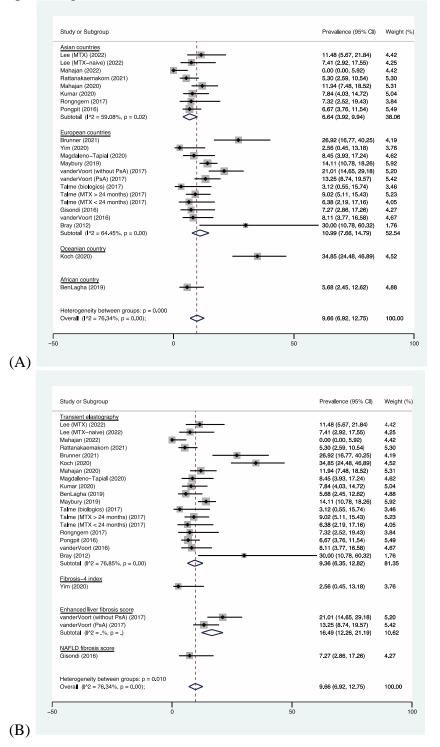
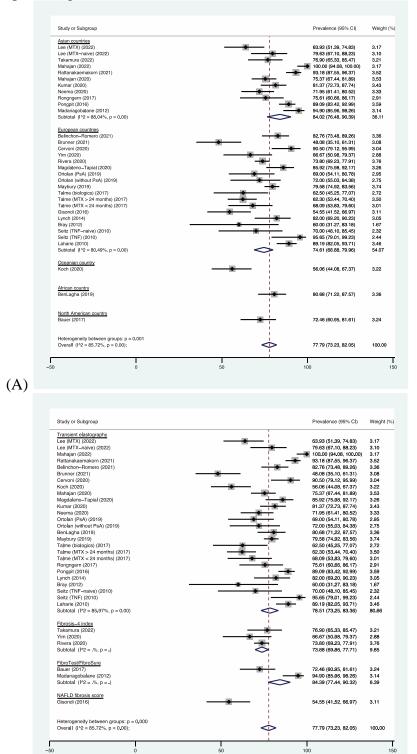
**Supplementary Figure 1**: Forrest plots for pooled prevalence psoriasis of high risk of advanced liver fibrosis subgrouped based on (A) continent, (B) non-invasive tests, and (C) methotrexate user percentage



Study or Subgroup		Prevalence (95% CI)	Weight (%
MTX cohorts (100%)		11 10 (5 07 01 01)	
Lee (MTX) (2022)		11.48 (5.67, 21.84)	4.42 5.30
Rattanakaemakorn (2021) Brunner (2021)		5.30 (2.59, 10.54) 26.92 (16.77, 40.25)	5.30 4.19
			3.76
Yim (2020) Koch (2020)		2.56 (0.45, 13.18) 34.85 (24.48, 46.89)	4.52
Talme (MTX > 24 months) (2017)			
Talme (MTX < 24 months) (2017)	_	9.02 (5.11, 15.43) 6.38 (2.19, 17.16)	5.23 4.05
Rongngern (2017)		7.32 (2.52, 19.43)	3.84
Bray (2012)			1.76
Subtotal (1^2 = 82,34%, p = 0.00)		30.00 (10.78, 60.32) 12.25 (6.02, 20.08)	37.06
Subtotal (1*2 = 82.34%, p = 0.00)	$\sim$	12.25 (6.02, 20.08)	37.06
MTX cohorts (50–99%)			5.04
Mahajan (2020)		11.94 (7.48, 18.52)	5.31
Maybury (2019)		14.11 (10.78, 18.26)	5.92
Pongpit (2016)		6.67 (3.76, 11.54)	5.49
Subtotal (1^2 = .%, p = .)	$\sim$	10.88 (6.68, 15.92)	16.72
MTX cohort (1-49%) Magdaleno-Tapial (2020)		8.45 (3.93, 17.24)	4.62
vanderVoort (without PsA) (2017)	· · · · · ·	21.01 (14.65, 29.18)	5.20
vanderVoort (PsA) (2017)	<u></u>	13.25 (8.74, 19.57)	5.42
Subtotal (I^2 = .%, p = .)	$\sim$	14.21 (8.23, 21.43)	15.23
MTX-naive cohorts			
Lee (MTX-naive) (2022)		7.41 (2.92, 17.55)	4.25
Mahajan (2022)	• i	0.00 (0.00, 5.92)	4.42
Kumar (2020)		7.84 (4.03, 14.72)	5.04
Talme (biologics) (2017)	• · · · · · · · · · · · · · · · · · · ·	3.12 (0.55, 15.74)	3.46
Gisondi (2016)		7.27 (2.86, 17.26)	4.27
Subtotal (I^2 = 59.34%, p = 0.04)	$\diamond$	4.44 (1.17, 9.22)	21.44
Data not provided			
BenLagha (2019)		5.68 (2.45, 12.62)	4.88
vanderVoort (2016) Subtotal (1^2 = .%, p = .)		8.11 (3.77, 16.58) 6.74 (3.24, 11.26)	4.67 9.55
Subtotal (P2 = .%, p = .)	$\sim$	6.74 (3.24, 11.26)	9.55
Heterogeneity between groups: p = 0.069	1		
Overall (I^2 = 76.34%, p = 0.00);	$\diamond$	9.66 (6.92, 12.75)	100.00
-50	0	50	

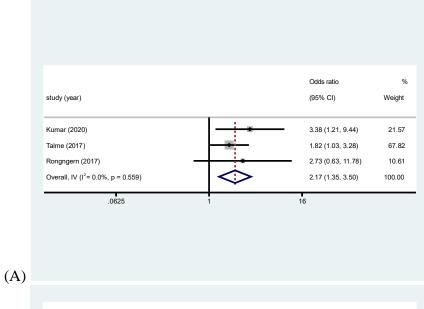
**Supplementary Figure 2**: Forrest plots for pooled prevalence psoriasis of low risk of advanced liver fibrosis subgrouped based on (A) continent, (B) non-invasive tests, and (C) methotrexate user percentage



