155	590035
Ceuta	5669	328	90	5691	5755	5838	5922	5995
Comunidad.Valenciana	388765	31	12	389122	390173	391784	393711	395544
Extremadura	73163	122	47	73283	73625	74144	74714	75242
Galicia	120051	79	33	120245	120801	121645	122577	123441
Islas.Baleares	58763	49	16	58834	59040	59350	59706	60038
La.Rioja	29014	198	83	29072	29232	29481	29745	29990
Madrid	664599	331	140	666591	671888	680204	688631	696633
Melilla	8487	365	108	8516	8593	8711	8824	8931
Murcia	110144	56	21	110263	110612	111138	111753	112333
Navarra	58412	352	132	58619	59174	60015	60845	61632
País.Vasco	178193	397	178	178943	180989	184017	187103	190051

Cuadro: Previsión Confirmados: Mod. No Paramétrico - Horiz. (días).

Tabla Ratio Incr. Confirmados: Mod. Lineal.

Last=20/04/2021

	Last	H1	H4	H8	H12	H15
España	0.0016	0.0023	0.0063	0.0121	0.0163	0.0205
Andalucía	0.0020	0.0029	0.0081	0.0151	0.0207	0.0255
Aragón	0.0016	0.0024	0.0067	0.0132	0.0182	0.0235
Asturias	0.0014	0.0021	0.0049	0.0085	0.0102	0.0119
Canarias	0.0027	0.0035	0.0100	0.0184	0.0253	0.0310
Cantabria	0.0031	0.0041	0.0142	0.0299	0.0448	0.0588
Castilla.y.León	0.0012	0.0019	0.0050	0.0100	0.0133	0.0170
Castilla.La.Mancha	0.0010	0.0018	0.0040	0.0072	0.0086	0.0104
Cataluña	0.0016	0.0024	0.0062	0.0113	0.0148	0.0182
Ceuta	0.0023	0.0027	0.0062	0.0096	0.0108	0.0118
Comunidad.Valenciana	0.0002	0.0009	0.0015	0.0032	0.0029	0.0042
Extremadura	0.0010	0.0017	0.0043	0.0083	0.0105	0.0134
Galicia	0.0010	0.0018	0.0045	0.0086	0.0110	0.0139
Islas.Baleares	0.0005	0.0011	0.0021	0.0042	0.0044	0.0057
La.Rioja	0.0013	0.0020	0.0052	0.0101	0.0132	0.0166
Madrid	0.0021	0.0028	0.0085	0.0172	0.0244	0.0318
Melilla	0.0018	0.0025	0.0054	0.0086	0.0098	0.0110
Murcia	0.0004	0.0011	0.0021	0.0044	0.0047	0.0063
Navarra	0.0022	0.0029	0.0082	0.0154	0.0209	0.0260
País.Vasco	0.0029	0.0040	0.0111	0.0201	0.0279	0.0329

Cuadro: Previsión Ratio Incr. Confirmados: Mod. lineal - Horiz. (días).

Tabla Ratio Incr. Confirmados: Mod. No Paramétrico.

Last=20/04/2021

	Last	H1	H4	H8	H12	H15
España	0.0016	0.0023	0.0087	0.0187	0.0291	0.0387
Andalucía	0.0020	0.0030	0.0110	0.0234	0.0360	0.0480
Aragón	0.0016	0.0022	0.0084	0.0180	0.0280	0.0374
Asturias	0.0014	0.0025	0.0093	0.0199	0.0308	0.0410
Canarias	0.0027	0.0040	0.0150	0.0308	0.0466	0.0611
Cantabria	0.0031	0.0035	0.0129	0.0275	0.0425	0.0570
Castilla.y.León	0.0012	0.0018	0.0068	0.0146	0.0229	0.0307
Castilla.La.Mancha	0.0010	0.0018	0.0068	0.0144	0.0227	0.0304
Cataluña	0.0016	0.0025	0.0094	0.0202	0.0313	0.0416
Ceuta	0.0023	0.0040	0.0152	0.0298	0.0446	0.0574
Comunidad.Valenciana	0.0002	0.0009	0.0036	0.0078	0.0127	0.0174
Extremadura	0.0010	0.0016	0.0063	0.0134	0.0212	0.0284
Galicia	0.0010	0.0016	0.0063	0.0133	0.0210	0.0282
Islas.Baleares	0.0005	0.0012	0.0047	0.0100	0.0160	0.0217
La.Rioja	0.0013	0.0020	0.0075	0.0161	0.0252	0.0336
Madrid	0.0021	0.0030	0.0110	0.0235	0.0362	0.0482
Melilla	0.0018	0.0034	0.0125	0.0263	0.0397	0.0523
Murcia	0.0004	0.0011	0.0042	0.0090	0.0146	0.0199
Navarra	0.0022	0.0035	0.0130	0.0274	0.0417	0.0551
País.Vasco	0.0029	0.0042	0.0157	0.0327	0.0500	0.0665

Cuadro: Previsión Ratio Incr. Confirmados: Mod. No Paramétrico - Horiz.
(días).

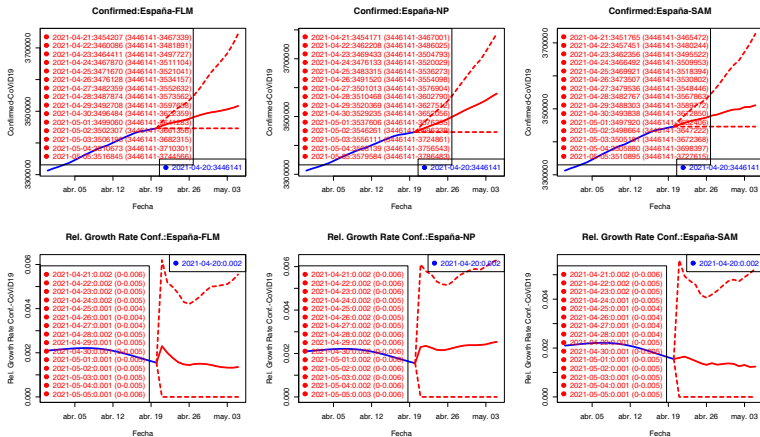
Tabla Ratio Incr. Confirmados: Mod. Aditivo.

Last=20/04/2021

	Last	H1	H4	H8	H12	H15
España	0.0016	0.0016	0.0059	0.0106	0.0152	0.0188
Andalucía	0.0020	0.0021	0.0074	0.0123	0.0171	0.0190
Aragón	0.0016	0.0017	0.0065	0.0125	0.0185	0.0244
Asturias	0.0014	0.0014	0.0045	0.0062	0.0078	0.0079
Canarias	0.0027	0.0031	0.0097	0.0158	0.0213	0.0237
Cantabria	0.0031	0.0038	0.0144	0.0301	0.0463	0.0607
Castilla.y.León	0.0012	0.0012	0.0047	0.0091	0.0137	0.0175
Castilla.La.Mancha	0.0010	0.0010	0.0036	0.0059	0.0084	0.0104
Cataluña	0.0016	0.0018	0.0059	0.0098	0.0135	0.0162
Ceuta	0.0023	0.0027	0.0068	0.0104	0.0130	0.0148
Comunidad.Valenciana	0.0002	0.0002	0.0015	0.0030	0.0062	0.0094
Extremadura	0.0010	0.0012	0.0042	0.0082	0.0122	0.0164
Galicia	0.0010	0.0013	0.0045	0.0083	0.0126	0.0167
Islas.Baleares	0.0005	0.0003	0.0018	0.0034	0.0058	0.0082
La.Rioja	0.0013	0.0014	0.0049	0.0090	0.0130	0.0158
Madrid	0.0021	0.0021	0.0079	0.0155	0.0225	0.0290
Melilla	0.0018	0.0019	0.0052	0.0071	0.0083	0.0093
Murcia	0.0004	0.0004	0.0020	0.0041	0.0074	0.0107
Navarra	0.0022	0.0023	0.0076	0.0128	0.0172	0.0199
País.Vasco	0.0029	0.0049	0.0126	0.0193	0.0279	0.0304

Cuadro: Previsión Ratio Incr. Confirmados: Mod. Aditivo - Horiz. (días).

