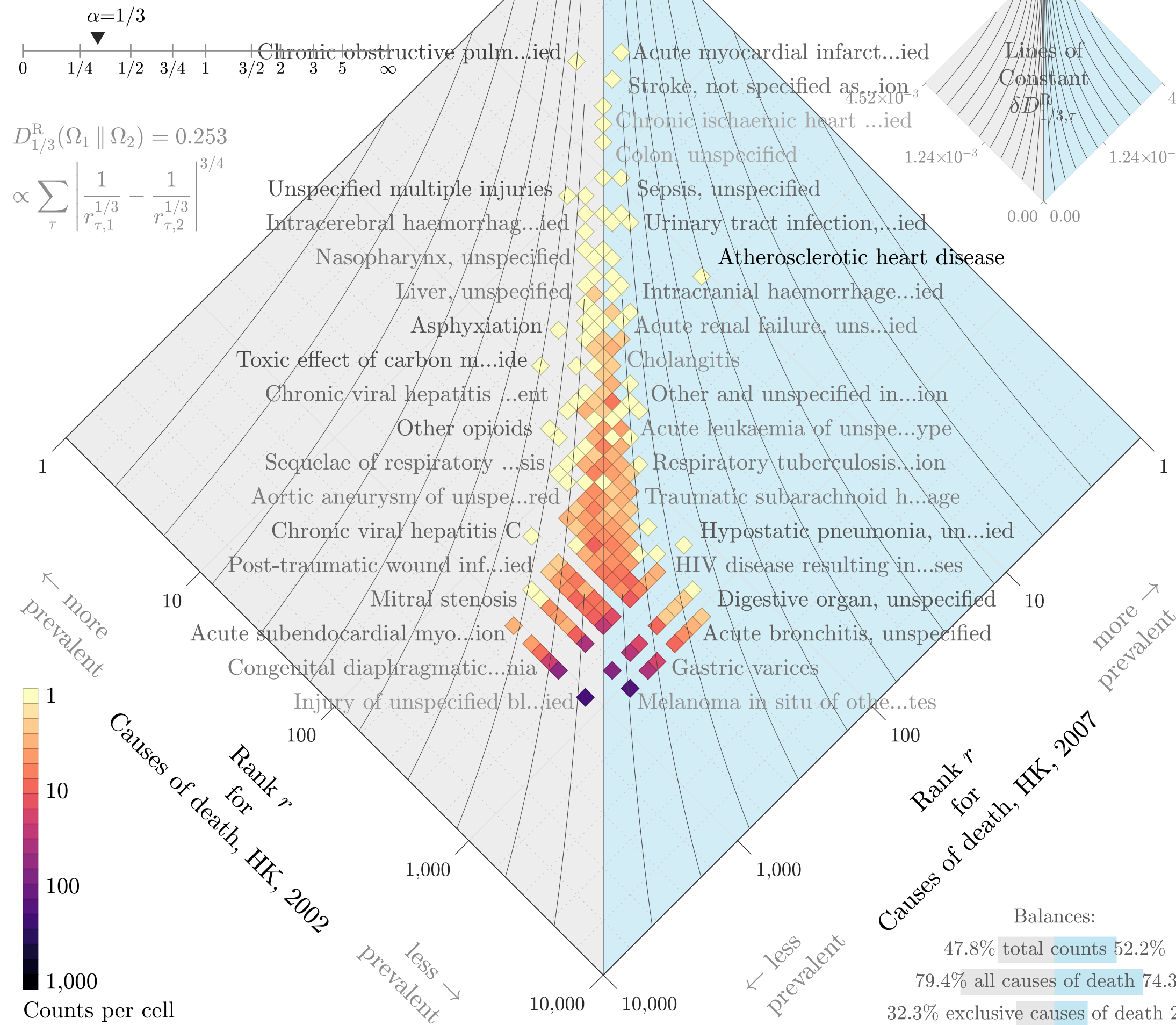


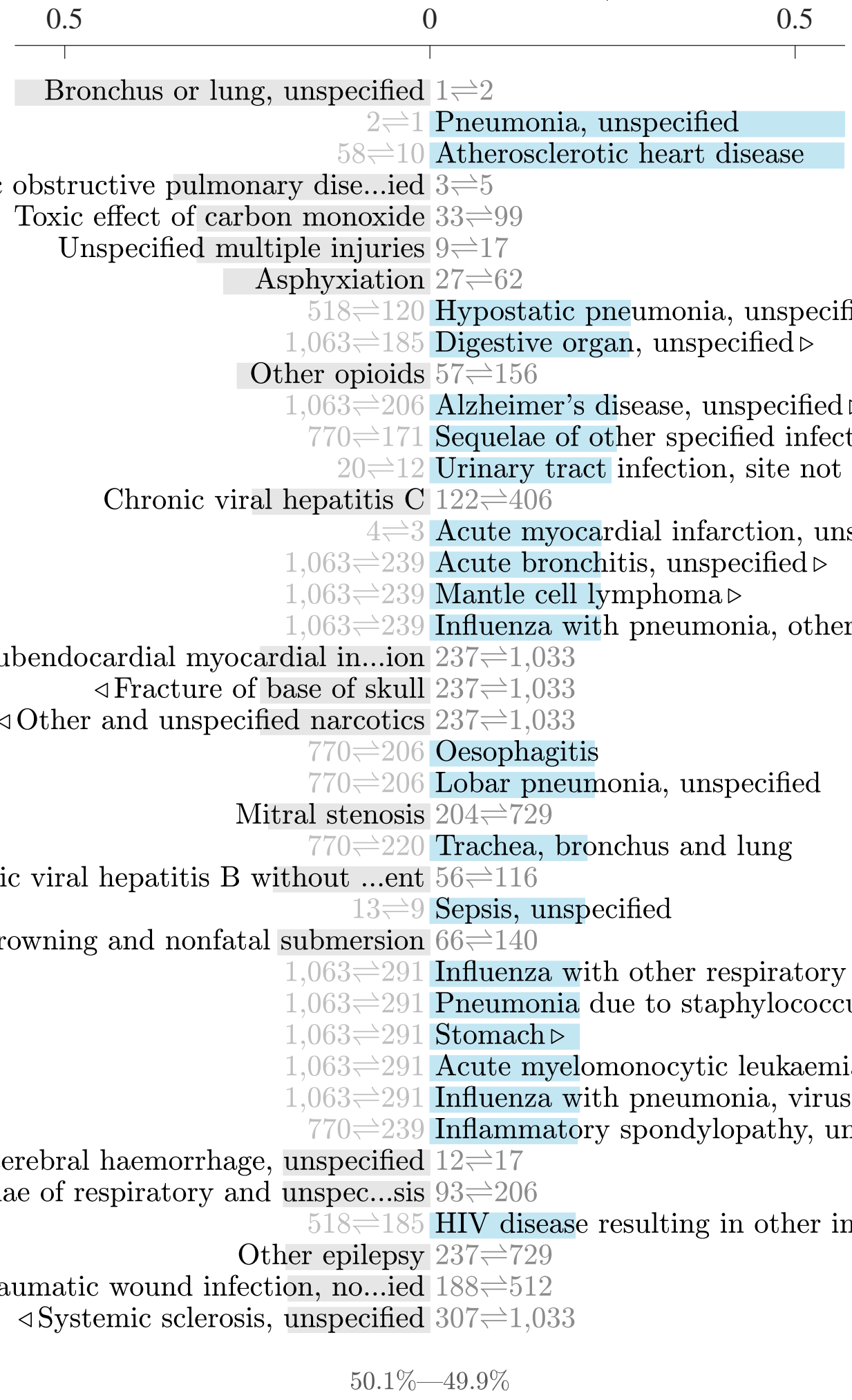
Ω_1 : Causes of death, HK, 2002

Ω_2 : Causes of death, HK, 2007

Instrument: Rank-Turbulence Divergence



Divergence contribution $\delta D_{1/3,\tau}^R$ (%)

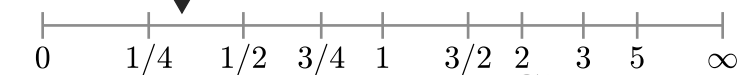