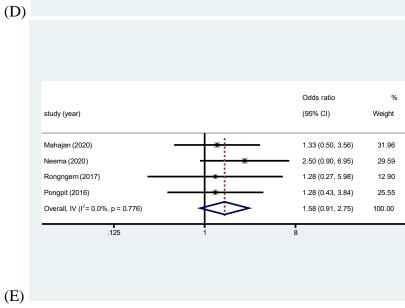
(B)

MTX cohors (2021)	Study or Subgroup		Prevalence (95% CI)	Weight (
Ratinakaemakaema (2021)		I		
Bunner (201) Yin (2020) Rivera (2020) Rivera (2020) Rivera (2020) Rivera (2020) Rivera (2020) Rivera (2020) Rivera (2020) Rivera (2020) Rivera (2020) Tahen (MTX > 24 months) (2017) Tahen (MTX > 24 months) (2016) Tahen (2020) Mantajan (2020)				
Ymr (220)       65 (20.69, 27, 73)       3.78         Rivera (2020)       78.80 (60.25, 77.31)       3.78         Bauer (2017)       74.80 (60.25, 77.31)       3.78         Talme (MTX = 24 months) (2017)       62.30 (66.84, 70.40)       3.50         Talme (MTX = 24 months) (2017)       72.40 (60.95, 81-61)       3.24         Talme (MTX = 24 months) (2017)       72.80 (60.86, 81.71)       2.81         Talme (MTX = 24 months) (2017)       72.80 (60.86, 81.71)       2.81         Talme (MTX = 24 months) (2017)       75.81 (60.66, 81.71)       2.81         Selit (TNF) (2010)       75.81 (70.19, 82.83)       3.60         Selit (TNF) (2010)       75.81 (70.19, 82.83)       4.44         Subtotal (P2 = 83.74%, p = 0.00)       75.81 (74.81, 89)       5.59         Mahajan (220)       75.81 (74.81, 89)       5.59         Mahajan (220)       75.81 (74.81, 89)       5.59         Markajan (220)       75.81 (74.81, 89)       5.59         Markajan (222)       75.81 (75.86, 89.41)       7.32         Markajan (222)       75.81 (75.86, 89.41)       7.32         Markajan (222)       75.81 (75.86, 89.41)       7.32         Markajan (222)       7.33 (71.18, 87.71)       3.48         Markajan (222)       7.33 (75.18, 8				
Rivera (2020)         73.80 (69.22, 77.91)         3.78           Neema (2020)         72.84 (69.23, 77.91)         3.78           Bauer (2020)         72.84 (69.27, 71.9)         3.78           Tahre (MTX > 24 months) (2017)         72.84 (69.27, 73.9)         3.78           Tahre (MTX > 24 months) (2017)         88.99 (63.87, 76.60)         3.01           Rongnem (2017)         75.61 (60.66, 66.71)         2.91           Lynch (2014)         80.00 (81.27, 78.18)         1.67           Statz (Thr / (2010)         75.61 (60.66, 66.71)         2.91           Statz (Thr / (2010)         75.61 (60.66, 66.71)         2.91           Wandyain (2020)         75.85 (77.01, 98.22)         2.44           National (2020)         75.85 (77.01, 98.22)         2.44           National (2020)         75.85 (77.01, 98.22)         2.44           Statiotal (1/2 = 3.5.4%), p = 0.00)         75.85 (75.01, 98.22)         2.44           Statiotal (1/2 = 3.5.4%), p = 0.00)         75.85 (75.01, 98.22)         2.44           Mahajan (2020)         75.85 (75.01, 98.22)         3.10           Mahajan (2020)         75.85 (75.01, 98.23)         3.10           Mattain (2020)         75.85 (75.88, 99.41)         77.35 (75.74, 88.48)           Matajan (2020)         75.85 (75.	Brunner (2021)		48.08 (35.10, 61.31)	3.08
Noch (2020)         75 56 (4.0 & 67 37)         2.2           Nermi (2020)         75 56 (4.1 & 80.52)         3.3           Bauer (2017)         72 48 (60.9 58 16 1)         3.4           Tahen (MTX > 24 months) (2017)         75 56 (14.0 & 67 37)         3.22           Tahen (MTX > 24 months) (2017)         75 56 (14.0 & 67 37)         3.20           Bary (2014)         95 80 (3.4 7.04.0)         3.50           Bary (2012)         75 56 (16.0 & 68 0.7)         2.91           Uprich (2014)         95 85 (70.0 (9.8.2)         2.44           Static (TMF-naive) (2010)         55 85 (70.0 (9.8.2)         2.44           Static (16.0 - 69%)         75 36 (16.0 (9.8.1)         2.44           Cervon (2020)         75 37 (67.44, 81.89)         3.64           Marbian (2020)         75 37 (67.41, 81.82)         3.10           Marbian (2020)         76 37 (67.10, 88.22)         3.10           Marbian (2020)         76 37 (67.10, 88.22)         3.10           M	Yim (2020)	•	66.67 (50.98, 79.37)	2.88
Noch (2020)         75 56 (64.0e, 67.37)         2.2           Nema (2017)         72.46 (60.95, 81.61)         3.33           Bauer (2017)         72.48 (60.95, 81.61)         3.44           Tahen (MTX > 24 months) (2017)         68.39 (53.8, 79.60)         3.01           Tahen (MTX > 24 months) (2017)         68.39 (53.8, 79.60)         3.01           Bauer (2014)         75.61 (60.66, 86.17)         2.91           Lynch (2014)         75.61 (60.66, 86.17)         2.91           Selatz (TMF-naive) (2010)         56.67 (70.17, 86.18)         1.67           Selatz (TMF-naive) (2020)         75.85 (60.66, 86.17)         2.91           Mahajan (2020)         75.85 (60.26, 86.17)         2.94           Subtotal (V2 = 83.54%, p = 0.00)         75.85 (60.26, 86.17)         3.04           Mahajan (2020)         75.85 (60.26, 80.71)         3.48           Marbian (2020)         75.85 (60.26, 80.71)         3.48           Marbian (2020)         75.85 (60.80, 71)         3.48           Marbian (2020)         75.85 (60.80, 71)         3.48           Marbian (2020)         65.97 (75.98, 92.17)         3.26           Marbian (2022)         76.97 (75.98, 92.17)         3.26           Marbian (2022)         76.97 (75.98, 92.17)         3.26     <	Rivera (2020)		73.80 (69.23, 77.91)	3.76