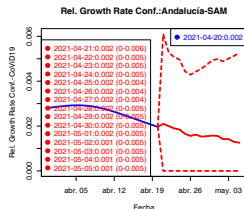
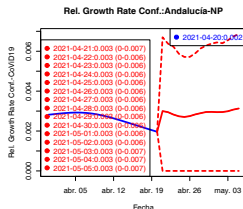
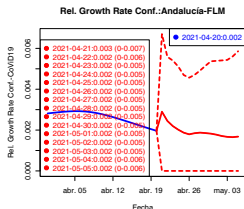
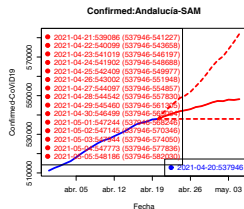
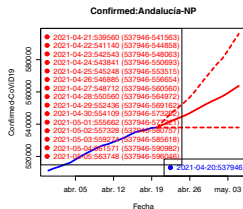
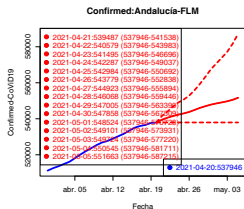
Confirmados: España



Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados ▶ Fallecidos

Confirmados: Andalucía

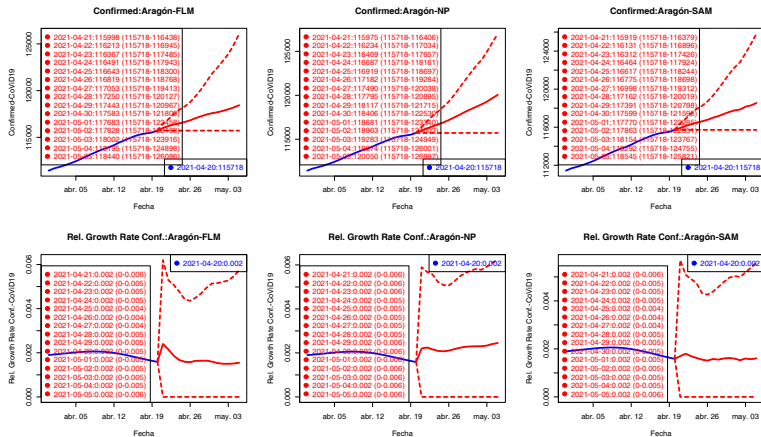


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

← Confirmados

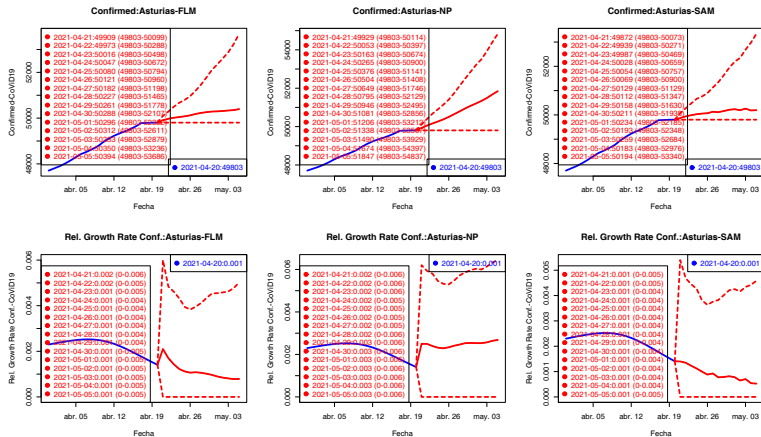
← Fallecidos

Confirmados: Aragón



Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

Confirmados: Asturias

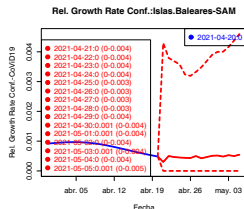
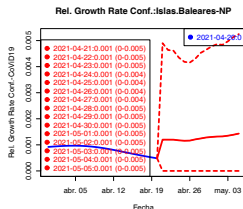
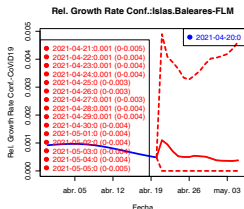
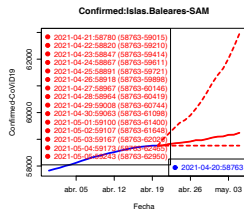
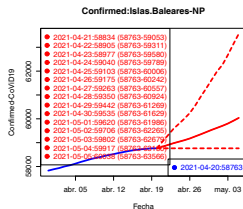
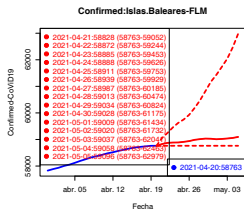


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Islas Baleares

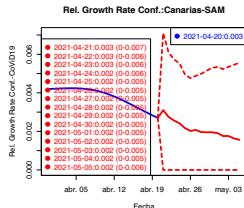
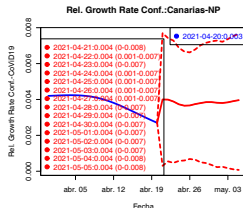
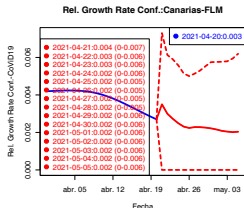
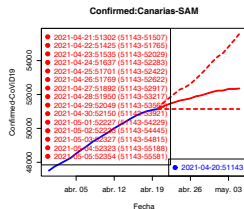
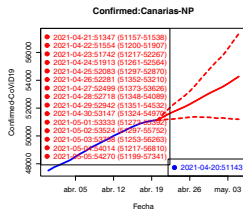
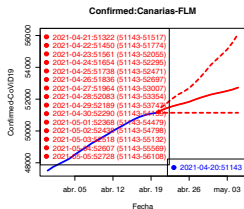


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

← Confirmados

← Fallecidos

Confirmados: Canarias

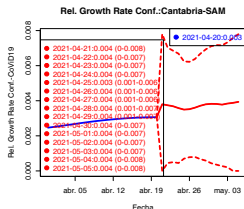
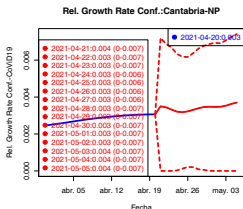
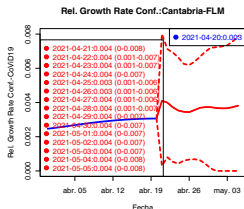
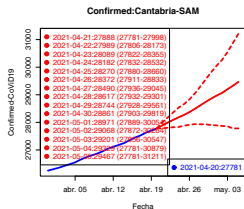
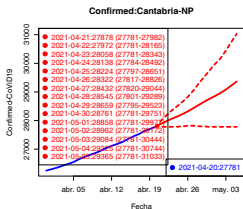
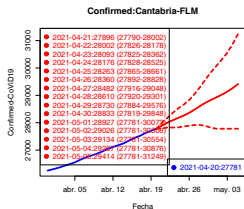


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Cantabria

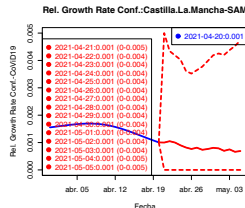
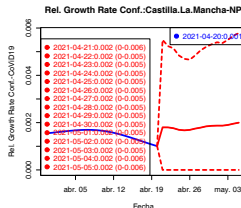
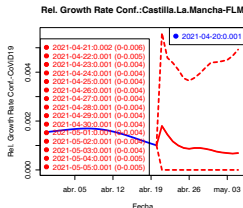
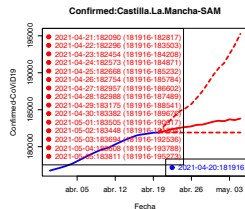
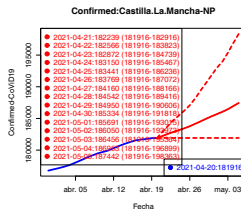
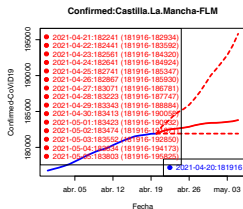


