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70° CONGRESSO SIGG

LIBERI E LONGEVI

Università degli Studi di Napoli Federico II
Polo Didattico di **SCAMPIA**

SOCIETÀ ITALIA DI GERONTOLO E GERIATRIA

Le polmoniti virali: epidemiologia, diagnosi e gestione

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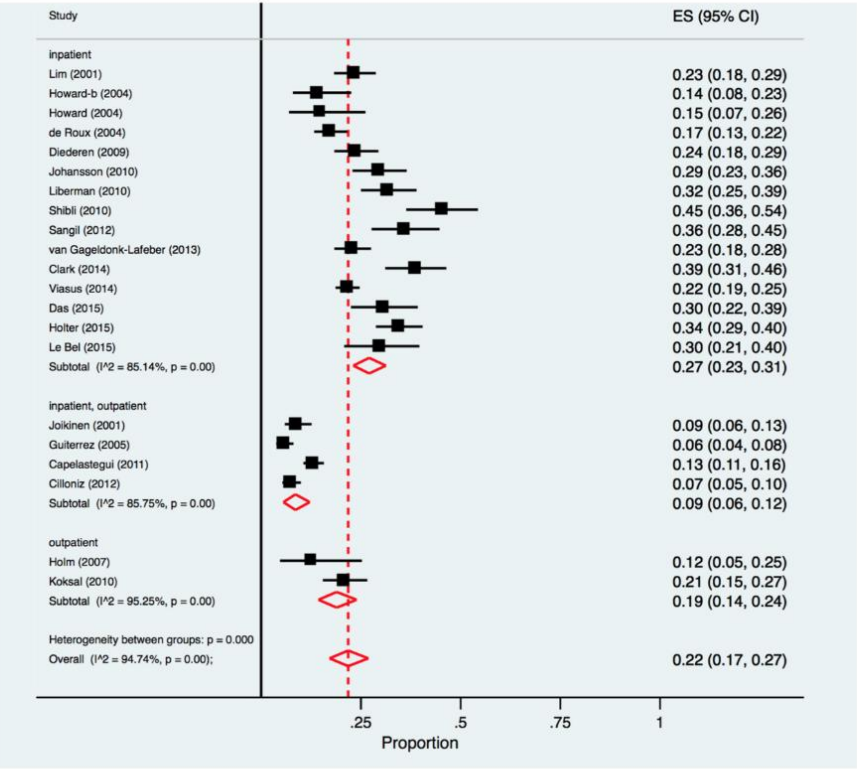
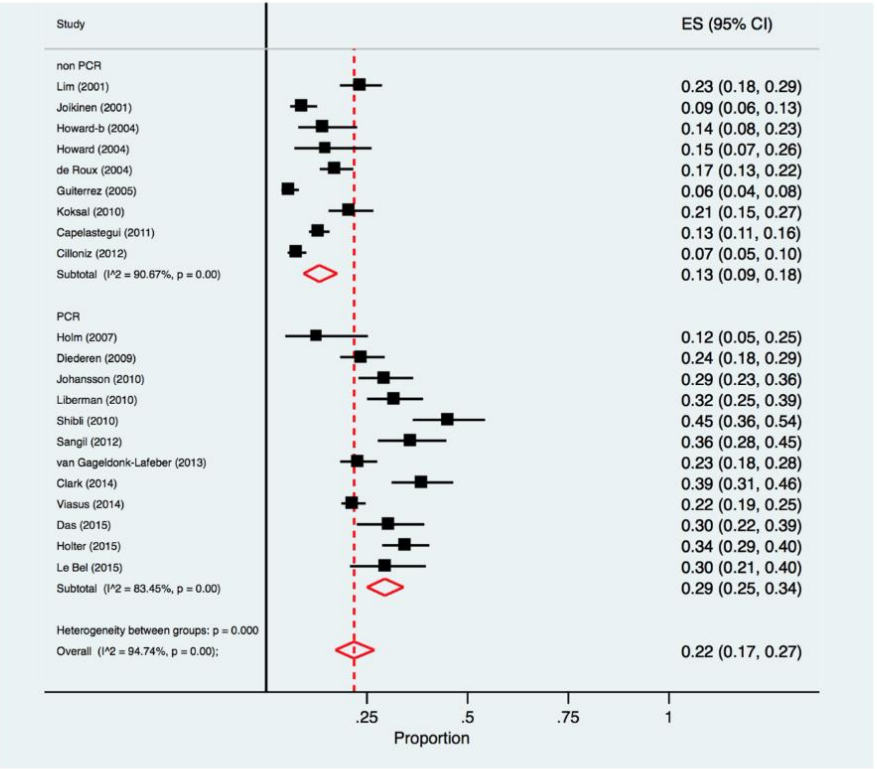
Epidemiologia