Ω_1 : Causes of death, HK, 2003

Ω_2 : Causes of death, HK, 2008

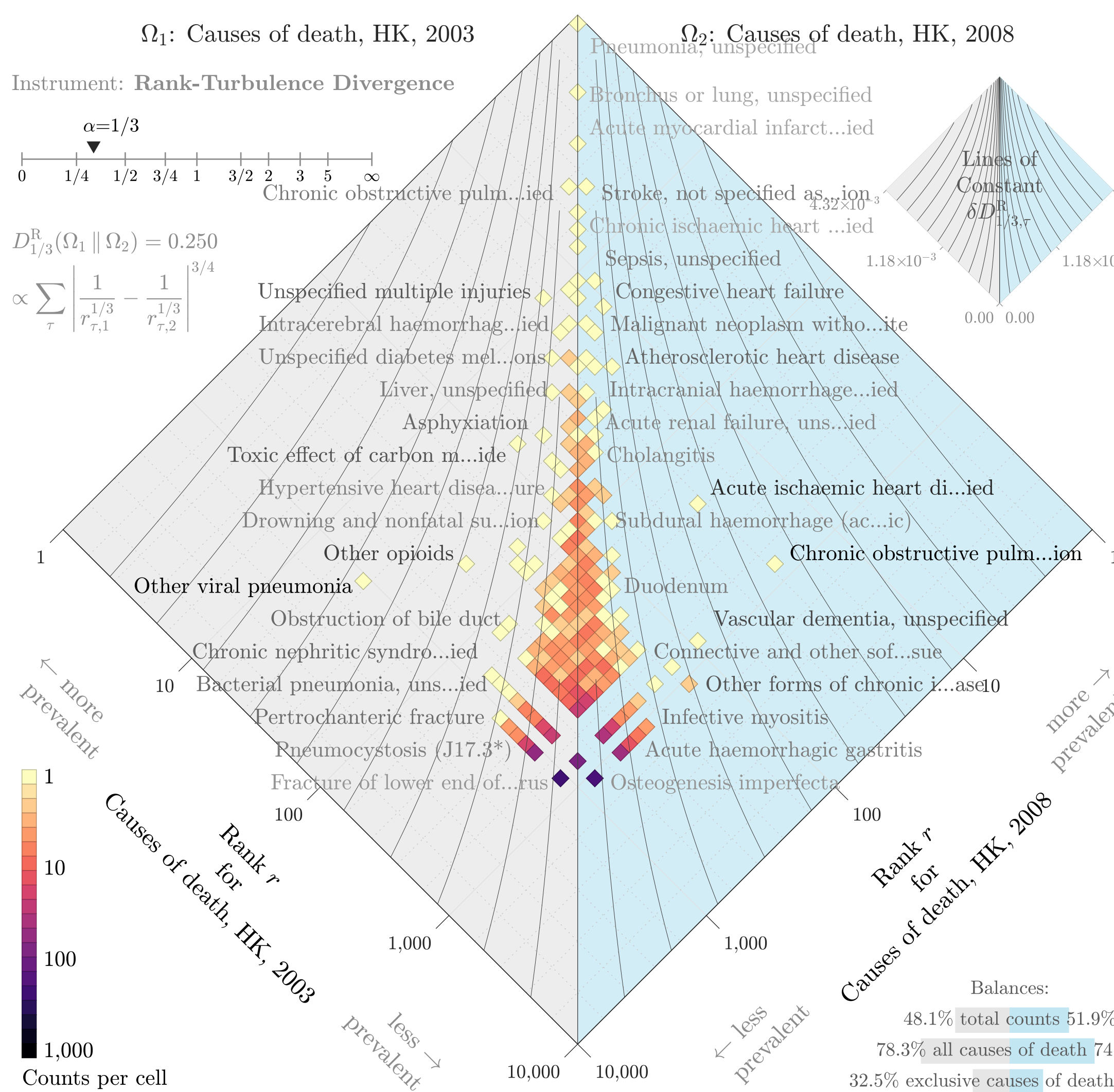
Instrument: Rank-Turbulence Divergence

$\alpha=1/3$



$$D_{1/3}^R(\Omega_1 \parallel \Omega_2) = 0.250$$

$$\propto \sum_{\tau} \left| \frac{1}{r_{\tau,1}^{1/3}} - \frac{1}{r_{\tau,2}^{1/3}} \right|^{3/4}$$