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: Castilla-La Mancha

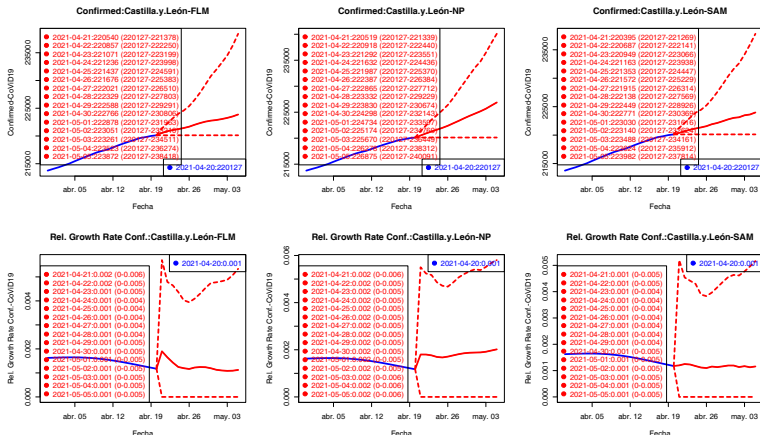


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

← Confirmados

← Fallecidos

Confirmados: Castilla y León

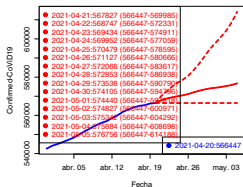


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

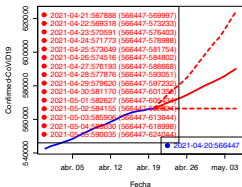
◀ Confirmados ▶ Fallecidos

Confirmados: Cataluña

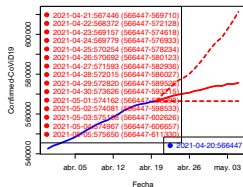
Confirmed:Cataluña-FLM



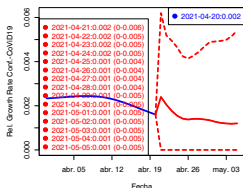
Confirmed:Cataluña-NP



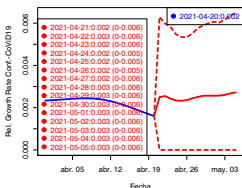
Confirmed:Cataluña-SAM



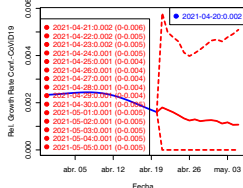
Rel. Growth Rate Conf.:Cataluña-FLM



Rel. Growth Rate Conf.:Cataluña-NP



Rel. Growth Rate Conf.:Cataluña-SAM

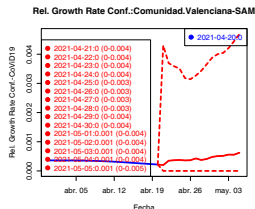
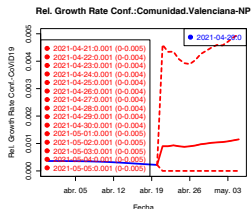
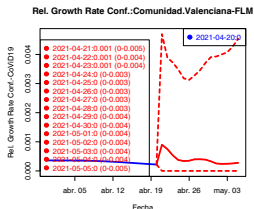
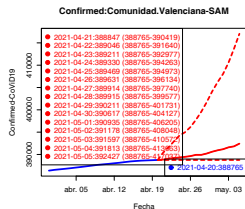
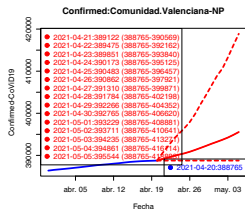
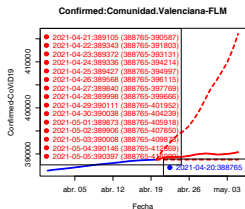


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Confirmados: C. Valenciana

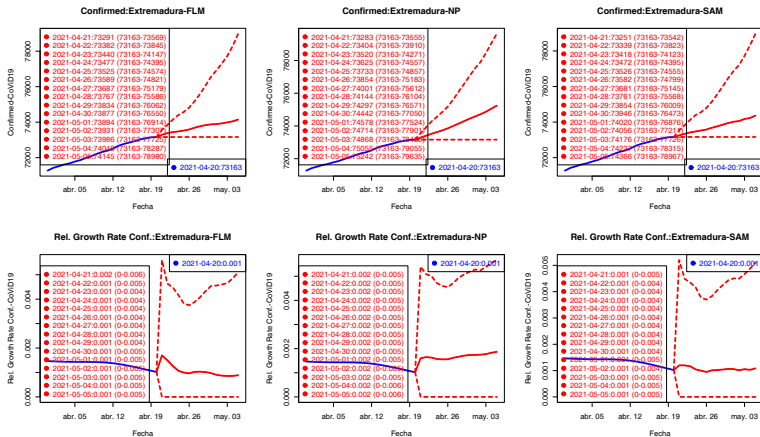


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

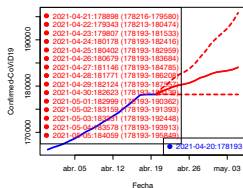
Confirmados: Extremadura



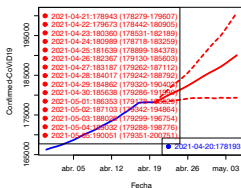
Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

Confirmados: País Vasco

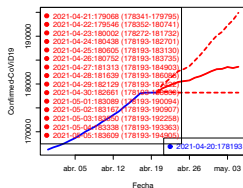
Confirmed:País.Vasco-FLM



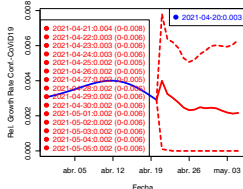
Confirmed:País.Vasco-NP



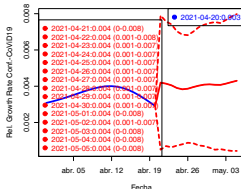
Confirmed:País.Vasco-SAM



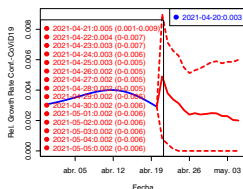
Rel. Growth Rate Conf.:País.Vasco-FLM



Rel. Growth Rate Conf.:País.Vasco-NP



Rel. Growth Rate Conf.:País.Vasco-SAM

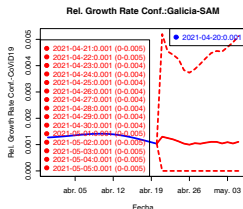
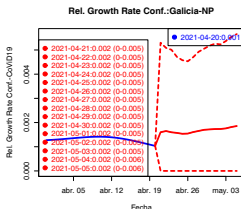
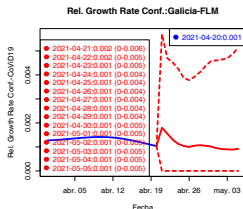
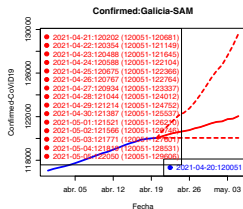
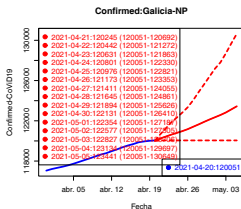
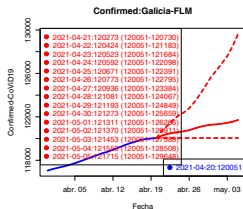


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

← Confirmados

← Fallecidos

Confirmados: Galicia

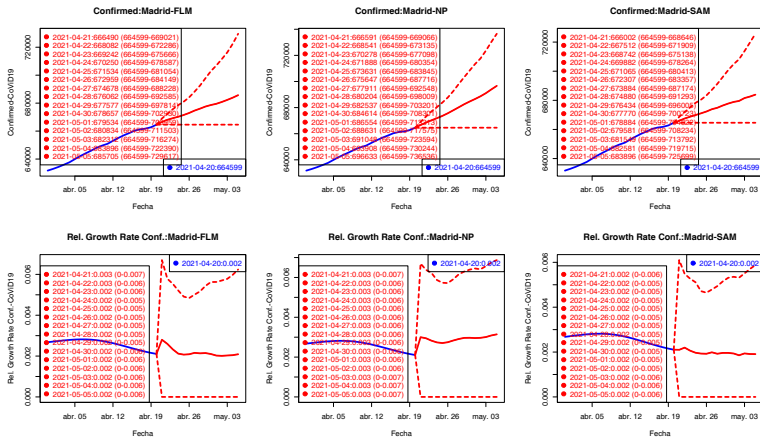


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

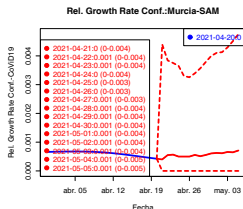
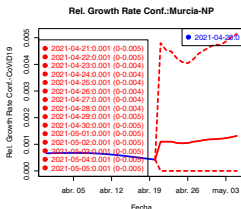
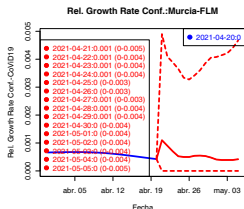
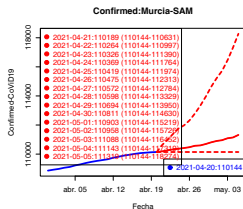
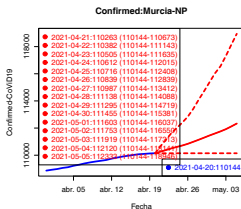
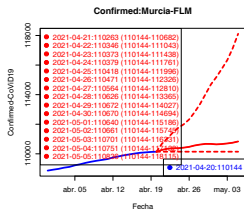
◀ Confirmados