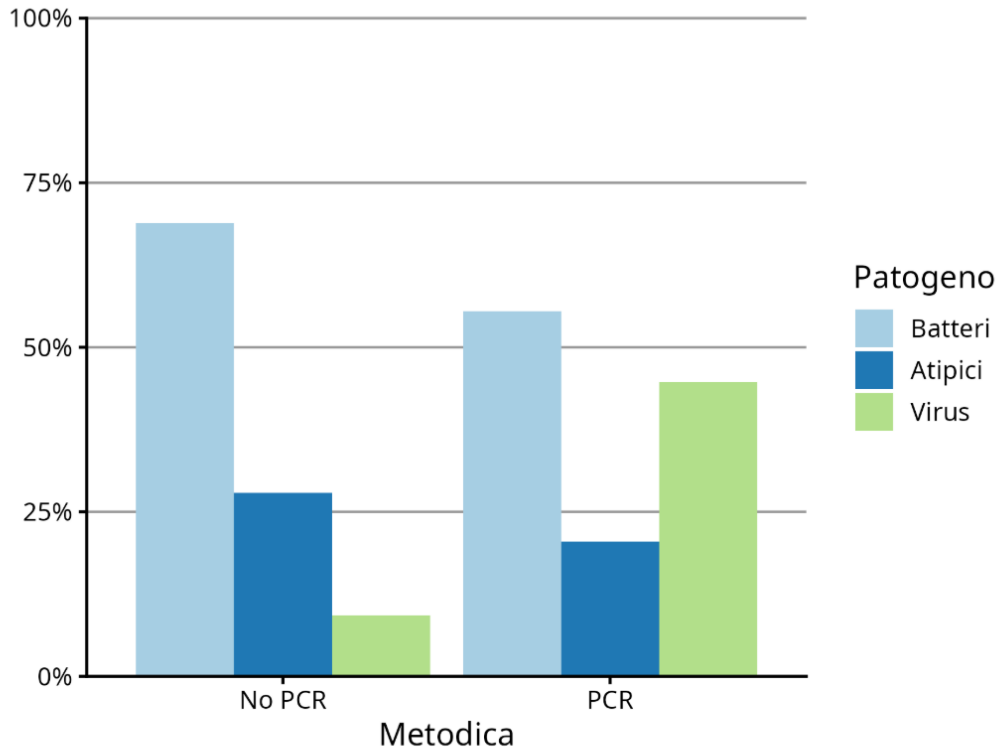
Alimi Y *et al.* Journal of Clinical Virology 2017.

Epidemiologia



Alimi Y *et al.* Journal of Clinical Virology 2017.

Importanza della metodica



Modificato da Shoar S, Musher DM Pneumonia 2020.