Nermin (2020)         7, 45; (6:1,41; 80:52)         3.3           Buer (2017)         7, 46; (6:0,60; 86; 16:1)         3.24           Tahne (MTX > 24 months) (2017)         68:09 (5:33; 7:66)         3.01           Borgnern (2017)         80:00 (3:1,27; 85; 16:1)         80:00 (3:1,27; 85; 18)         16:1           Figure (2016)         90:00 (3:1,27; 85; 18)         16:0         16:00 (3:1,27; 85; 18)         16:0           Figure (2016)         90:00 (3:1,27; 85; 18)         16:0         16:00 (3:1,27; 85; 18)         16:0           Figure (2016)         90:00 (3:1,27; 85; 18)         16:0         16:00 (3:1,27; 85; 18)         16:0           Figure (2016)         90:50 (7:1,2; 95:59)         3.04         77:55 (6:7, 48; 819)         5.33           Mahajan (2020)         75:57 (7:4, 81:58)         3.34         16:0         17:35 (6:7, 48; 819)         5.35           Mitz cohort (1-49%)         90:00 (6:1,18,023)         3.10         16:00 (6:0,000)         17:35           Mitz cohort (1-49%)         90:00 (6:1,18,023)         3.10         10:00 (6:0,000,001)         3.10           Mitz cohort (1-49%)         90:00 (6:1,18,023)         3.10         10:00 (6:0,000,001)         14:0           Mitz cohort (1-49%)         90:00 (6:1,18,023)         3.10         10:00 (6:0,000,001)				3.22
Buuer (2017)         7.46 (00.95, 61.0)         3.24           Tahine (MTX > 24 months) (2017)         62.30 (65.48, 70.40)         3.50           Tahine (MTX > 24 months) (2017)         75.61 (60.68, 68.17)         2.81           Lynch (2014)         50.00 (65.20, 50.23)         3.60           Bary (2012)         50.00 (65.20, 50.23)         3.50           Satiz (TMF-raine) (2010)         50.00 (65.20, 50.23)         3.50           Satiz (TMF-raine) (2010)         50.50 (76.12, 85.18)         1.67           Satiz (TMF-raine) (2020)         75.61 (60.68, 86.17)         2.91           Mahajari (2020)         75.65 (60.50, 90.23)         3.04           Markain (2020)         75.65 (60.50, 90.23)         3.04           Mahajari (2020)         75.65 (60.50, 90.19, 92.3)         3.04           Mahajari (2020)         75.65 (60.50, 90.10)         3.74           Markain (2020)         90.50 (77.12, 95.96)         3.04           Mahajari (2020)         90.50 (77.10, 98.23)         3.10           Mahajari (2020)         90.50 (77.10, 98.23)         3.10           Markaine (2020)         90.50 (77.10, 88.29)         3.10           Mahajari (2020)         90.50 (77.10, 88.29)         3.10           Mahajari (2020)         90.50 (77.10, 88.29)         <				
Takine (MTX > 24 months) (2017)         58.09 (53.41, 70.40)         5.00         5.01           Prongen (2017)         58.09 (53.41, 70.40)         5.00         5.01           Prongen (2017)         50.00 (53.17, 82.0)         5.01         5.00 (53.17, 82.0)         5.01           Prongen (2017)         75.01 (60.66, 86.17)         2.91         5.00 (53.17, 82.0)         5.01           Static (ThF) (2010)         5.00 (53.27, 85.10)         5.02         7.00 (44.01, 86.45)         2.32           Static (ThF) (2010)         5.05 (75.12, 95.98)         0.04         7.95 (67.48, 81.80)         3.31           Mahajan (2020)         7.95 (74.4, 81.80)         3.33         3.46           Mahajan (2020)         7.95 (75.48, 92.80)         3.46           Subtrait (I*2 = 77.20%, p = 0.00)         7.95 (75.48, 92.80)         3.47           Mahajan (2020)         7.95 (75.48, 92.81)         3.10           Mahajan (2020)         7.95 (75.48, 92.81)         3.46           MitX-nahov cohomt         1.90 (96.33, 98.40)         3.10           Mahajan (2022)         7.95 (75.48, 92.81)         3.10           Mahajan (2022)         7.95 (75.48, 92.81)         3.10           Mahajan (2022)         7.95 (75.48, 92.81)         3.10           Mahajan (2021)				
Talen (MTX < 24 months) (2017)				
Program (2017)         75.61 (60.66, 86.17)         2.61           Bray (2012)         82.00 (69.20, 90.23)         3.05           Startz (ThF) (2010)         70.50 (41.0, 86.45)         2.32           Marging (1016)         70.50 (41.0, 86.45)         2.32           Marging (2010)         70.50 (41.0, 86.45)         2.32           Marging (2010)         70.50 (41.0, 86.45)         2.32           Marging (2010)         70.50 (71.2, 95.89)         3.04           Marging (2016)         70.50 (71.0, 95.29)         3.46           Subtolal (1/2 = 77.20%, p = 0.00)         70.50 (71.0, 95.23)         3.10           Marging (2020)         70.50 (60.46, 90.000)         3.17           Marging (2021)         70.50 (60.46, 90.000)         3.17           Marging (2020)         70.50 (67.10, 98.23)         3.10				
Lynch (2014) Bray (2012) Seltz (TNF-naive) (2010) Seltz (TNF-naive) (2010) Seltz (TNF-naive) (2010) Seltz (TNF-naive) (2010) Seltz (TNF-naive) (2010) Seltz (TNF-naive) (2010) MTX cohort (50-99k) Cervon (12020) MAbajan (2020) MAbajan (2020) MA				