◀ Fallecidos

Confirmados: Madrid

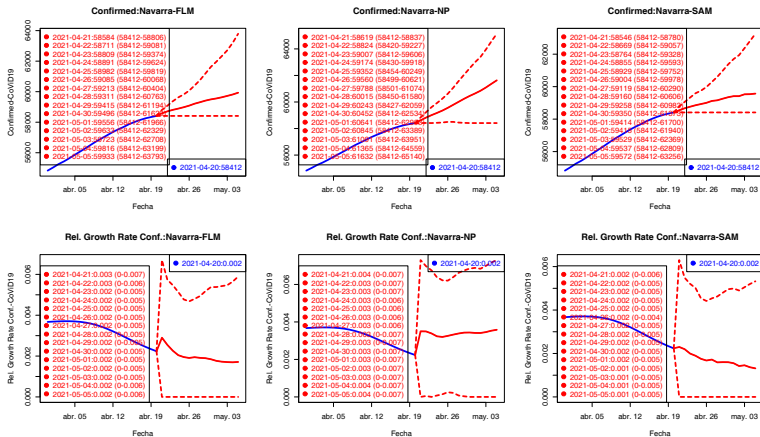


Confirmados: Murcia



Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

Confirmados: Navarra



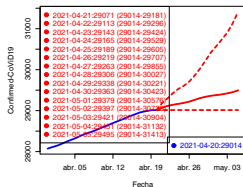
Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

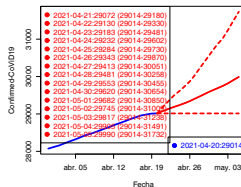
◀ Fallecidos

Confirmados: La Rioja

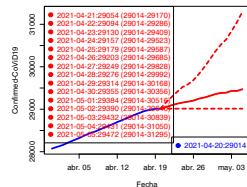
Confirmed:La.Rioja-FLM



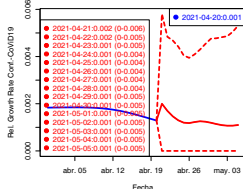
Confirmed:La.Rioja-NP



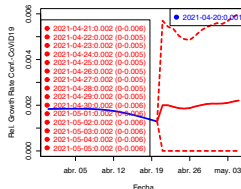
Confirmed:La.Rioja-SAM



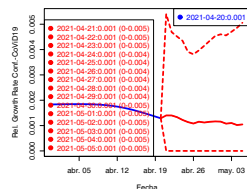
Rel. Growth Rate Conf.:La.Rioja-FLM



Rel. Growth Rate Conf.:La.Rioja-NP



Rel. Growth Rate Conf.:La.Rioja-SAM



Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

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 - Predicciones
- 2 Fallecidos
 - Predicciones Fallecidos
- 3 Panorama internacional

Modelos para fallecidos por CoViD-19

Último dato: 20/04/2021 Fuente: https://cnecovid.isciii.es/covid19/resources/casos_hosp_uci_def_sexo_edad_provres.csv

Predicciones:

▶ España

▶ Andalucía

▶ Aragón

▶ Asturias

▶ I. Baleares

▶ Canarias

▶ Cantabria

▶ Castilla-La Mancha

▶ Castilla y León

▶ Cataluña

▶ C. Valenciana

▶ Extremadura

▶ País Vasco

▶ Galicia

▶ Madrid

▶ Murcia

▶ Navarra

▶ La Rioja

▶ Mod Lineal

▶ Mod NP

▶ Mod Aditivo

	$10^2 \sigma_R^2$			$10^2 \sigma_R^2(rob.)$			r^2		
Horiz	FLM	NP	SAM	FLM	NP	SAM	FLM	NP	SAM
H1	0.005	0.004	0.005	0.001	0.001	0.001	0.557	0.62	0.562
H4	0.019	0.018	0.018	0.009	0.009	0.008	0.818	0.832	0.829
H8	0.066	0.07	0.061	0.036	0.04	0.031	0.857	0.853	0.868
H12	0.141	0.151	0.125	0.096	0.102	0.081	0.864	0.858	0.879
H15	0.219	0.245	0.185	0.172	0.213	0.127	0.873	0.863	0.893

Tabla Previsión Fallecidos: Mod. Lineal.

Last=20/04/2021

	Last	H1	H4	H8	H12	H15
España	76966	77015	77069	77172	77130	77043
Andalucía	9395	9404	9419	9444	9452	9453
Aragón	3392	3395	3400	3410	3412	3413
Asturias	1936	1937	1939	1941	1939	1937
Canarias	705	707	711	715	719	721
Cantabria	553	554	555	557	559	560
Castilla.y.León	6668	6672	6675	6682	6677	6670
Castilla.La.Mancha	5803	5808	5812	5822	5821	5813
Cataluña	13739	13742	13739	13739	13739	13739
Ceuta	101	101	102	102	102	102
Comunidad.Valenciana	7200	7202	7200	7200	7200	7200
Extremadura	1763	1765	1767	1770	1772	1770
Galicia	2360	2361	2361	2362	2360	2360
Islas.Baleares	787	787	787	787	787	787
La.Rioja	756	756	757	758	758	757
Madrid	14905	14919	14940	14977	14989	14988
Melilla	88	88	89	89	89	89
Murcia	1585	1586	1586	1586	1585	1585
Navarra	1141	1142	1143	1147	1147	1146
País.Vasco	4089	4091	4093	4095	4089	4089

Cuadro: Previsión fallecidos: Mod. lineal - Horiz. (días).

Tabla Previsión Fallecidos: Mod. No Paramétrico.

Last=20/04/2021

	Last	H1	H4	H8	H12	H15
España	76966	77052	77351	77799	78236	78649
Andalucía	9395	9407	9445	9503	9561	9615
Aragón	3392	3396	3411	3433	3455	3476
Asturias	1936	1938	1946	1958	1970	1981
Canarias	705	707	712	720	728	735
Cantabria	553	554	556	560	563	567
Castilla.y.León	6668	6675	6700	6736	6772	6806
Castilla.La.Mancha	5803	5809	5831	5864	5896	5926
Cataluña	13739	13753	13802	13874	13944	14010
Ceuta	101	101	102	103	104	105
Comunidad.Valenciana	7200	7206	7230	7263	7296	7326
Extremadura	1763	1765	1772	1782	1791	1800
Galicia	2360	2363	2372	2386	2399	2412
Islas.Baleares	787	788	790	794	798	801
La.Rioja	756	757	760	764	769	773
Madrid	14905	14924	14985	15079	15172	15260
Melilla	88	88	89	91	92	94
Murcia	1585	1587	1592	1601	1609	1616
Navarra	1141	1142	1147	1155	1162	1169
País.Vasco	4089	4095	4112	4140	4167	4193

Cuadro: Previsión fallecidos: Mod. No Paramétrico - Horiz. (días).

Tabla Previsión Fallecidos: Mod. Aditivo.