Divergence contribution $\delta D_{1/3,\tau}^R$ (%)



Other viral pneumonia	24	1,104
Chronic obstructive pulmonary disease	797	22
Acute ischaemic heart disease, unspecified	235	27
Other opioids	46	349
Vascular dementia, unspecified	797	86
Toxic effect of carbon monoxide	28	82
Other forms of chronic ischaemic heart disease	1,128	140
Disorder of skin and subcutaneous tissue	1,128	140
Unspecified multiple injuries	9	17
Fluid overload	797	157
Chronic viral hepatitis B without cirrhosis	66	202
Chronic nephritic syndrome, unspecified	159	772
Chronic viral hepatitis C	130	530
Atherosclerotic heart disease	34	18
Congestive heart failure	16	10
Other specified chronic obstructive pulmonary disease	83	233
Bacterial pneumonia, unspecified	187	772
Asphyxiation	30	59
Obstruction of bile duct	130	417
Pertrochanteric fracture	254	1,104
Influenza with pneumonia, other influenza viruses	797	214
Old myocardial infarction	93	233
Connective and other soft tissue diseases	529	167
Sequelae of respiratory and circulatory diseases	92	214
Calculus of bile duct with cholangitis	235	772
Infective myositis	1,128	306
Accessory sinus, unspecified	1,128	306
Secondary malignant neoplasm of other sites	1,128	306
Other specified general symptoms and signs	1,128	306
Discoid lupus erythematosus	309	1,104
Influenza with pneumonia, virus not identified	309	1,104
Fracture of base of skull	309	1,104
Retropharyngeal and parapharyngeal abscess	309	1,104
Oesophagitis	797	255
Malignant neoplasm without specification of site	20	14
Herbicides and fungicides	254	772
Cerebral infarction due to thromboembolism	196	530
Extreme immaturity	529	202
Alzheimer's disease, unspecified	529	202
Chronic passive congestion of liver	1,128	349

Balances:

48.1% total counts 51.9%
 78.3% all causes of death 74.5%
 32.5% exclusive causes of death 29.1%

49.7%—50.3%

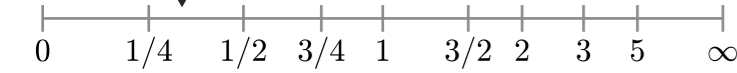
Ω_1 : Causes of death, HK, 2004

Ω_2 : Causes of death, HK, 2009

Divergence contribution $\delta D_{1/3,\tau}^R$ (%)

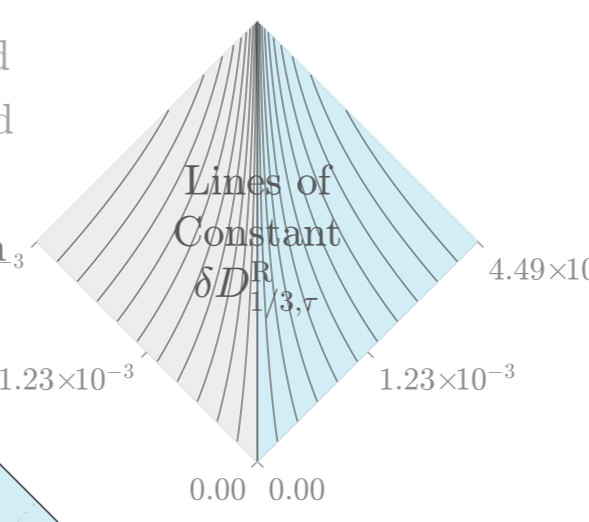
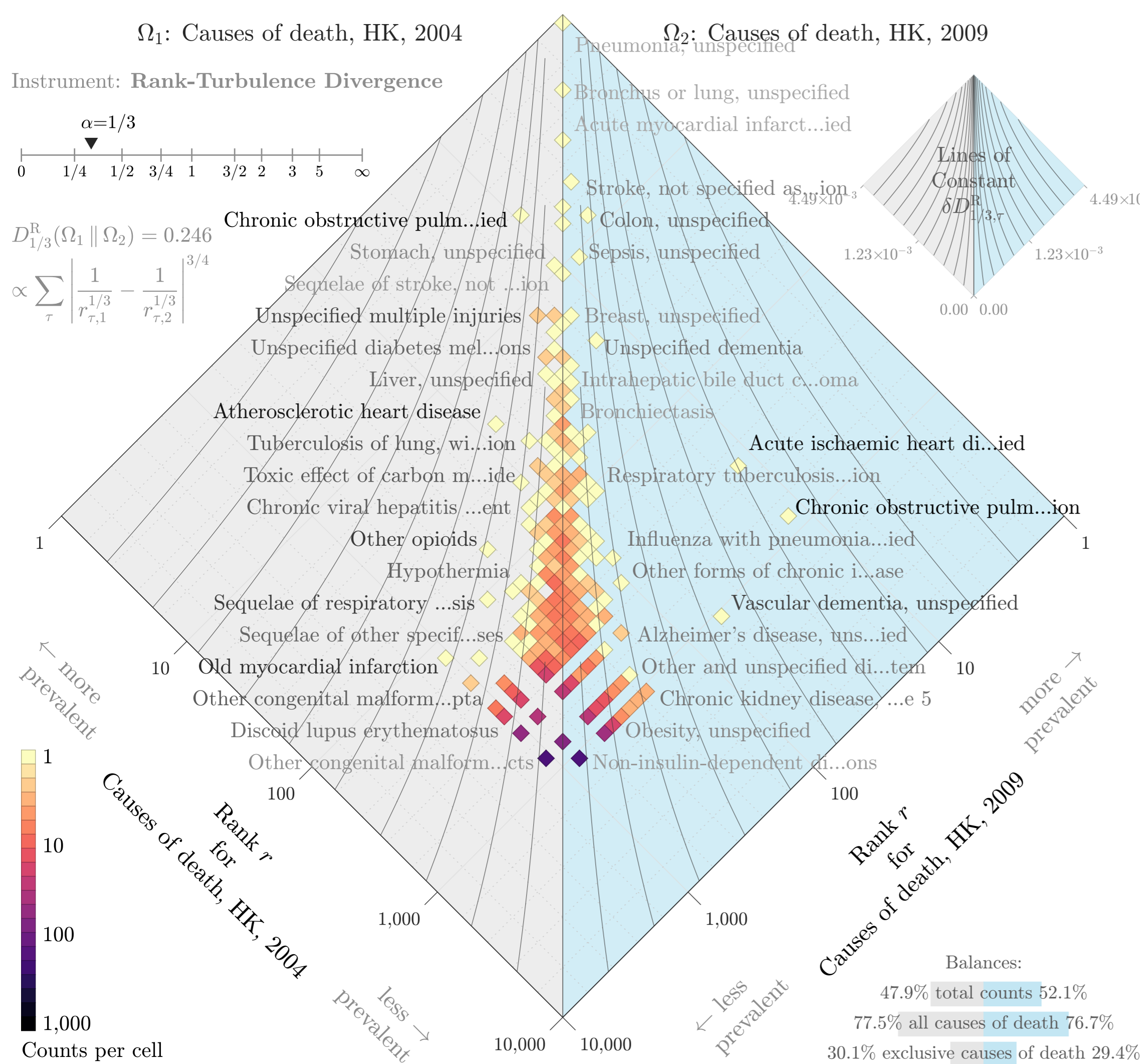
Instrument: Rank-Turbulence Divergence