Bing (2012)         00.00 (si 27, 85, 10)         16           Seliz (TNP (2010)         5.812 (TNP (2010)         75.813 (FA, 81, 80)         2.32           Seliz (TNP (2010)         75.85 (FA, 01, 98.23)         2.44           Subtotal (122 = 85.4%)         75.85 (FA, 01, 98.23)         2.44           Cerron (2020)         75.85 (FA, 77.44, 81.80)         3.63           Markgain (2020)         75.85 (FA, 74.4, 81.80)         3.63           Markgain (122 = 77.20%, p = 0.00)         75.85 (F7.44, 81.80)         3.63           Markgain (2020)         84.57 (F3.66, 92.42)         3.60           Markgain (2022)         84.57 (F3.66, 92.43)         3.10           Lee (MTX-naive c)chorts         10.00 (94.81, 00.00)         3.17           Lee (MTX-naive (2021)         95.82 (F7.80, 92.41)         3.83           Markgain (2022)         10.00 (94.81, 00.00)         3.17           Markgain (2022)         10.00 (94.81, 00.00)         3.17           Taken (2021)         95.82 (F7.80, 72.8, 27.7)         3.48           Subtotal (122 = 80.8%, p = 0.00)				
Size (TNF-maive) (2010)         70.00 (48.10, 85.45)         2.82           Size (TNF-maive) (2010)         75.55 (67.01, 99.23)         2.44           Subtotal (V2 = 83.54%, p = 0.00)         75.37 (67.44, 81.89)         3.54           Mahajan (2020)         79.58 (17.42, 85.56)         3.04           Mahajan (2020)         79.58 (17.42, 81.89)         3.53           Mature (2010)         79.58 (17.42, 81.89)         3.54           Mature (2010)         79.58 (17.42, 81.89)         3.74           Poppil (2016)         90.98 (32.29.28)         3.69           Mature (2010)         85.92 (75.98, 92.17)         3.46           Mature cohorts         85.92 (75.98, 92.17)         3.28           MTX-naive cohorts         85.92 (75.98, 92.17)         3.28           MTX-naive cohorts         85.92 (75.98, 92.17)         3.28           MTX-naive cohorts         85.92 (75.98, 92.17)         3.28           Mature (202)         85.92 (75.98, 92.17)         3.28           Mature (2010)         85.92 (75.98, 92.17)         3.28           Mature (2010)         85.92 (75.98, 92.17)         3.28           Mature (2010)         85.92 (75.98, 92.17)         3.28           Mature (202)         85.92 (75.98, 92.17)         3.28	Lynch (2014)		— 82.00 (69.20, 90.23)	
Setz (TNP) (2010)         95.66 (75.01) (92.23)         2.4           Subticul (IV:2 = 83.54%), p = 0.00)         75.37 (67.44, 81.80)         35.3           Matajan (2020)         75.37 (67.44, 81.80)         35.3           Matajan (2020)         75.37 (67.44, 81.80)         35.3           Matajan (2020)         75.37 (67.46, 81.80)         35.3           Matajan (2020)         95.92 (75.96, 92.17)         3.46           Mit Central (1-49%)         99.09 (82.65, 80.94)         17.35           Mit Central (1-49%)         99.09 (82.67, 91.83)         3.10           Matajang (2020)         99.09 (82.67, 91.23, 87.74)         3.43           Orbain (without FA4) (2019)         70.00 (80.66, 100.00)         3.17           Matajang (2020)         99.09 (85.82, 97.13, 3.14         99.09 (85.82, 80.22)           Matajang (2014)	Bray (2012)		60,00 (31,27, 83,18)	1,67
Satz (TKF) (2010)       95.65 (70.01)       92.53 (70.				
Subtotal ( <sup>1/2</sup> = 83.54%, p = 0.00) MTX cohorts (50-99%) Gerovini (2020) Matajan (2020) Matajan (2020) My Cohorts (50-99%) Gerovini (2019) Poss (77-12, 95.99) 77.85 (74.4, 81.89) 89.99 (83.42, 92.89) Subtotal ( <sup>1/2</sup> = 7.57, 67.44, 81.89) 99.09 (83.42, 92.89) Subtotal ( <sup>1/2</sup> = 7.57, 67.44, 81.89) 99.09 (83.42, 92.89) Subtotal ( <sup>1/2</sup> = 7.57, 85.89, 94) 17.35 MTX cohort (1-49%) Magdateme-Tappal (2020) Matajan (202) Chevini (P2-80.79%, p = 0.00) Matajan (202) Chevini (P2-80.79%, p = 0.00) Matajan (202) Chevini (P2-80.79%, p = 0.00) Dotation (P2-80.99%, p = 0.00) Dotation (P2-80.				
$\frac{MTX \operatorname{cohorts} (50-39\%)}{\operatorname{Garvon} (2020)} \\ \operatorname{Metajan} (2020) \\ \operatorname{Markajan} (2020) \\ \operatorname{Markajan} (2020) \\ \operatorname{Markajan} (2016) \\ \operatorname{Lataric} (2016) \\ \operatorname{Markajan} (2020) \\ \operatorname{Markajan} (2021) \\ \operatorname{Markajan} (2020) \\ \operatorname{Markajan} (20$		$\sim$		