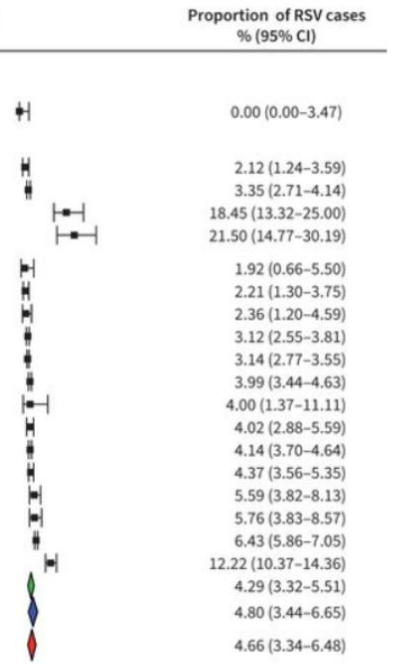
Patogeni implicati

- Influenza A/B
- Virus respiratorio sinciziale
- SARS-CoV-2
- Metapneumovirus
- Virus parainfluenzali
- Rinovirus, coronavirus, adenovirus

Epidemiologia

RSV

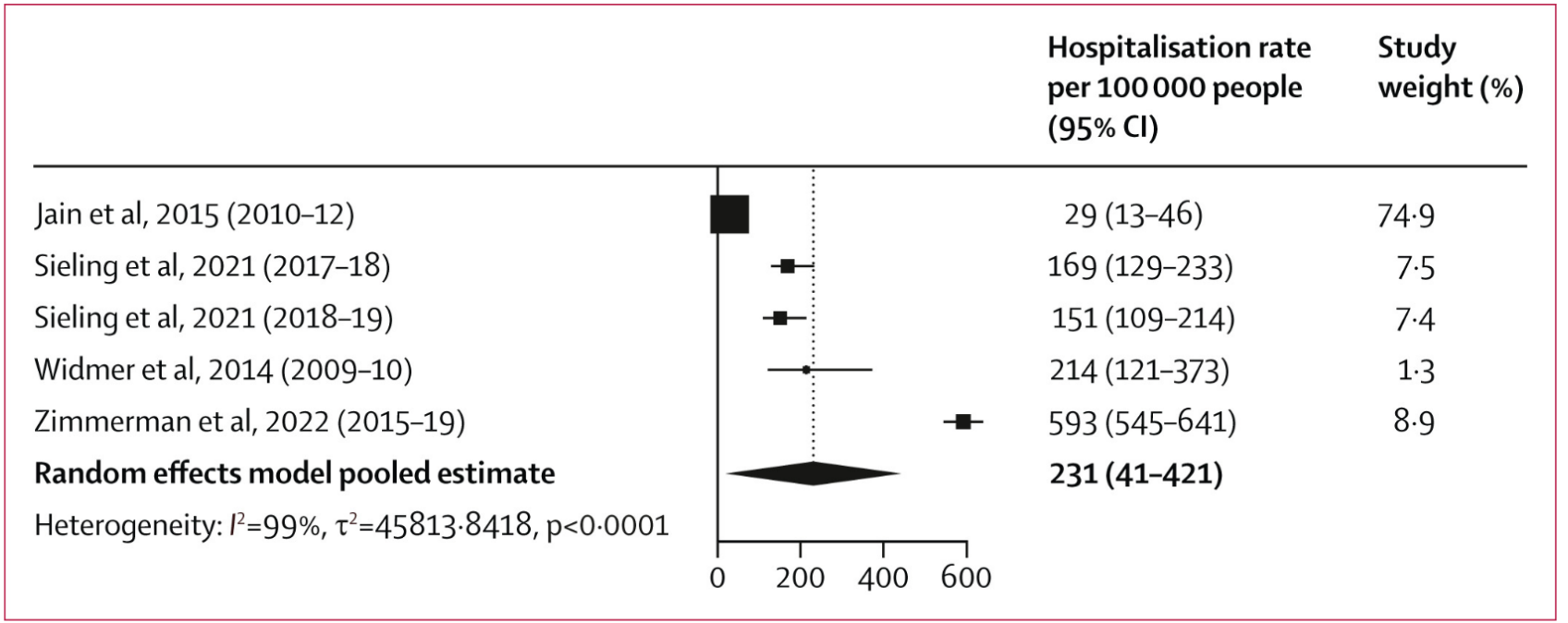
a) Study	Country	Age group (years)	Population type	Sample and infection	ROB	RSV cases (n)	Tested samples (n)	Proportion of RSV cases % (95% CI)
Annual data								
Community								
GRAAT, 2003	NL	≥60		SS ARI	0/9	0	107	0.00 (0.00–3.47)
Medically attended								
ARBEFEVILLE, 2017[#]	US	≥60		CI ARI	4/9	13	614	2.12 (1.24–3.59)
VISSEAUX, 2017	FR	≥60	IP	CI ARI	3/9	82	2449	3.35 (2.71–4.14)
WALKER, 2017	US	≥60	IP	CI ARI	3/9	31	168	18.45 (13.32–25.00)
PABA, 2014	IT	≥60	IP	SS ILI	1/9	23	107	21.50 (14.77–30.19)
WANSAULA, 2016	US	≥65	IP	SS SARI	2/9	3	156	1.92 (0.66–5.50)
CHARLES, 2008	AU	≥65	ED	SS PNM	1/9	13	587	2.21 (1.30–3.75)
ANTON, 2016	ES	≥65	OP	SS ILI	0/9	8	339	2.36 (1.20–4.59)