Last=20/04/2021

	Last	H1	H4	H8	H12	H15
España	76966	76992	77146	77298	77439	77504
Andalucía	9395	9400	9416	9436	9453	9453
Aragón	3392	3395	3405	3421	3433	3445
Asturias	1936	1937	1941	1945	1949	1951
Canarias	705	706	710	715	719	720
Cantabria	553	554	555	558	559	561
Castilla.y.León	6668	6670	6681	6693	6705	6712
Castilla.La.Mancha	5803	5805	5818	5833	5848	5853
Cataluña	13739	13739	13756	13753	13760	13747
Ceuta	101	101	101	101	102	101
Comunidad.Valenciana	7200	7200	7207	7213	7222	7228
Extremadura	1763	1764	1768	1772	1778	1779
Galicia	2360	2360	2366	2370	2376	2384
Islas.Baleares	787	787	787	787	788	787
La.Rioja	756	756	758	759	761	762
Madrid	14905	14914	14945	14993	15019	15034
Melilla	88	88	89	89	90	90
Murcia	1585	1585	1587	1587	1591	1591
Navarra	1141	1142	1144	1150	1150	1151
País.Vasco	4089	4090	4107	4116	4125	4131

Cuadro: Previsión fallecidos: Mod. Aditivo - Horiz. (días).

Tabla Ratio Incr. Fallecidos: Mod. Lineal.

Last=20/04/2021

	Last	H1	H4	H8	H12	H15
España	0.0006	0.0006	0.0013	0.0027	0.0021	0.0010
Andalucía	0.0008	0.0009	0.0025	0.0052	0.0060	0.0061
Aragón	0.0009	0.0009	0.0023	0.0053	0.0059	0.0062
Asturias	0.0007	0.0006	0.0013	0.0028	0.0016	0.0003
Canarias	0.0023	0.0024	0.0078	0.0146	0.0205	0.0226
Cantabria	0.0009	0.0012	0.0035	0.0072	0.0105	0.0124
Castilla.y.León	0.0005	0.0006	0.0010	0.0021	0.0014	0.0003
Castilla.La.Mancha	0.0007	0.0008	0.0016	0.0033	0.0031	0.0017
Cataluña	0.0003	0.0002	0.0000	0.0000	0.0000	0.0000
Ceuta	0.0021	0.0017	0.0063	0.0099	0.0121	0.0121
Comunidad.Valenciana	0.0001	0.0002	0.0000	0.0000	0.0000	0.0000
Extremadura	0.0007	0.0010	0.0021	0.0042	0.0049	0.0040
Galicia	0.0004	0.0003	0.0003	0.0007	0.0000	0.0000
Islas.Baleares	0.0002	0.0003	0.0000	0.0000	0.0000	0.0000
La.Rioja	0.0006	0.0006	0.0014	0.0029	0.0022	0.0016
Madrid	0.0008	0.0009	0.0023	0.0049	0.0056	0.0056
Melilla	0.0033	0.0023	0.0080	0.0114	0.0135	0.0120
Murcia	0.0004	0.0005	0.0008	0.0008	0.0000	0.0000
Navarra	0.0009	0.0009	0.0021	0.0051	0.0050	0.0046
País.Vasco	0.0006	0.0004	0.0011	0.0014	0.0000	0.0000

Cuadro: Previsión Ratio Incr. Fallecidos: Mod. lineal - Horiz. (días).

	Last	H1	H4	H8	H12	H15
España	0.0006	0.0011	0.0050	0.0108	0.0165	0.0219
Andalucía	0.0008	0.0012	0.0053	0.0115	0.0176	0.0235
Aragón	0.0009	0.0013	0.0055	0.0121	0.0185	0.0246
Asturias	0.0007	0.0012	0.0053	0.0115	0.0176	0.0235
Canarias	0.0023	0.0027	0.0095	0.0212	0.0320	0.0428
Cantabria	0.0009	0.0013	0.0055	0.0121	0.0185	0.0246
Castilla.y.León	0.0005	0.0010	0.0048	0.0103	0.0156	0.0206
Castilla.La.Mancha	0.0007	0.0011	0.0048	0.0105	0.0160	0.0211
Cataluña	0.0003	0.0010	0.0046	0.0099	0.0149	0.0197
Ceuta	0.0021	0.0029	0.0102	0.0222	0.0332	0.0438
Comunidad.Valenciana	0.0001	0.0009	0.0041	0.0088	0.0133	0.0174
Extremadura	0.0007	0.0011	0.0048	0.0105	0.0160	0.0212
Galicia	0.0004	0.0011	0.0051	0.0110	0.0167	0.0221
Islas.Baleares	0.0002	0.0009	0.0041	0.0089	0.0133	0.0176
La.Rioja	0.0006	0.0011	0.0051	0.0110	0.0167	0.0222
Madrid	0.0008	0.0012	0.0054	0.0117	0.0179	0.0238
Melilla	0.0033	0.0045	0.0160	0.0340	0.0493	0.0630
Murcia	0.0004	0.0010	0.0046	0.0099	0.0150	0.0198
Navarra	0.0009	0.0013	0.0055	0.0121	0.0185	0.0246
País.Vasco	0.0006	0.0014	0.0057	0.0124	0.0190	0.0254

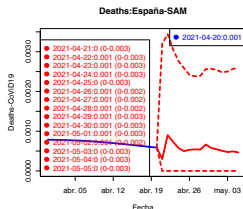
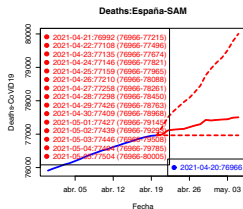
Cuadro: Previsión Ratio Incr. Fallecidos: Mod. No Paramétrico - Horiz. (días).

Tabla Ratio Incr. Fallecidos: Mod. Aditivo.

Last=20/04/2021

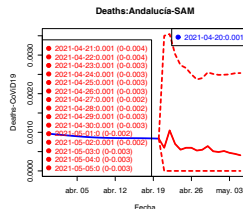
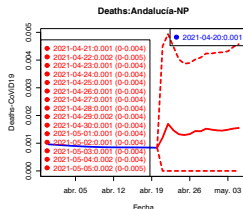
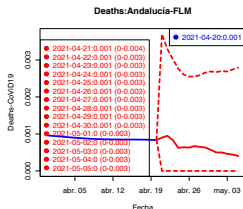
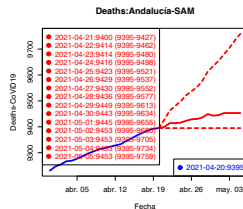
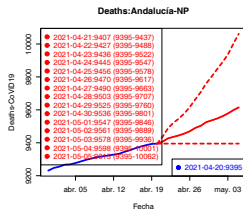
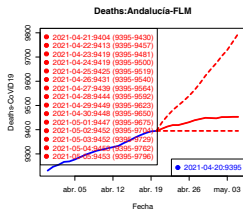
	Last	H1	H4	H8	H12	H15
España	0.0006	0.0003	0.0023	0.0043	0.0061	0.0070
Andalucía	0.0008	0.0006	0.0022	0.0044	0.0062	0.0061
Aragón	0.0009	0.0007	0.0039	0.0086	0.0120	0.0156
Asturias	0.0007	0.0003	0.0025	0.0045	0.0067	0.0079
Canarias	0.0023	0.0020	0.0071	0.0139	0.0202	0.0215
Cantabria	0.0009	0.0010	0.0041	0.0082	0.0113	0.0141
Castilla.y.León	0.0005	0.0003	0.0019	0.0038	0.0055	0.0066
Castilla.La.Mancha	0.0007	0.0003	0.0025	0.0051	0.0077	0.0087
Cataluña	0.0003	0.0000	0.0012	0.0010	0.0015	0.0006
Ceuta	0.0021	0.0011	0.0028	0.0032	0.0067	0.0036
Comunidad.Valenciana	0.0001	0.0000	0.0010	0.0018	0.0030	0.0039
Extremadura	0.0007	0.0004	0.0028	0.0053	0.0084	0.0089
Galicia	0.0004	0.0001	0.0024	0.0044	0.0069	0.0102
Islas.Baleares	0.0002	0.0000	0.0004	0.0003	0.0012	0.0004
La.Rioja	0.0006	0.0003	0.0024	0.0039	0.0066	0.0081
Madrid	0.0008	0.0006	0.0027	0.0059	0.0077	0.0086
Melilla	0.0033	0.0019	0.0087	0.0156	0.0220	0.0270
Murcia	0.0004	0.0001	0.0014	0.0014	0.0038	0.0040
Navarra	0.0009	0.0006	0.0029	0.0077	0.0082	0.0085
País.Vasco	0.0006	0.0004	0.0045	0.0066	0.0088	0.0103

Cuadro: Previsión Ratio Incr. Fallecidos: Mod. Aditivo - Horizonte 1 – 5 días.



Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

Fallecidos: Andalucía

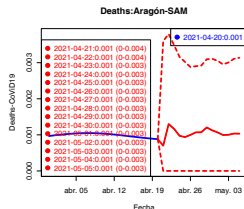
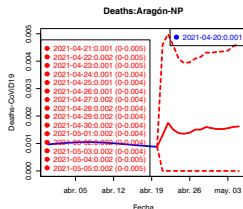
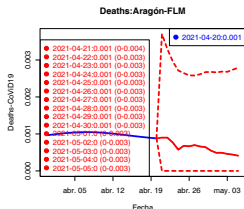
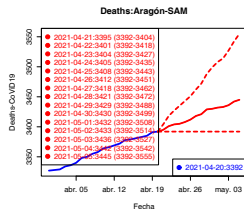
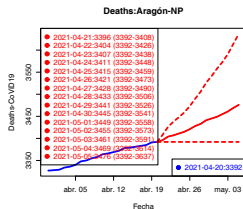
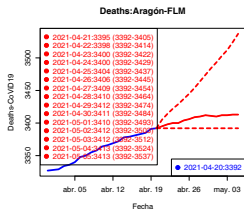


Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

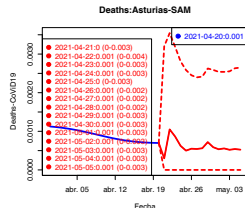
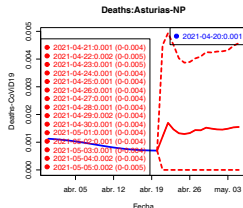
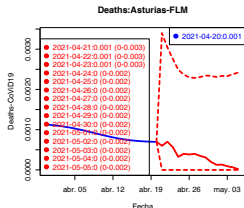
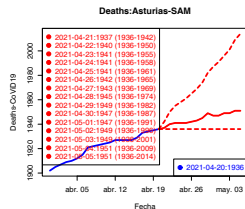
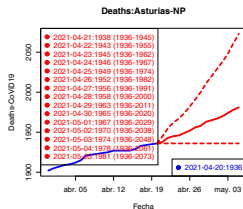
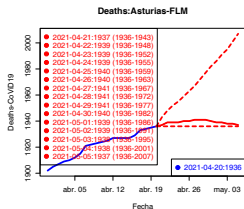
◀ Fallecidos

Fallecidos: Aragón



Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

Fallecidos: Asturias



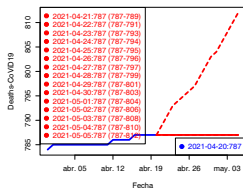
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◀ Confirmados

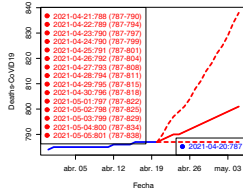
◀ Fallecidos

Fallecidos: Islas Baleares

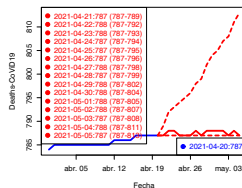
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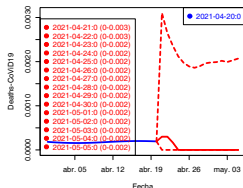
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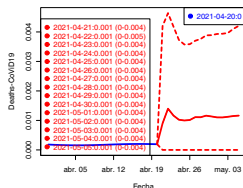
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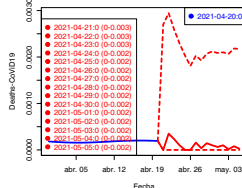
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Deaths:Islas.Baleares-NP



Deaths:Islas.Baleares-SAM

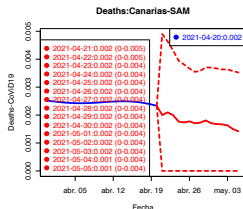
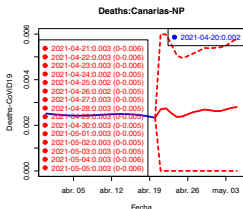
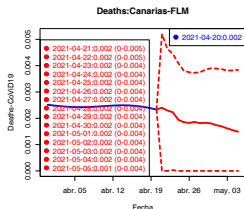
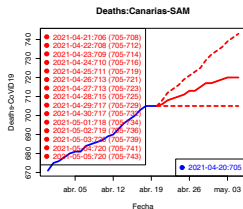
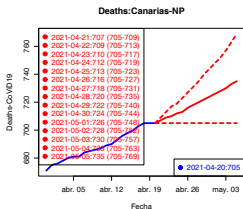
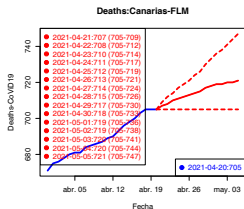


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

Fallecidos: Canarias

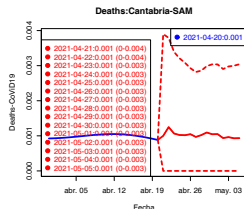
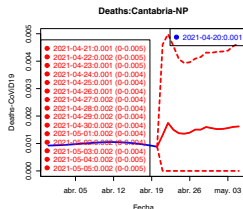
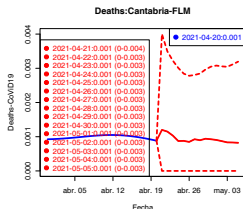
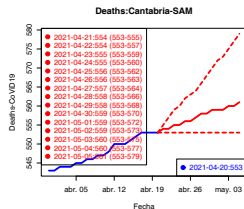
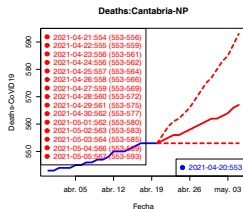
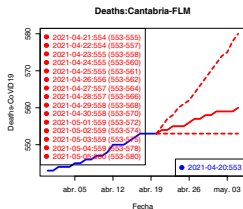


Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

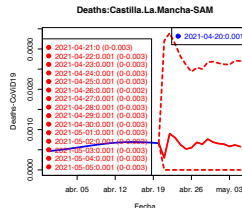
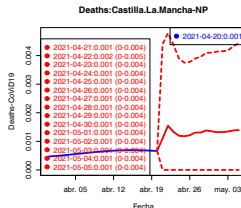
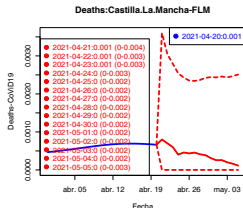
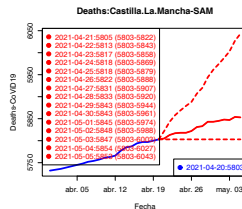
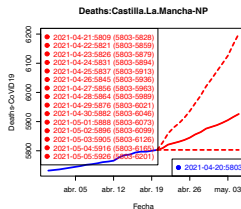
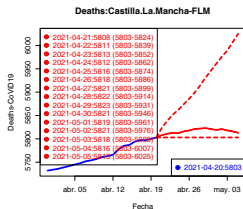
◀ Fallecidos

Fallecidos: Cantabria



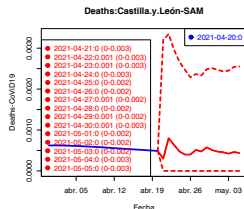
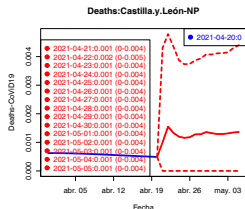
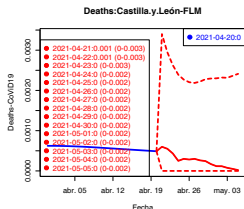
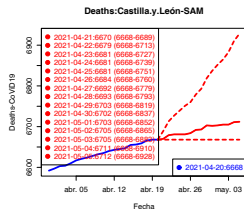
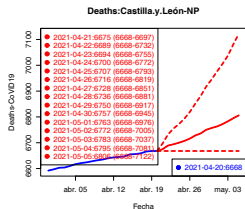
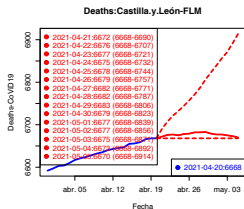
Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