Cervon (2020)         90.00 (79.12, 96.59)         3.04           Mahqiau (2020)         75.37 (67.44, 81.89)         3.53           Maybury (2019)         75.38 (74.22, 82.56)         3.74           Ponppi (2016)         49.09 (82.62, 92.99)         3.69           Laharie (2010)         9.09 (79.12, 95.99)         3.69           Subtotal (1/2 = 77.20%, p = 0.00)         9.09 (79.12, 95.99)         3.69           Margadaeno-Tapial (2020)         9.09 (84.22, 92.99)         3.69           Margadaeno-Tapial (2020)         85.92 (75.98, 92.17)         3.28           Margadaeno-Tapial (2020)         9.09 (87.10, 88.23)         3.10           Mahajain (2022)         79.63 (67.10, 88.23)         3.10           Mahajain (2022)         79.63 (67.10, 88.23)         3.10           Orolain (PA) (2019)         72.20 (75.38, 92.17)         3.43           Orolain (Vinto PA) (2019)         72.20 (75.38, 92.17)         3.43           Subtotal (1/2 = 0.89%, p = 0.00)         9.00 (54.11, 80.79)         3.11           Madaraagotalane (2012)         9.00 (54.11, 80.79)         3.14           Subtotal (1/2 = 0.89%, p = 0.00)         9.00 (55.39, 85.47)         3.21           Beinchon-Romero (2021)         9.00 (55.39, 85.47)         3.21           Beinchon-Romero (2021)	Subtotal (1*2 = 83.54%, p = 0.00)	~	71.95 (64.70, 78.69)	45.09
Mahajan (2020)         75 af (ir 7.4, is 160)         5.3 af (ir 7.4, is 160)<			-	
Maybury (2019)         79.88 (74.22, 85.69)         3.74           Proppi (2016)         89.09 (82.42, 92.99)         3.59           Laharia (2010)         99.19 (82.62, 93.67)         3.48           Subtotal (1°2 = 77.20%, p = 0.00)         85.92 (75.98, 92.17)         3.26           MTX-cnaive cohorts         95.99 (82.62, 93.77)         3.26           MTX-naive cohorts         79.63 (67.10, 88.23)         3.10           Lae (MTX-naive) (3022)         79.63 (67.10, 88.23)         3.10           Manjain (2022)         79.63 (67.10, 88.23)         3.10           Totain (P6A) (2019)         72.00 (55.08, 84.39)         2.75           Taime (biologics) (2017)         72.00 (55.08, 84.39)         2.75           Gioond (12'2')         79.89 (67.38, 84.39)         2.75           Taime (biologics) (2017)         72.00 (55.08, 84.39)         2.75           Taime (biologics) (2017)         79.99 (65.78, 92.93)         3.11           Madamagobalane (2012)         79.99 (65.78, 82.93)         3.14           Subtotal (1'2'= 80.8%, p = 0.00)         77.99 (73.23, 82.95)         3.36           Beinchon-Romero (2021)         80.86 (71.22, 87.57)         3.36           Beinchon-Romero (2021)         80.86 (71.22, 87.57)         3.36           Beinchopanal (2019)				
Pongint (2016)         90.9 (83.42, 92.99)         35.9           Laharia (2010)         96.9 (83.42, 92.99)         35.9           Subtotal (1*2 = 77.20%, p = 0.00)         96.9 (83.42, 92.99)         35.9           MTX cohort (1-19%)         96.9 (83.42, 92.99)         35.9           Magdalence Tapali (2020)         96.9 (83.42, 92.99)         35.9           Magdalence Tapali (2020)         96.9 (96.25, 96.71)         3.46           Malagian (2022)         96.9 (96.25, 96.71)         3.28           Ontain (%hoot PA4) (2019)         79.83 (67.10, 89.23)         3.10           Tatien (biologi) (2017)         96.9 (96.25, 96.71)         3.48           Madamagobalane (2012)         96.99 (96.25, 97.91)         3.14           Subtotal (1*2 = 90.89%, p = 0.00)         77.98 (65.70, 91.23)         3.14           Tatamura (2022)         96.99 (96.25, 97.91.23)         3.14           Beinchon-Romero (2021)         96.99 (85.9, 89.20)         3.14           Beinchon-Romero (2021)         96.98 (71.22, 87.77)         3.86           Beinchon-Romero (2021)         96.98 (71.22, 87.77)         3.86           Beinchon-Romero (2021)         97.98 (65.70, 91.23)         3.93           Beinchon-Romero (2021)         97.98 (65.70, 91.23)         3.93           Beinchon-Ro			75.37 (67.44, 81.89)	
Laharie (2010) Subtotal (1 <sup>12</sup> = 77.20%, p = 0.00) MTX cohort (1-49%) Magdalano-Tapial (2020) MTX cohort (1-49%) Madanagobalane (2022) Tame (biologics) (2017) Gison (124) (2019) Tata not provided Takamura (2022) Data not provided Takamura (2022) Balanot provided Takamura (2022)	Maybury (2019)		79.58 (74.92, 83.56)	3.74
Subtoral (1*2 = 77,26%, p = 0.00)         94.67 (78.56, 69.94)         17.35           MTX cohor(1 (-19%) Magdatem-Tapial (2020)         85.92 (75.98, 92.17)         3.26           MTX-naive cohorts Lee (MTX-naive) (2022)         90.63 (67.10, 88.23)         3.10           Maddatem-Tapial (2020)         90.63 (67.10, 88.23)         3.10           Orbian (reA) (2019)         90.06 (41.10, 07.8)         2.95           Orbian (reA) (2019)         72.73 (87.4)         3.48           Orbian (reA) (2019)         72.73 (87.4)         3.48           Tame (blocks) (2017)         62.20 (45.27, 70.7)         2.72           Genomic (2016)         82.97 (77.24, 87.7)         3.48           Mabutal (r'2 = 00.98%, p = 0.00)         79.98 (65.70, 91.23)         2.437           Tatamura (2022)         88.64, 77.24, 87.91         2.41           Beinchon-Romero (2021)         80.64 (71.22, 87.77)         3.48           Beinchon-Romero (2021)         80.64 (71.22, 87.77)         3.48 <tr< td=""><td>Ponapit (2016)</td><td>_</td><td>89.09 (83.42, 92.99)</td><td>3.59</td></tr<>	Ponapit (2016)	_	89.09 (83.42, 92.99)	3.59