HUIJTS, 2018[¶]	NL	≥65		SS PNM	2/9	91	2917	3.12 (2.55–3.81)
PRICE, 2019	AU	≥65		CI ARI	3/9	244	7777	3.14 (2.77–3.55)
GAYMARD, 2018	FR	≥65		CI ARI/ILI	5/9	169	4232	3.99 (3.44–4.63)
TRAMUTO, 2016	IT	≥65	ICU	CI ARI/ILI	2/9	3	75	4.00 (1.37–11.11)
JAIN, 2015	US	≥65	IP	SS PNM	1/9	33	821	4.02 (2.88–5.59)
GAYMARD, 2019	FR	≥65		CI MSARI	5/9	287	6931	4.14 (3.70–4.64)
KATSURADA, 2017	JP	≥65		SS PNM	1/9	89	2037	4.37 (3.56–5.35)
VARGHESE, 2018	AU	≥65		SS ILI	2/9	25	447	5.59 (3.82–8.13)
ARONEN, 2019[+]	FI	≥65	IP	SS ARI	0/9	22	382	5.76 (3.83–8.57)
GIMFERRER, 2019	ES	≥65		SS ARI	3/9	420	6534	6.43 (5.86–7.05)
AMBROSIONI, 2014	CH	≥65		CI ARI	4/9	127	1039	12.22 (10.37–14.36)
REM for ≥65 years age group ($Q=247.58$, $p<0.01$; $I^2=95.1\%$)								4.29 (3.32–5.51)
REM for medically attended data ($Q=376.35$, $p<0.01$; $I^2=97.6\%$)								4.80 (3.44–6.65)
REM for annual data ($Q=379.21$, $p<0.01$; $I^2=97.5\%$)								4.66 (3.34–6.48)