$\alpha=1/3$



$$D_{1/3}^R(\Omega_1 \parallel \Omega_2) = 0.246$$

$$\propto \sum_{\tau} \left| \frac{1}{r_{\tau,1}^{1/3}} - \frac{1}{r_{\tau,2}^{1/3}} \right|^{3/4}$$



758 ⇌ 13	Chronic obstructive pulmonary disease, unspecified
297 ⇌ 12	Acute ischaemic heart disease, unspecified
1,060 ⇌ 59	Vascular dementia, unspecified
4 ⇌ 9	Chronic obstructive pulmonary disease, unspecified
23 ⇌ 85	Atherosclerotic heart disease
131 ⇌ 1,055	Old myocardial infarction
71 ⇌ 279	Other opioids
8 ⇌ 5	Colon, unspecified
101 ⇌ 414	Sequelae of respiratory and unspecified infections
190 ⇌ 1,055	Scoliosis, unspecified
190 ⇌ 1,055	Hypostatic pneumonia, unspecified
12 ⇌ 21	Unspecified multiple injuries
171 ⇌ 752	Calculus of bile duct with cholangitis
26 ⇌ 15	Unspecified dementia
1,060 ⇌ 219	Chronic kidney disease, stage 5
1,060 ⇌ 235	Malignant neoplasm, unspecified
1,060 ⇌ 235	Connective and other soft tissue disorders
238 ⇌ 89	Influenza with pneumonia, other influenzae
330 ⇌ 113	Other forms of chronic ischaemic heart disease
1,060 ⇌ 254	Inflammatory disorders of other spinal cord segments
1,060 ⇌ 254	Pneumonia due to staphylococcus
1,060 ⇌ 254	Other specified general symptoms and signs
37 ⇌ 71	Tuberculosis of lung, without mention of meningitis
517 ⇌ 162	Alzheimer's disease, unspecified
13 ⇌ 20	Intracerebral haemorrhage, unspecified
758 ⇌ 219	Other and unspecified disorders of the circulatory system
51 ⇌ 100	Toxic effect of carbon monoxide
517 ⇌ 177	Hyperlipidaemia, unspecified
125 ⇌ 317	Cerebral infarction due to embolism and thrombosis
74 ⇌ 155	Chronic viral hepatitis B without mention of cirrhosis
297 ⇌ 1,055	Other congenital malformations of the circulatory system
1,060 ⇌ 317	Follicular lymphoma, unspecified
1,060 ⇌ 317	Gastroenteritis and colitis of unspecified site
1,060 ⇌ 317	Legionnaires' disease
101 ⇌ 55	Respiratory tuberculosis unspecified
758 ⇌ 254	Peripheral T-cell lymphoma, not classified
758 ⇌ 254	Diverticular disease of intestine, unspecified
397 ⇌ 162	Chronic hepatitis, unspecified
397 ⇌ 162	Lobar pneumonia, unspecified
397 ⇌ 162	Mesothelioma, unspecified

Balances:
 47.9% total counts 52.1%
 77.5% all causes of death 76.7%
 30.1% exclusive causes of death 29.4%

50.6%—49.4%

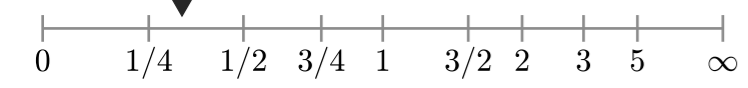
Ω_1 : Causes of death, HK, 2005

Ω_2 : Causes of death, HK, 2010

Divergence contribution $\delta D_{1/3,\tau}^R$ (%)