Subtoal (1*2 = 77.20%, p = 0.00)         94.67 (78.56, 89.94)         17.35           MTX cohor(1 - 49%) Magdalence Taplal (2020)         85.92 (75.98, 92.17)         3.26           MTX-naive cohorts Lee (MTX-naive) (2022)         90.63 (67.10, 88.23)         3.10           Orbian (r4A) (2019)         100.00 (94.08, 100.00)         3.17           Transer (2020)         90.00 (54.08, 100.00)         3.17           Subtoal (r2 = 90.89%, p = 0.00)         90.00 (51.11, 80.78)         2.95           Transer (2021)         90.00 (51.11, 80.78)         2.93           Tataer (2022)         79.63 (67.10, 88.23)         3.10           Tataer (2022)         79.63 (67.10, 88.23)         3.10           Tataer (2022)         79.63 (67.10, 88.23)         3.10           Tataer (2022)         79.63 (67.10, 88.23)         3.11           Tataer (2022)         79.63 (67.10, 88.23)         3.11           Tataer (2022)         79.63 (67.10, 88.23)         3.14           Subtotal (r2 = 90.89%, p = 0.00)         79.98 (65.79, 91.23)         24.37           Tataer (2022)         80.64 (7.12, 87.57)         3.36           Beinchon-Romero (2021)         80.64 (7.12, 87.57)         3.36           Beinchon-Romero (2021)         80.64 (7.12, 87.57)         3.36           Beinchon-Rom				
Magdalenc-Tapial (2020)         85.92 (75.98, 92.17)         3.28           MTX-maive cohorts         79.63 (67.10, 89.23)         3.10           Lee (NTX-maive) (2022)         100.00 (94.08, 100.00)         3.17           Mahajan (2022)         100.00 (94.08, 100.00)         3.17           Kumar (2021)         90.00 (4.11, 80.73)         243           Orbitaln (Mitvul P&A) (2019)         72.00 (55.08, 94.38)         2.75           Tatine (biologics) (2017)         64.55 (71.08, 92.93)         3.11           Madanagobalane (2012)         93.98 (65.79, 91.23)         24.37           Data not provided         75.90 (65.38, 85.47)         3.26           Takamura (2022)         93.98 (65.79, 91.23)         24.37           Beinchon-Romero (2021)         80.68 (71.28, 67.97)         3.36           Beinchon-Romero (2021)         80.68 (71.28, 67.97)         3.36           Beinchon-Romero (2021)         80.68 (71.28, 67.97)         3.36           Beinchon-Romero (2021)         75.93 (65.33, 85.47)         3.36           Beinchon-Romero (2021)         77.79 (73.23, 82.05)         100.00           Heterogeneity between groups: p = 0.036         77.79 (73.23, 82.05)         100.00		$\sim$		
Lee ((ITX-raive) (2022) Mahajan (2022) Kumar (2020) Crotain ((#hout Pak) (2019) Orbain ((#hout Pak) (2019) Data on optication ((%) (%) Data on optication (%) (%) D			85.92 (75.98, 92.17)	3.26
Mahajan (2022)         Image: Constraint of the cons		-	70.00 (07.40.00.00)	
Kumar (2020)         137 (72.78, 87.74)         3.43           Orbian (vehout PsA) (2019)         91.37 (72.78, 87.74)         3.43           Orbian (vehout PsA) (2019)         91.37 (72.78, 87.74)         3.43           Tame (biologis) (2017)         92.95         97.01           Giscondi (2016)         92.95         97.01           Mata net provided         145.95 (415.26.69.77)         3.44           Subtotal (1 <sup>1/2</sup> = 90.89%, p = 0.00)         76.80 (65.33, 85.47)         3.24.37           Data net provided         148.07 (65.33, 85.42)         3.24.37           Data net provided         148.07 (65.33, 85.47)         3.24.37           Belinchon-Romarc (2021)         149.97 (65.33, 85.47)         3.26           Subtotal (1 <sup>1/2</sup> = .%, p = .)         80.88 (71.22, 87.57)         3.86           Heterogeneity between groups: p = 0.036         77.79 (73.23, 82.05)         100.00		M		
Orbian (#sA) (2019)         72,00 (55,03, 84,38)         2,75           Orbian (#ixitour 1sA) (2019)         72,00 (55,03, 84,38)         2,75           Talme (biologies) (2017)         54,55 (41,52, 66, 97)         2,72           Gison (12)         54,55 (41,52, 66, 97)         2,73           Subtal (1/2 = 80,8%, p = 0.0)         79,90 (55,33, 85,47)         3,11           Madamagobalane (2012)         79,90 (55,33, 85,47)         3,21           Beinchon-Romero (2021)         82,76 (74,88, 80,28)         3,36           Beinchon-Romero (2021)         80,87 (75,14, 86,31)         9,39           Heterogeneity between groups: p = 0.036         77,79 (73,23, 82,05)         100,00				
Ortokan (without P-8/k) (2019)         72.00 (55.03, 84.36)         27.57           Tatime (biogocie) (2017)         62.50 (45.25, 77.07)         27.27           Gisondi (2016)         62.50 (45.25, 77.07)         27.27           Jasona (1/2 = 90,89%, p = 0.00)         74.59 (45.57, 97.123)         24.37           Data not provided         78.80 (65.33, 85.47)         32.11           Takamiru (2022)         76.80 (65.33, 85.47)         32.11           BenLagiru (2012)         76.80 (65.33, 85.47)         32.11           BenLagiru (2022)         76.80 (75.33, 85.47)         32.61           BenLagiru (2012)         76.80 (75.33, 85.47)         32.61           BenLagiru (2019)         10.00         80.88 (77.12, 82.65)         33.66           BenLagiru (2019)         10.00         80.88 (77.12, 82.65)         33.66           BenLagiru (2019)         10.00         80.88 (77.13, 85.31)         9.83           Hotorogeneily between groups: p = 0.036         77.79 (73.23, 82.05)         100.00				