Nguyen-Van-Tam JS *et al.* European Respiratory Review 2022.

Epidemiologia

Metapneumovirus



Kulkarni D *et al.* The Lancet Healthy Longevity 2025.

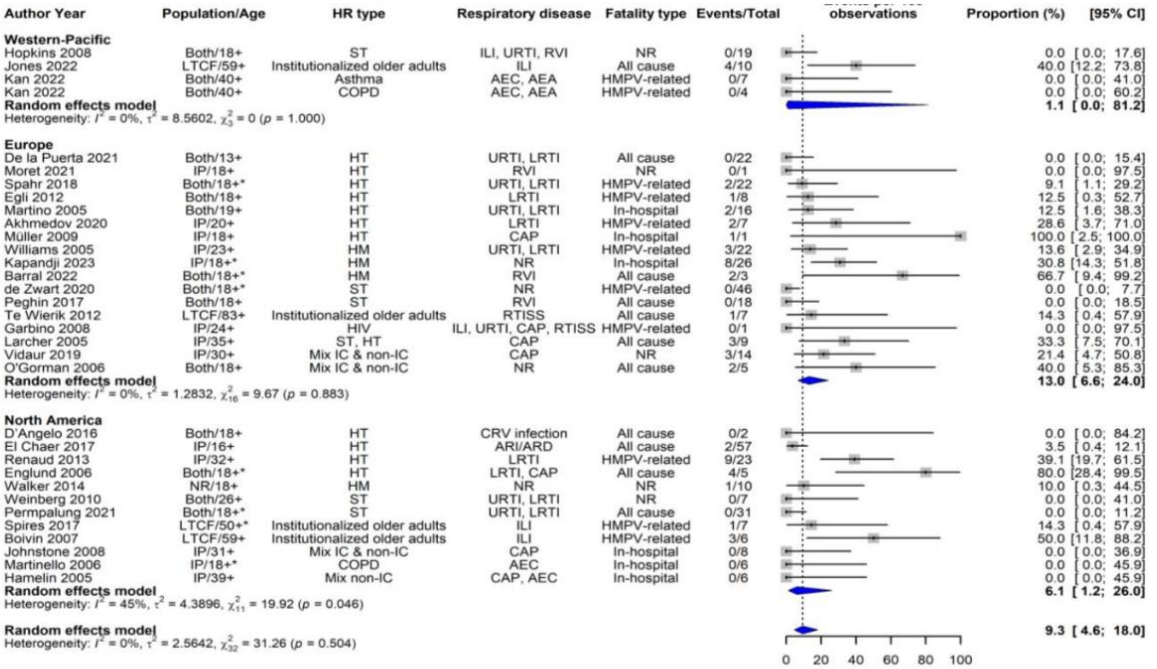
Impatto delle polmoniti virali

RSV

- Negli anziani è causa di una proporzione significativa di infezioni delle basse vie respiratorie e polmoniti;
- Può spiegare fino al 25% dell'eccesso di mortalità osservata in inverno (Bracaloni S *et al.* Influenza and Other Respiratory Viruses 2024.);
- Il tasso di ospedalizzazione negli anziani con infezione da RSV varia dal 12% al 56%;
- La mortalità negli anziani con infezione da RSV varia dal 2% al 36% (~ 36% in UTI) (D'Ambrosio F *et al.* Vaccines 2025.).

Impatto delle polmoniti virali

Metapneumovirus



Sobanjo-ter Meulen A *et al.* Infect Dis Ther 2025.

Diagnosi

Presentazione clinica

- Spesso atipica, come nelle polmoniti batteriche:
  - Assenza di febbre/leucocitosi;
  - Delirium, cadute, riacutizzazione delle comorbilità.
- Rx torace poco sensibile e poco indicativa della gravità;
- TC poco discriminante tra polmoniti virali vs. batteriche.

Diagnosi

Analisi di laboratorio

- Inadatti a differenziare polmoniti batteriche da polmoniti virali;
- Una procalcitonina bassa indica una minor *probabilità* di polmonite batterica, le linee-guida sconsigliano di usarla come unica guida per la terapia antibiotica (Metlay JP *et al.* ATS/IDSA Clinical Practice Guideline 2019.).

Diagnosi

Microbiologia

- La PCR ha dei limiti:
  - Infezione vs. colonizzazione/shedding
  - Risultati qualitativi;
  - Costi e tempi di attesa.

Diagnosi

Quando ricercare i virus?

- Pazienti ospedalizzati;
- Nel corso di outbreaks;
- Pazienti immunocompromessi;
- Sospetto di influenza, RSV o COVID-19.

