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# The duration of intervals on the oral cancer care pathway and implications for survival: a meta-analysis

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### **BACKGROUND & METHODS**

Delays in oral cancer diagnosis and treatment outcomes; however, previous studies have shown Our aims were (1) to calculate pooled meta-analy diagnostic, and treatment intervals in oral can synthesise the evidence on the relation of these in

We conducted a systematic review with meta-ana Based on the Aarhus statement, eligible studies primary oral cancer, which reported data on the le

- Patient interval (PI): first symptom -> first prese
- Diagnostic interval (DI): first presentation -> diagnostic
- Treatment interval (TI): diagnosis -> start of tre

#### RESULTS

The initial search retrieved 9,922 records, of whi on a total of 30,845 patients with primary oral can

Interval duration:

- Pooled PI = 47 days (95% CI=31-73), k=18, and countries (see Figure).
- Pooled DI = 35 days (95% CI=21-38), k=11, with
- Pooled TI = 30 days (95% CI=23-53) k=19, and it

Stage at diagnosis and survival:

- Longer patient intervals were related to later st
- Longer treatment intervals were associated w risk of bias from high-income countries.

### **DISCUSSION &** CONCLUSIONS

Interval duration on the oral cancer care pathway is influenced by the socio-economic context and has implications for patient outcomes. All three intervals were relatively homogeneous in studies from high-income countries. In lower-income countries, the PI and the TI were significantly longer. The relation between interval duration and stage and/or survival varied depending on the country's income level and the study's risk of bias.



## Registres des Cancers général de la Manche, général du Calvados, digestif du Calvados et des hémopathies malignes de Basse-Normandie

are generally associated with worse patient	k   N   IQR	Sub-group	(A) Patient interval						Pooled median [95% CI]
n heterogeneous results.	18   1,995   52	Overall			F				47 [31, 73]
vtic estimates of the duration of the natient	14   1,603   29	Excluding high-risk studies			Ļ				46 [31, 60]
y cie estimates of the abration of the patient,	17   1,936   29	Excluding studies reporting r	means		F				45 [31, 60]
icer, and (2) to systematically complie and	8   755   33	Lower-middle income						I	75 [50, 90]
ntervals with stage at diagnosis and survival.	4   550   13	Upper-middle income			F	<b></b> 1			36 [30, 45]
alysis following PRISMA 2020 guidelines.	6   690   22	High income			<b>⊢</b> ∎			4	31 [22, 87]
were those conducted on adult patients with ength of one or more interval of interest:				0	25	50	75	100	
sentation to a healthcare professional.	k   N   IQR	Sub-group	(B) Diagn	ostic	interv	al			Pooled median [95% CI]
agnosis.	11   1,303   12	Overall			<b></b>	н			35 [21, 38]
eatment.	11   1,303   12	Excluding high-risk studies			ŀ	μ			35 [21, 38]
	11   1,303   12	Excluding studies reporting n	neans		<b></b>	ŀ			35 [21, 38]
	3   321   10	Lower-middle income				I			30 [30, 49]
	2   216   4	Upper-middle income			H <b>an</b> i				18 [14, 21]
ich 28 articles were included, reporting data	6   766   3	High income			<b></b>	4			36 [24, 39]
ncer.									
				0	25	50	75	100	
d it was longer in studies from lower-income	k   N   IQR	Sub-group	(C) Treatment interval						Pooled median [95% CI]
	19   29,047   31	Overall			ŀ	4			30 [23, 53]
no differences based on country income.	14   28,728   30	Excluding high-risk studies			⊦				29 [22, 52]
was longer in lower-income countries.	12   28,241   10	Excluding studies reporting m	neans		┝╼═╋╋═┥				25 [19, 30]
	2   169   24	Low income							79 [55, 103]
	1   32   0	Lower-middle income*							20 [20, 20]
tages in lower-income countries	16   28,846   30	High income			<b>⊢_</b>				30 [23, 53]
ith lower and incluse in studies with lower	Note: k=number of studies	s; N=number of patients; IQR=interquartile	e range.						
in lower survival rates in studies with lower				0	25	50	75	100	



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47 [31,	73]
46 [31,	60]
45 [31,	60]
75 [50,	90]
36 [30,	45]
31 <b>[</b> 22,	87]