Taime (biologies) (2017)         62.50 (45.25, 77.07)         27.22           Gisond (2016)         64.56 (41.52, 66.97)         3.11           Madanagobalane (2012)         94.09 (85.95, 9e.20)         3.14           Subtola ((12 = 96.89%, p = 0.00)         79.89 (65.78, 91.23)         24.37           Data not provided         78.99 (65.38, 88.47)         3.21           Takamura (2022)         88.47, 75.99 (65.38, 85.47)         3.36           Beinchon-Romero (2021)         89.87 (75.14, 88.28)         3.36           Subtola ((12 = 36, p = .))         9.93         80.47 (75.14, 85.31)         9.93           Heterogeneity between groups: p = 0.036         77.79 (73.23, 82.05)         100.00	Ortolan (PsA) (2019)		69.00 (54.11, 80.78)	2.95
Gisond (2016)         4.65 (41 52, 66 97)         3.11           Madamagolahar (2012)         4.99 (85.79, 91.23)         24.37           Subtotal (1 <sup>12</sup> = 90.89%, p = 0.00)         76 80 (65 33, 85 47)         3.21           Takamura (2022)         76 80 (65 33, 85 47)         3.21           Beinchon-Romaro (2021)         100         80 88 (21 22, 87 57)         3.26           Subtotal (1 <sup>12</sup> = .%, p = .)         100         80 88 (17 22, 87 57)         3.86           Heterogeneity between groups: p = 0.036         77.79 (73 23, 82 05)         100.00	Ortolan (without PsA) (2019)	•	72.00 (55.03, 84.38)	2.75
Gisond (2016)         4.65 (41 52, 66 97)         3.11           Madamagolahar (2012)         4.99 (85.79, 91.23)         24.37           Subtotal (1 <sup>12</sup> = 90.89%, p = 0.00)         76 80 (65 33, 85 47)         3.21           Takamura (2022)         76 80 (65 33, 85 47)         3.21           Beinchon-Romaro (2021)         100         80 88 (21 22, 87 57)         3.26           Subtotal (1 <sup>12</sup> = .%, p = .)         100         80 88 (17 22, 87 57)         3.86           Heterogeneity between groups: p = 0.036         77.79 (73 23, 82 05)         100.00				
Madanapobalane (2012)         44.90 (85.9; 98.26)         3.14           Subtotal (1°2 = 08.9%; e.00)         79.98 (65.79, 91.23)         24.37           Data not provided         78.98 (65.79, 91.23)         24.37           Takamura (2022)         88.98 (62.79, 91.23)         24.37           Belinkon-Romero (2021)         80.78 (74.88, 82.99)         3.36           Bendapha (2019)         80.88 (71.22, 87.57)         3.36           Subtotal (1°2 = .%, p = .)         9.39         9.29 (75.28, 82.99)         3.44           Heterogeneity between groups: p = 0.036         77.79 (73.23, 82.05)         100.00				
Subtotal (I*2 = 90.89%, p = 0.00)         79.98 (65.79, 91.23)         24.37           Data not provided         76.80 (65.33, 85.47)         3.21           Takamur (2022)         76.80 (65.33, 85.47)         3.21           Beinchon-Romero (2021)         76.80 (65.33, 85.47)         3.6           Beinchon-Romero (2021)         76.80 (65.33, 85.47)         3.6           Beinchon-Romero (2021)         76.80 (65.33, 85.47)         3.6           Beinchon-Romero (2021)         77.80 (75.14, 85.31)         3.8           Hoterogeneity between groups: p = .0.36         77.79 (73.23, 82.05)         100.00				
Data not provided         76.90 (65.33, 85.47)         3.21           Takamura (2022)         82.76 (73.48, 89.26)         3.36           Beinchon-Romaro (2021)         82.78 (73.48, 89.26)         3.36           Bendagha (2019)         80.68 (71.22, 87.57)         3.36           Subtotal (l*2 = %, p = .)         9.38         80.47 (75.14, 85.31)         9.38           Heterogeneity between groups: p = 0.036         77.79 (73.23, 82.05)         100.00				
Takamura (2022)         76.90 (65.32, 85.47)         3.21           Belinchon-Romero (2021)         82.76 (74.84, 89.26)         3.36           Bort.agha (2019)         80.86 (71.22, 87.57)         3.36           Subtolal (172 = .%, p = .)         80.47 (75.14, 85.31)         9.33           Heterogeneily between groups: p = 0.036         77.79 (73.23, 82.05)         100.00	Subtotal (1/2 = 90.89%, p = 0.00)		/9.96 (65./9, 91.23)	24.37
Beinchon-Romer (2021)         The second		1		
BenLapha (2019)         80.98 (71.22, 67.57)         3.36           Subtotal (*2 = %, p = .)         80.447 (75.14, 85.31)         9.38           Heterogenety between groups: p = 0.036         77.79 (73.23, 82.05)         100.00				
Subtrail (I <sup>4</sup> 2 = .%, p = .) Heteropeneity between groups: p = 0.036 Overall (I <sup>4</sup> 2 = .65, 72%, p = 0.00); 77.79 (73.23, 82.05) 100.00			<ul> <li>82.76 (73.48, 89.26)</li> </ul>	
Heterogeneity between groups: p = 0.036 Overall (H2 = 85.72%, p = 0.00); 77.79 (73.23, 82.05) 100.00	BenLagha (2019)	•	<ul> <li>80.68 (71.22, 87.57)</li> </ul>	3.36
Overall (1/2 = 85.72%, p = 0.00); 77.79 (73.23, 82.05) 100.00	Subtotal (I^2 = .%, p = .)	$\diamond$	80.47 (75.14, 85.31)	9.93
-50 0 50 100			77.79 (73.23, 82.05)	100.00
		1	1	
	 0	30	100	