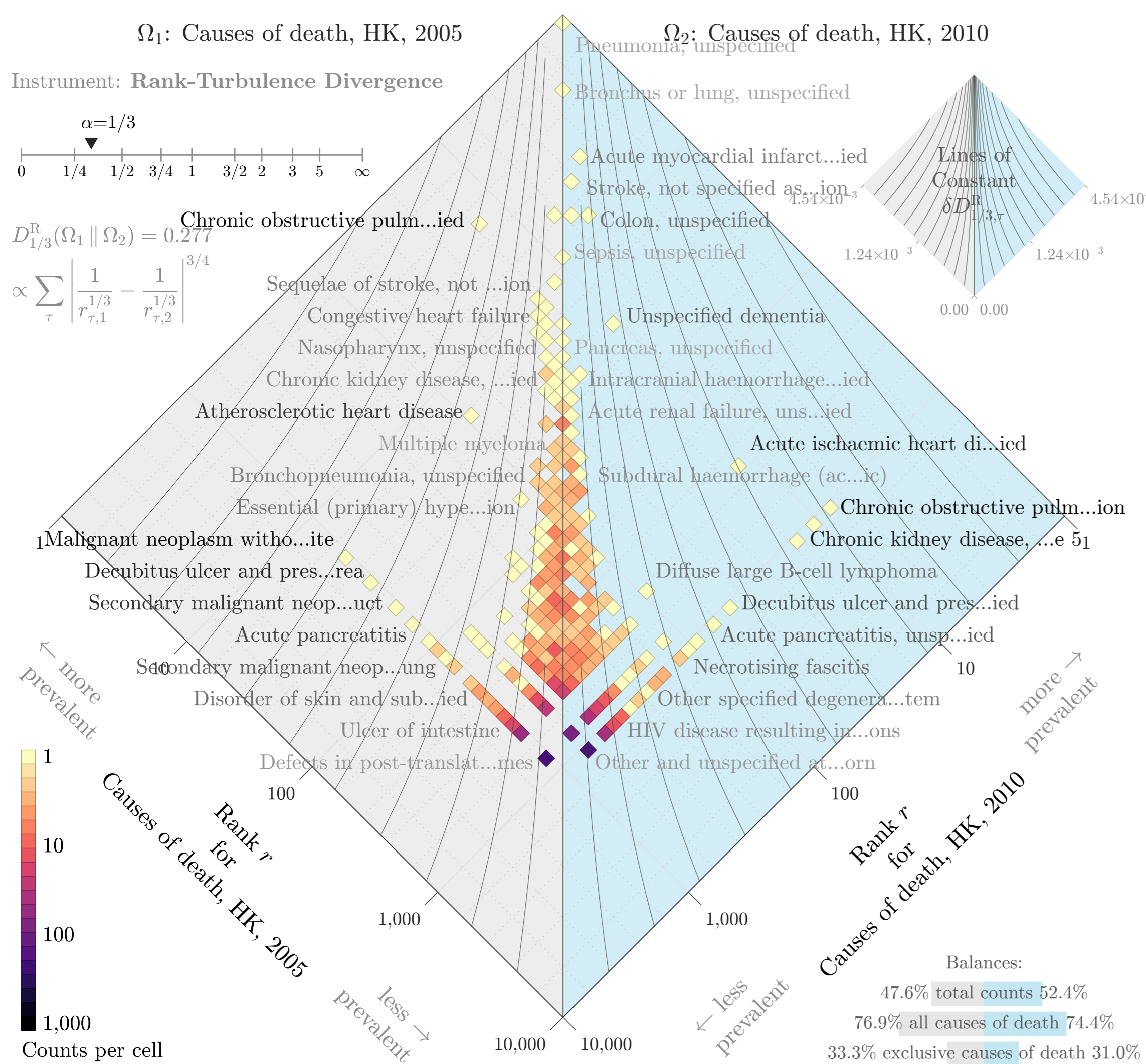
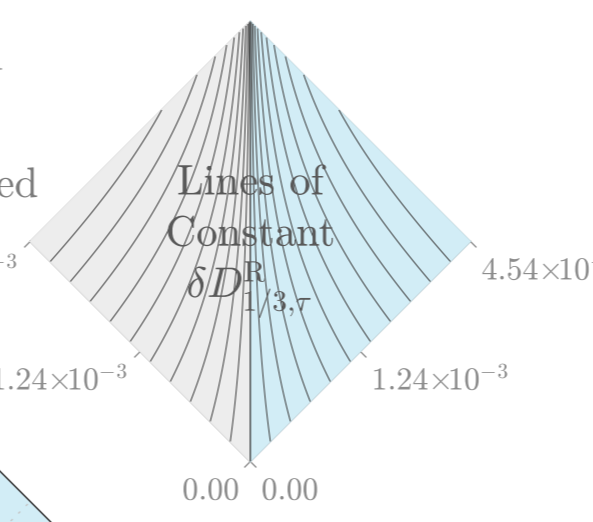
Instrument: Rank-Turbulence Divergence

$\alpha=1/3$



$$D_{1/3}^R(\Omega_1 \parallel \Omega_2) = 0.277$$

$$\propto \sum_{\tau} \left| \frac{1}{r_{\tau,1}^{1/3}} - \frac{1}{r_{\tau,2}^{1/3}} \right|^{3/4}$$