Fallecidos: Castilla-La Mancha



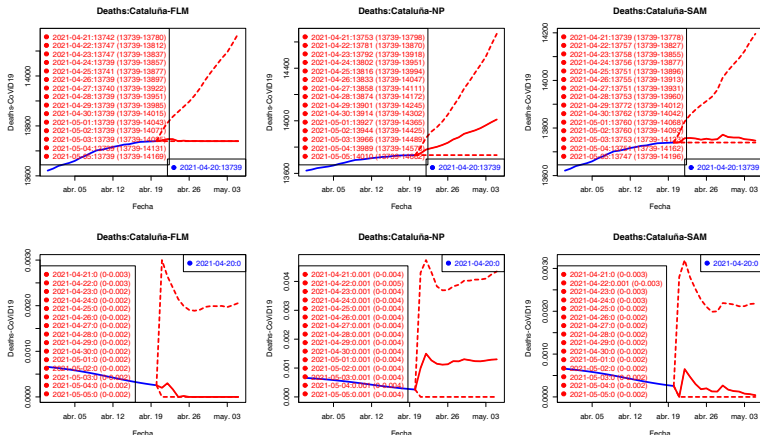
Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

Fallecidos: Castilla y León



Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

Fallecidos: Cataluña

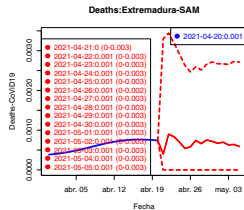
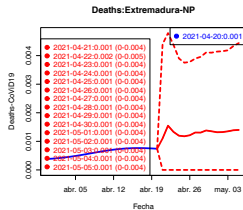
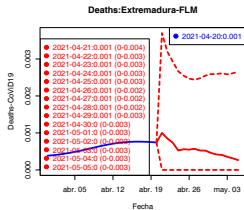
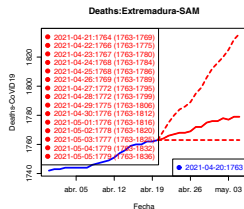
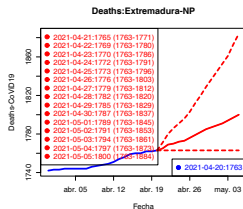
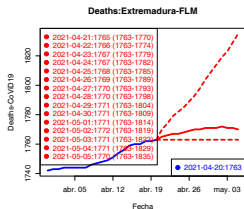


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados ▶ Fallecidos

Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

Fallecidos: Extremadura

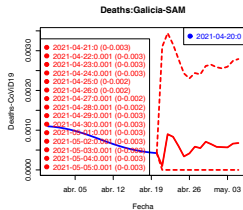
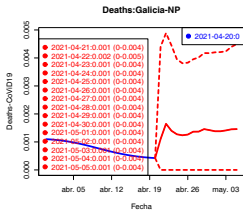
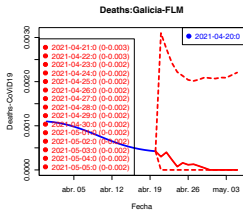
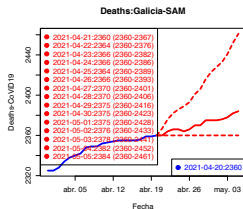
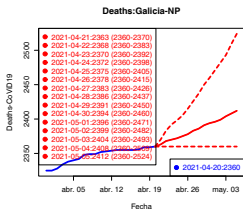
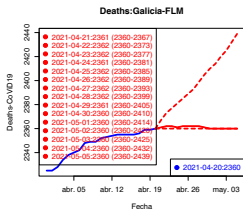


Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

◀ Confirmados

◀ Fallecidos

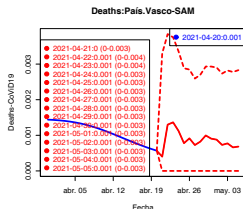
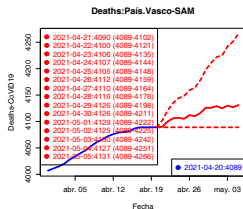
Fallecidos: Galicia



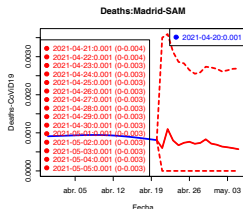
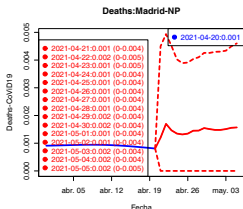
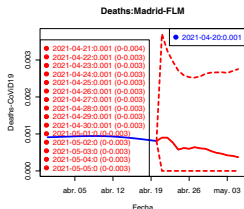
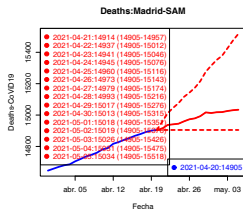
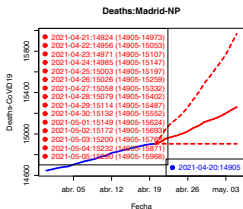
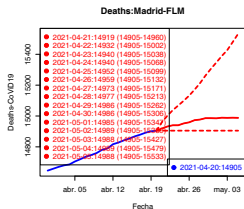
Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

◀ Fallecidos

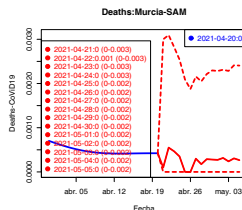
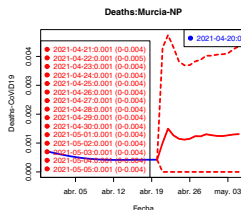
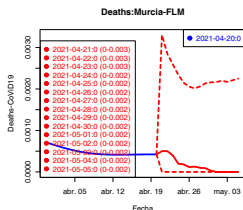
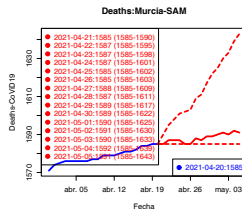
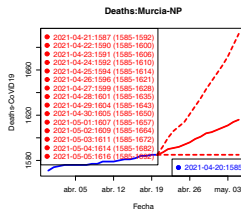
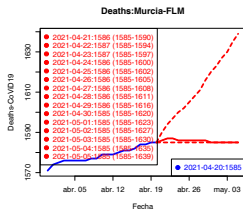


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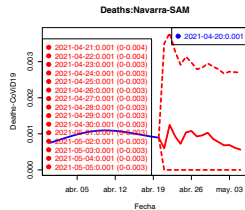
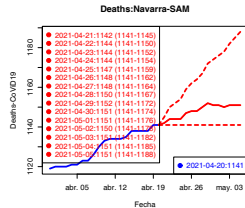


Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

Fallecidos: Murcia

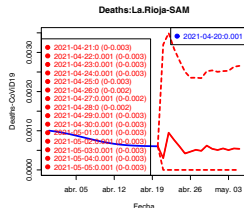
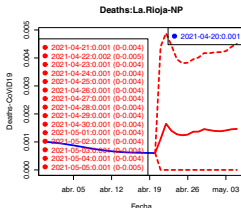
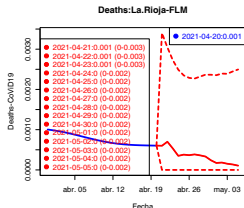
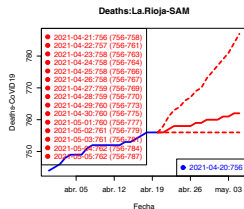
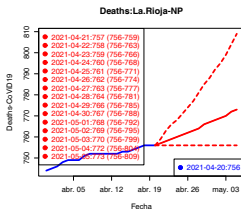
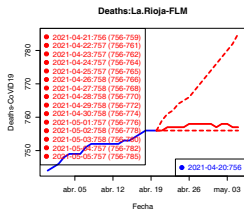


Los valores del Ratio de incremento de H2-H15 están rescalados a H1 para su comparación gráfica.