**Supplementary Figure 3**: Forrest plots of pooled odds ratios for the association of variables with liver fibrosis; (A) age (B) male (C) PASI > 10 (D) Psoriatic arthritis (E) Cumulative MTX dose > 1500 mg (F) BMI>30 (G) DM (H) HT (I) DLP (J) Metabolic syndrome

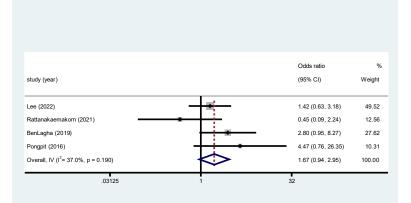


	Odds ratio	
study (year)	(95% CI)	Weię
Lee (2022)	1.67 (0.73, 3.82	7.
Rattanakaemakorn (2021)	2.38 (0.84, 6.79	4.
Rivera (2020)	1.09 (0.67, 1.77	22.
Koch (2020)	1.26 (0.48, 3.34	5
Mahajan (2020)	- 0.39 (0.17, 0.90	8
Kumar (2020)	0.84 (0.30, 2.35	5
Neema (2020)	0.78 (0.27, 2.26	4
BenLagha (2019)	0.88 (0.27, 2.82	4
Maybury (2019)	1.49 (0.78, 2.87	12
Talme (2017)	1.02 (0.56, 1.84	15
Rongngern (2017)	1.08 (0.25, 4.63	2
Pongpit (2016)	1.58 (0.59, 4.22	5
Overall, IV (I <sup>2</sup> = 3.2%, p = 0.413)	1.10 (0.87, 1.39	100



	Odds ratio	%
study (year)	(95% CI)	Weight
Lee (2022)	1.71 (0.69, 4.27)	25.33
Rivera (2020)	0.82 (0.42, 1.58)	48.87
Koch (2020)	3.65 (0.65, 20.36)	7.09
Pongpit (2016)	2.03 (0.70, 5.88)	18.70
Overall, IV (I <sup>2</sup> = 30.6%, p = 0.228)	1.30 (0.82, 2.06)	100.00
	1	
.0625 1	16	

(C)



(H)

study (year)	Odds ratio (95% Cl)	% Weight
Lee (2022)	2.32 (1.02, 5.27)	39.93
BenLagha (2019)	2.82 (0.94, 8.46)	22.36
Rongngern (2017)	1.82 (0.43, 7.70)	12.94
Pongpit (2016)	4.84 (1.71, 13.72)	24.78
Overall, IV (I <sup>2</sup> = 0.0%, p = 0.659)	2.82 (1.68, 4.74)	100.00
.0625	1 16	

(G)

	Odds	ratio %
study (year)	(95%	CI) Weight
	-	
Lee (2022)	10.21	(3.98, 26.22) 13.78
Rattanakaemakorn (2021)	5.28 (	(1.80, 15.50) 10.56
Rivera (2020)	<b>→</b> 12.99	(6.66, 25.33) 27.43
Koch (2020)	5.57 (	(1.10, 29.30) 4.55
BenLagha (2019)	1.86 (	0.56, 6.20) 8.44
Talme (2017)	3.37 (	1.52, 7.77) 18.40
Rongngern (2017)	4.17 (	0.91, 19.18) 5.27
Pongpit (2016)	5.68 (	2.03, 15.90) 11.56
Overall, IV (I <sup>2</sup> = 42.4%, p = 0.095)	6.23 (	4.39, 8.84) 100.00
03105	1 32	
.03125	1 32	

(F)

	(	Odds ratio	9
study (year)		95% CI)	Weigh
Lee (2022)	a	3.33 (2.42, 28.66)	12.56
Rattanakaemakorn(2021)		2.56 (0.70, 9.30)	11.53
Koch (2020)		.52 (0.54, 4.22)	18.28
BenLagha (2019)		.68 (0.46, 6.11)	11.50
Talme (2017)	e	5.53 (2.94, 10.68)	46.13
Overall, IV (I <sup>2</sup> = 48.8%, p = 0.099)		8.67 (2.37, 5.68)	100.00

	Odds ratio	%
tudy (year)	(95% CI)	Weight
.ee (2022)	3.85 (1.65, 8.94)	32.44
Rattanakaemakorn (2021)	4.70 (1.66, 13.33)	21.29
BenLagha (2019)	1.73 (0.56, 5.39)	18.00
Rongngern (2017)	1.64 (0.38, 6.97)	11.03
Pongpit (2016)	3.26 (1.02, 10.40)	17.25
Overall, IV (l <sup>2</sup> = 0.0%, p = 0.622)	3.08 (1.90, 4.98)	100.00
	1 16	

(I)

		%
study (year)	Odds ratio (95% CI)	Weight
Rivera (2020)	8.49 (3.82, 18.89)	38.84
Neema (2020)	3.54 (1.30, 9.67)	24.62
BenLagha (2019)	6.84 (2.17, 21.54)	18.89
Rongngern (2017)	2.38 (0.55, 10.20)	11.70
Pongpit (2016)	20.86 (2.71, 160.91)	5.95
Overall, IV (I <sup>2</sup> = 17.0%, p = 0.307)	5.98 (3.63, 9.83)	100.00
.0078125 1	128	

(J)