Divergence contribution $\delta D_{1/3,\tau}^R$ (%)								
0.8	0.6	0.4	0.2	0	0.2	0.4	0.6	0.8
1,059 \Rightarrow 8 Chronic obstructive pulmonary disease, unspecified \triangleright								
1,059 \Rightarrow 11 Malignant neoplasm, unspecified \triangleright								
1,059 \Rightarrow 14 Chronic kidney disease, stage 5 \triangleright								
Chronic obstructive pulmonary disease, unspecified \triangleright 3 \Rightarrow 15								
302 \Rightarrow 12 Acute ischaemic heart disease, unspecified \triangleright								
\triangleleft Malignant neoplasm without specification of site 19 \Rightarrow 1,044								
\triangleleft Decubitus ulcer and pressure area 33 \Rightarrow 1,044								
\triangleleft Secondary malignant neoplasm of lymphoid tissue 47 \Rightarrow 1,044								
1,059 \Rightarrow 49 Decubitus ulcer and pressure area, unspecified \triangleright								
Atherosclerotic heart disease 17 \Rightarrow 88								
1,059 \Rightarrow 72 Acute pancreatitis, unspecified \triangleright								
\triangleleft Acute pancreatitis 72 \Rightarrow 1,044								
26 \Rightarrow 10 Unspecified dementia								
\triangleleft Secondary malignant neoplasm of bronchus 97 \Rightarrow 1,044								
1,059 \Rightarrow 98 Vascular dementia, unspecified \triangleright								
\triangleleft Secondary malignant neoplasm of bone and articular cartilage 106 \Rightarrow 1,044								
\triangleleft Old myocardial infarction 112 \Rightarrow 1,044								
1,059 \Rightarrow 114 Gastroenteritis and colitis of unspecified site \triangleright								
1,059 \Rightarrow 118 Necrotising fasciitis \triangleright								
\triangleleft Secondary malignant neoplasm of lung 123 \Rightarrow 1,044								
1,059 \Rightarrow 134 Malignant neoplasm, primary site unspecified \triangleright								
\triangleleft Secondary malignant neoplasm of rectum 138 \Rightarrow 1,044								
Cerebral infarction due to embolism and thrombosis 118 \Rightarrow 725								
399 \Rightarrow 89 Diffuse large B-cell lymphoma								
\triangleleft Secondary malignant neoplasm of pleura 158 \Rightarrow 1,044								
8 \Rightarrow 5 Colon, unspecified								
1,059 \Rightarrow 163 Other secondary pulmonary hypertension \triangleright								
738 \Rightarrow 134 Chronic obstructive pulmonary disease, unspecified \triangleright								
1,059 \Rightarrow 171 Other specified general symptoms and signs \triangleright								
1,059 \Rightarrow 171 Pneumonia due to staphylococcus \triangleright								
Primary pulmonary hypertension 142 \Rightarrow 725								
1,059 \Rightarrow 191 Chronic ulcer of skin, not elsewhere specified \triangleright								
\triangleleft Cerebral infarction due to thrombosis 198 \Rightarrow 1,044								
\triangleleft Acute bronchitis, unspecified 198 \Rightarrow 1,044								
1,059 \Rightarrow 205 Other forms of chronic ischaemic heart disease \triangleright								
1,059 \Rightarrow 205 Other specified symptoms and signs \triangleright								
Noninfective gastroenteritis and colitis 175 \Rightarrow 725								
\triangleleft Disorder of skin and subcutaneous tissue 223 \Rightarrow 1,044								
738 \Rightarrow 181 Connective and other soft tissue								
1,059 \Rightarrow 230 Other specified degenerative diseases \triangleright								
Balances:								
47.6% total counts 52.4%								
76.9% all causes of death 74.4%								
33.3% exclusive causes of death 31.0%								
50.6%—49.4%								

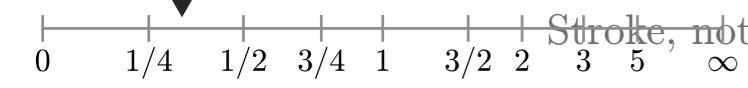
Ω_1 : Causes of death, HK, 2006

Ω_2 : Causes of death, HK, 2011

Divergence contribution $\delta D_{1/3,\tau}^R$ (%)