◀ Confirmados ◀ Fallecidos

Fallecidos: La Rioja

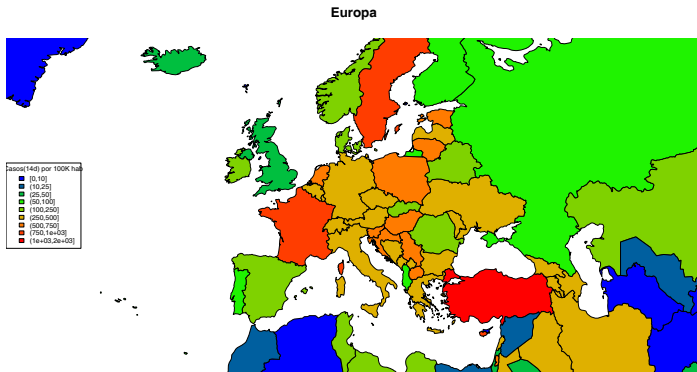


Los valores del Ratio de incremento de H2–H15 están rescalados a H1 para su comparación gráfica.

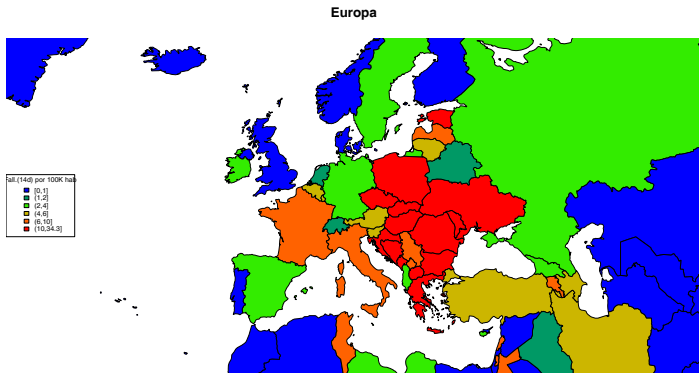
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- 2 Fallecidos
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- 3 Panorama internacional

Europa: Incidencia Acumulada (14d) por 100K hab.

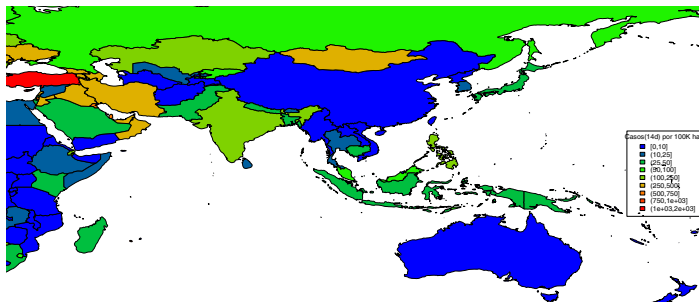


Europa: Fallecidos (14d) por 100K hab.



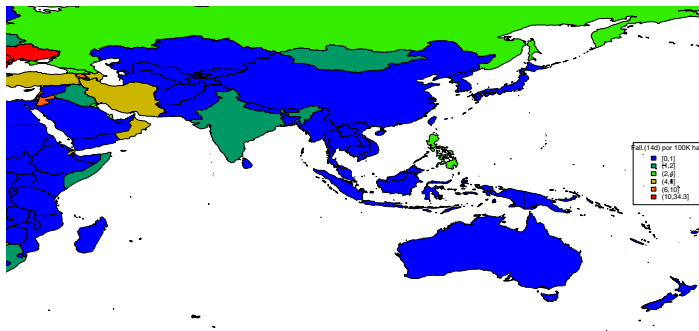
Asia y Oceanía: Incidencia acumulada (14d) por 100K hab.

Asia y Oceanía



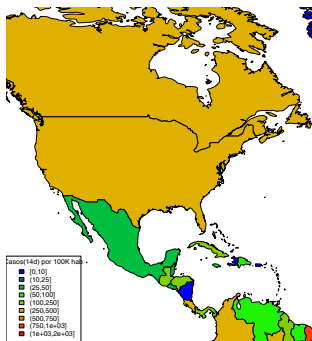
Asia y Oceanía: Fallecidos (14d) por 100K hab.

Asia y Oceanía

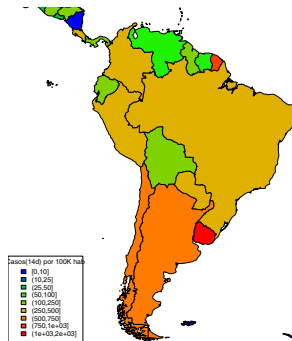


América: Incidencia acumulada (14d) por 100K hab.

América del Norte

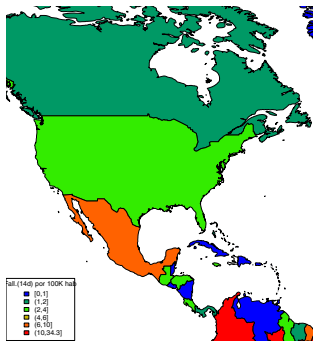


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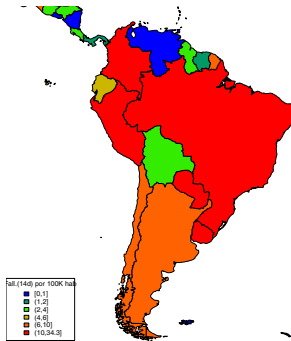


América: Fallecidos (14d) por 100K hab.

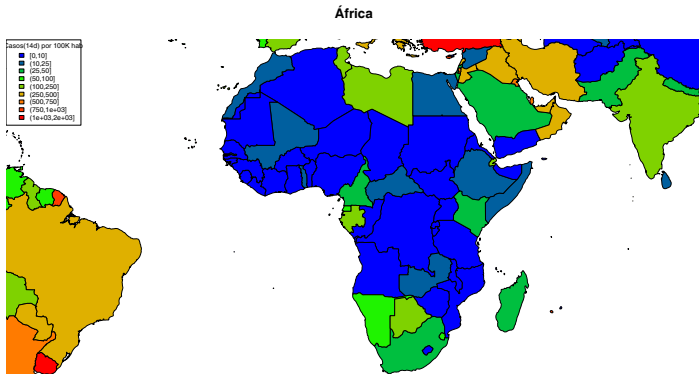
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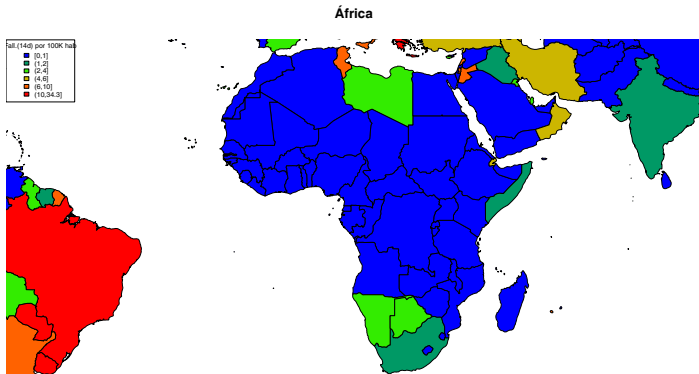
América del sur



África: Incidencia acumulada (14d) por 100K hab.



África: Fallecidos (14d) por 100K hab.



Breve descripción del Modelo de predicción

Objetivo: Predecir ratio de incremento de casos confirmados a 1–5 días: $r^{(k)}(t) = \frac{x_{t+k} - x_t}{x_t + 1}$

Información usada: Pasado de esta variable suavizada (retardo 1) durante los últimos 21 días: $R^{(1)} = \{r^{(1)}(-21), \dots, r^{(1)}(0)\}$.

Datos para alimentar el modelo: https://github.com/CSSEGISandData/COVID-19/tree/master/csse_covid_19_data/csse_covid_19_time_series/. Algunas series de tiempo (como el Diamond Princess) son filtrados por inconsistencia, presunta falta de veracidad o por valores anormalmente bajos. En la predicción final se reconstruye el número de casos esperado.

Se construyen tres modelos funcionales de la regresión general: $r^{(k)}(0) = f(R^{(1)}) + \epsilon$ donde la diferencia radica en la forma de la función f

- Lineal: $f(R^{(1)}) = \int_{-21}^0 R^{(1)}(t)\beta(t)dt$
- NP: f es una estimación no paramétrica tipo núcleo.
- SAM: f es una combinación aditiva de funciones suaves de las componentes principales funcionales.

Para el objetivo de predecir el ratio de incremento de fallecidos, se usa además del pasado de la propia variable, el ratio de incremento pasado de casos confirmados.