Terapia

Influenza

	Study results and measurements	Seasonal influenza				Zoonotic influenza			
		Absolute effect estimate per 1000 patients	Absolute difference per 1000 patients (95% CI)	Certainty in effect estimates	Summary	Absolute effect estimate per 1000 patients	Absolute difference per 1000 patients (95% CI)	Certainty in effect estimates	Summary
Oseltamivir vs standard care or placebo	RR 0·53 (95% CI 0·07 to 4·24); based on data from 74 participants in one study	16 vs 30	−14 (−28 to 97)	Very low*	Whether oseltamivir reduces mortality in people with seasonal influenza is very uncertain	205 vs 387	−182 (−360 to 613)	Very low*	Whether oseltamivir reduces mortality in people with zoonotic influenza is very uncertain
Peramivir vs standard care or placebo	RR 0·40 (95% CI 0·03 to 4·72); based on data from 114 participants in one study	12 vs 30	−18 (−29 to 112)	Very low*†	Whether peramivir reduces mortality in people with seasonal influenza is very uncertain	155 vs 387	−232 (−375 to 613)	Very low*†	Whether peramivir reduces mortality in people with zoonotic influenza is very uncertain
Zanamivir vs standard care or placebo	RR 0·58 (95% CI 0·06 to 5·29); based on indirect evidence	17 vs 30	−13 (−28 to 129)	Very low*†	Whether zanamivir reduces mortality in people with seasonal influenza is very uncertain	224 vs 387	−163 (−364 to 613)	Very low*†	Whether zanamivir reduces mortality in people with zoonotic influenza is very uncertain
Oseltamivir vs peramivir	RR 1·33 (95% CI 0·11 to 15·87); based on data from 137 participants in one study	16 vs 12	4 (−11 to 178)	Very low*	Whether oseltamivir reduces mortality in people with seasonal influenza compared with peramivir is very uncertain	206 vs 155	51 (−138 to 845)	Very low*	Whether oseltamivir reduces mortality in people with zoonotic influenza compared with peramivir is very uncertain
Oseltamivir vs zanamivir	RR 0·91 (95% CI 0·44 to 1·87); based on data from 488 participants in one study	15 vs 17	−2 (−10 to 15)	Very low†‡	Whether oseltamivir reduces mortality in people with seasonal influenza compared with zanamivir is very uncertain	204 vs 224	−20 (−126 to 195)	Very low*†	Whether oseltamivir reduces mortality in people with zoonotic influenza compared with zanamivir is very uncertain
Peramivir vs zanamivir	RR 0·68 (95% CI 0·05 to 9·01); based on indirect evidence	11 vs 17	−6 (−17 to 139)	Very low*†	Whether peramivir reduces mortality in people with seasonal influenza compared with zanamivir is very uncertain	152 vs 224	−72 (−213 to 776)	Very low*†	Whether peramivir reduces mortality in people with zoonotic influenza compared with zanamivir is very uncertain

Gao Y *et al.* The Lancet 2024.

Terapia

Influenza

	Study results and measurements	Absolute effect estimates, mean duration in days	Mean difference (95% CI)	Certainty in effect estimates	Summary
Oseltamivir *vs* standard care or placebo	The lower the duration of hospitalisation, the better the result; based on data from 104 participants in two studies	3·37 *vs* 5·00	−1·63 (−2·81 to −0·45)	Low*†	Oseltamivir might reduce duration of hospitalisation
Peramivir *vs* standard care or placebo	The lower the duration of hospitalisation, the better the result; based on indirect evidence	3·27 *vs* 5·00	−1·73 (−3·33 to −0·13)	Low*†	Peramivir might reduce duration of hospitalisation
Oseltamivir *vs* peramivir	The lower the duration of hospitalisation, the better the result; based on data from 122 participants in one study	3·37 *vs* 3·27	0·10 (−0·98 to 1·18)	Low*†	There might be little or no difference between oseltamivir and peramivir for duration of hospitalisation

Gao Y *et al.* The Lancet 2024.