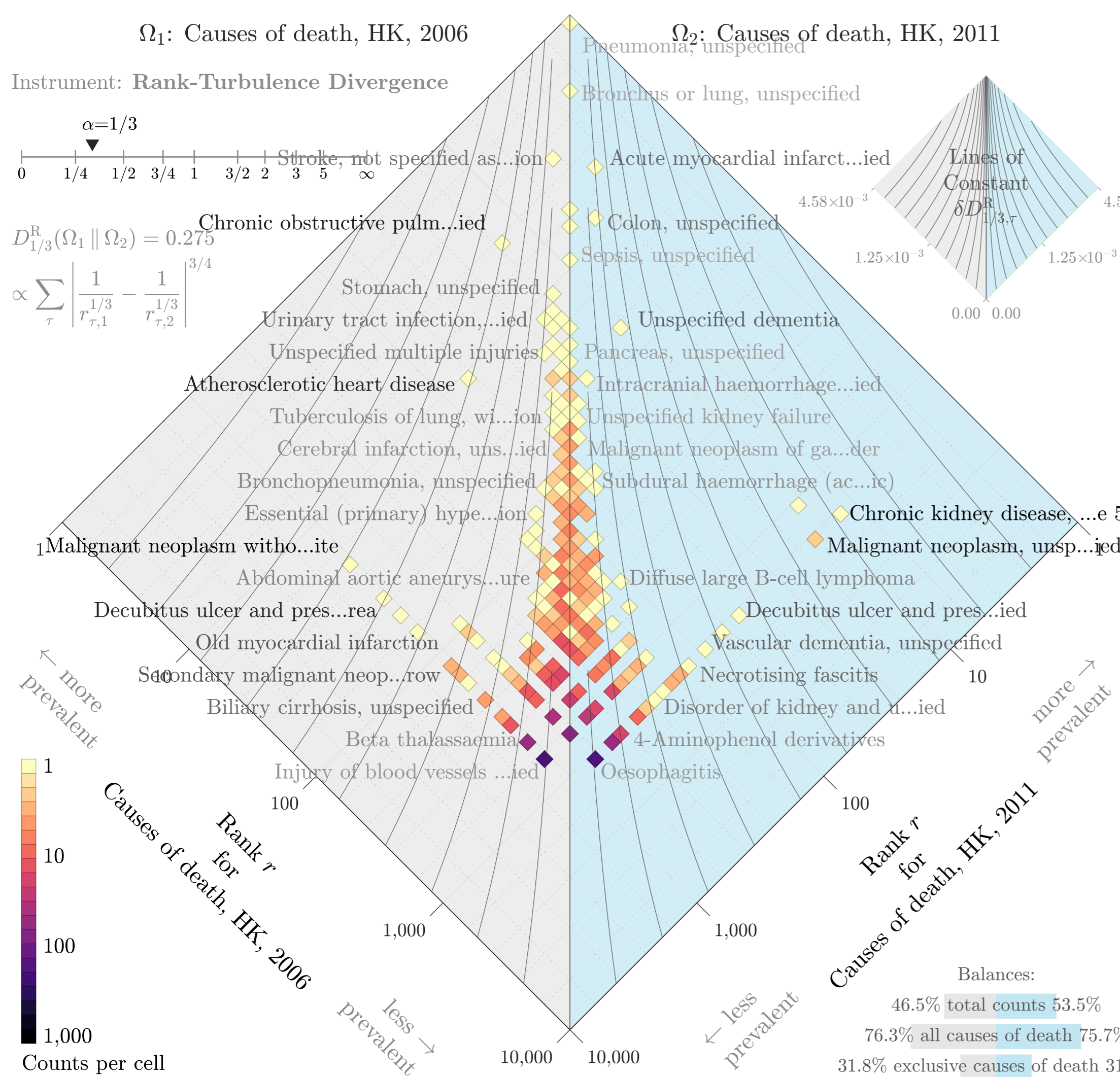
Instrument: Rank-Turbulence Divergence

$\alpha=1/3$



$$D_{1/3}^R(\Omega_1 \parallel \Omega_2) = 0.275$$

$$\propto \sum_{\tau} \left| \frac{1}{r_{\tau,1}^{1/3}} - \frac{1}{r_{\tau,2}^{1/3}} \right|^{3/4}$$



- 1,038 \Rightarrow 8 Chronic kidney disease, stage 5 \triangleright
- 728 \Rightarrow 11 Acute ischaemic heart disease, unspecified \triangleright
- 1,038 \Rightarrow 12 Malignant neoplasm, unspecified \triangleright
- 1,038 \Rightarrow 13 Chronic obstructive pulmonary disease, unspecified \triangleright
- \triangleleft Malignant neoplasm without specification of site \triangleright 19 \Rightarrow 1,034
- Chronic obstructive pulmonary disease, unspecified 4 \Rightarrow 15
- Atherosclerotic heart disease 11 \Rightarrow 72
- \triangleleft Decubitus ulcer and pressure area \triangleright 38 \Rightarrow 1,034
- \triangleleft Secondary malignant neoplasm of liver \triangleright 48 \Rightarrow 1,034
- 1,038 \Rightarrow 52 Decubitus ulcer and pressure area, unspecified \triangleright
- \triangleleft Acute pancreatitis \triangleright 64 \Rightarrow 1,034
- 1,038 \Rightarrow 65 Acute pancreatitis, unspecified \triangleright
- 28 \Rightarrow 10 Unspecified dementia
- 1,038 \Rightarrow 98 Vascular dementia, unspecified \triangleright
- Secondary malignant neoplasm of bronchus \triangleright 86 \Rightarrow 731
- 5 \Rightarrow 3 Acute myocardial infarction, unspecified
- \triangleleft Old myocardial infarction \triangleright 117 \Rightarrow 1,034
- 1,038 \Rightarrow 120 Necrotising fasciitis \triangleright
- \triangleleft Secondary malignant neoplasm of bone \triangleright 121 \Rightarrow 1,034
- Cerebral infarction due to embolism \triangleright 103 \Rightarrow 731
- Sequelae of respiratory and unspecified infection \triangleright 105 \Rightarrow 731
- \triangleleft Secondary malignant neoplasm of pleura \triangleright 131 \Rightarrow 1,034
- \triangleleft Noninfective gastroenteritis and colitis \triangleright 139 \Rightarrow 1,034
- \triangleleft Secondary malignant neoplasm of lung \triangleright 139 \Rightarrow 1,034
- \triangleleft Secondary malignant neoplasm of rectum \triangleright 139 \Rightarrow 1,034
- 1,038 \Rightarrow 148 Gastroenteritis and colitis of unspecified site \triangleright
- 1,038 \Rightarrow 148 Other specified symptoms and signs \triangleright
- 1,038 \Rightarrow 154 Other specified general symptoms and signs \triangleright
- 1,038 \Rightarrow 160 Chronic obstructive pulmonary disease, unspecified \triangleright
- 8 \Rightarrow 5 Colon, unspecified
- Sudden cardiac death, so described \triangleright 135 \Rightarrow 731
- 1,038 \Rightarrow 172 Chronic viral hepatitis B without cirrhosis \triangleright
- \triangleleft Secondary malignant neoplasm of otitis \triangleright 176 \Rightarrow 1,034
- 1,038 \Rightarrow 181 Influenza due to identified avian influenza virus \triangleright
- Urinary tract infection, site not specified \triangleright 12 \Rightarrow 21
- Primary pulmonary hypertension \triangleright 159 \Rightarrow 731
- 1,038 \Rightarrow 205 Other secondary pulmonary hypertension \triangleright
- \triangleleft Biliary cirrhosis, unspecified \triangleright 221 \Rightarrow 1,034
- 728 \Rightarrow 181 Connective and soft tissue of abdomen
- 1,038 \Rightarrow 231 Disorder of kidney and ureter, unspecified \triangleright

Balances:
 46.5% total counts 53.5%
 76.3% all causes of death 75.7%
 31.8% exclusive causes of death 31.3%

51.0%—49.0%

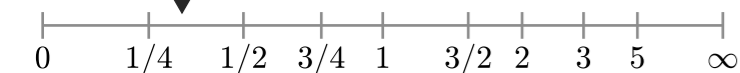
Ω_1 : Causes of death, HK, 2007

Ω_2 : Causes of death, HK, 2012

Divergence contribution $\delta D_{1/3,\tau}^R$ (%)