Terapia

COVID-19

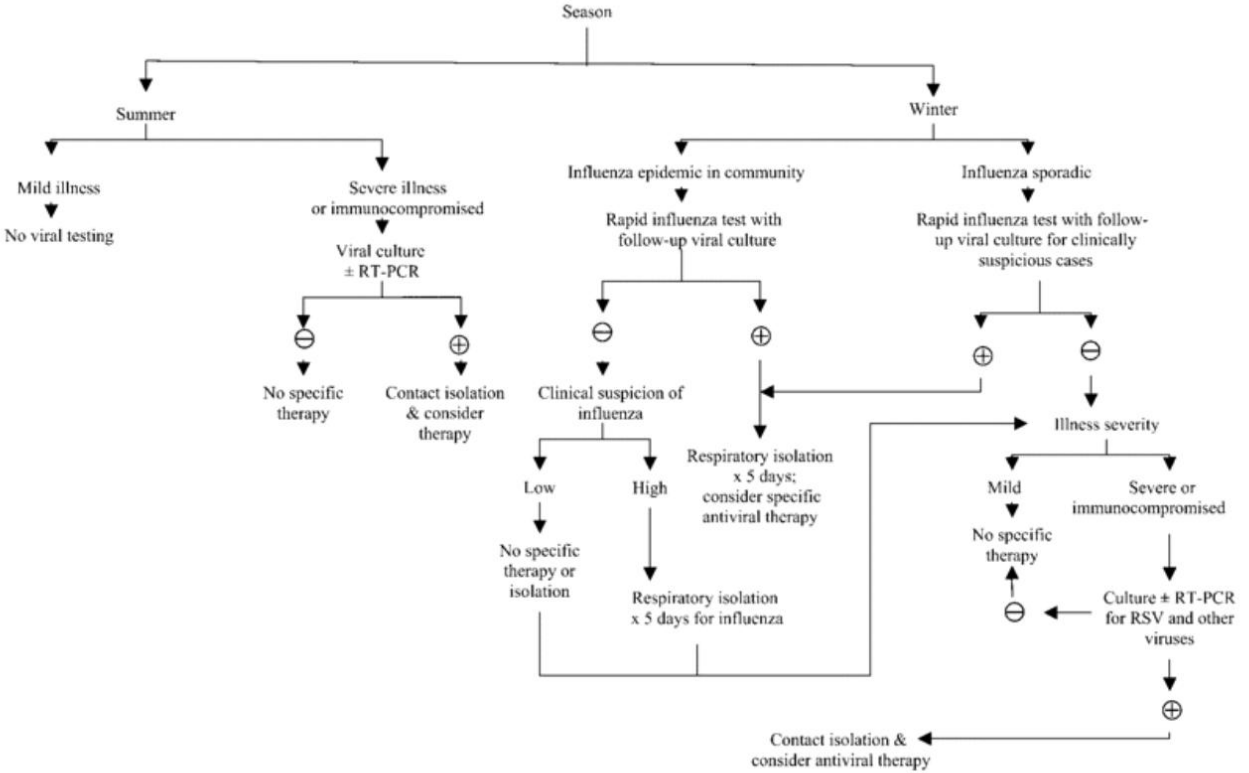
- Nirmatrelavir/ritonavir (Paxlovid) nei casi meno gravi;
- Remdesevir + altre misure di supporto nei pazienti ospedalizzati.

Terapia

RSV & Metapneumovirus

- Misure di supporto;
- Nei pazienti affetti da RSV immunocompromessi è stata sperimentata la ribavirina sistemica o per aerosol ma le evidenze sono scarse e c'è rischio di tossicità;
- In studio vaccini e anticorpi monoclonali per metapneumovirus.

Isolamento



Falsey AR, Walsh EE Clinical Infectious Diseases 2006.

Prevenzione

- In considerazione dell'impatto delle polmoniti virali e della relativa scarsità di opzioni terapeutiche, la prevenzione vaccinale rimane l'intervento più importante per ridurre l'impatto di queste patologie;
- Esistono vaccini efficaci per influenza, RSV e SARS-CoV-2, coprono quindi la maggior parte dei casi di polmonite;
- Al momento solo i vaccini per influenza e SARS-CoV-2 sono coperti dal SSN.

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Falsey AR, Walsh EE. Viral pneumonia in older adults. Clinical Infectious Diseases 2006; 42 :518–524