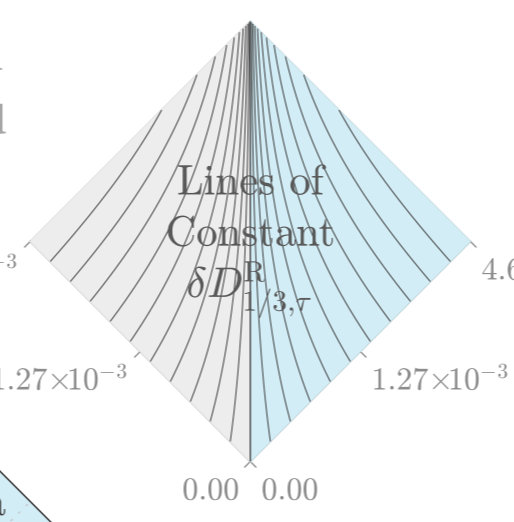
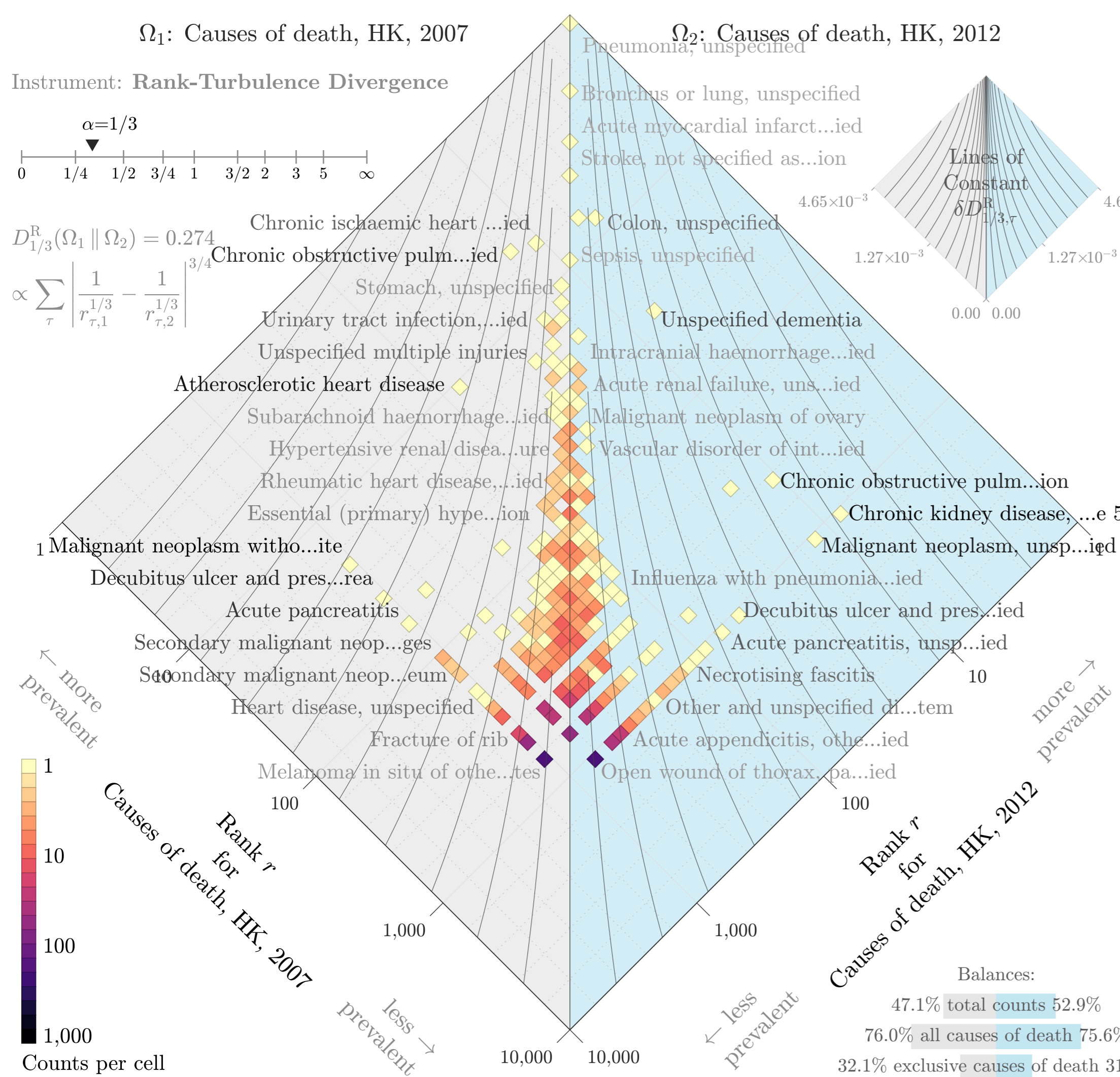
Instrument: Rank-Turbulence Divergence

$\alpha=1/3$



$$D_{1/3}^R(\Omega_1 \parallel \Omega_2) = 0.274$$

$$\propto \sum_{\tau} \left| \frac{1}{r_{\tau,1}^{1/3}} - \frac{1}{r_{\tau,2}^{1/3}} \right|^{3/4}$$



1,020	8	Chronic kidney disease, stage 5
1,020	13	Malignant neoplasm, unspecified
406	11	Chronic obstructive pulmonary disease
20	1,018	Malignant neoplasm without specification of site
336	18	Acute ischaemic heart disease, unspecified
10	79	Atherosclerotic heart disease
35	1,018	Decubitus ulcer and pressure area
29	7	Unspecified dementia
5	15	Chronic obstructive pulmonary disease
1,020	54	Decubitus ulcer and pressure area, unspecified
56	1,018	Acute pancreatitis
54	714	Secondary malignant neoplasm of liver
1,020	68	Acute pancreatitis, unspecified
1,020	89	Vascular dementia, unspecified
729	79	Diffuse large B-cell lymphoma
101	1,018	Secondary malignant neoplasm of bronchus
102	1,018	Secondary malignant neoplasm of bone marrow
1,020	108	Gastroenteritis and colitis of unspecified site
111	1,018	Secondary malignant neoplasm of pleura
120	1,018	Hypostatic pneumonia, unspecified
1,020	126	Necrotising fasciitis
134	1,018	Secondary malignant neoplasm of rectum
116	714	Noninfective gastroenteritis and colitis
140	1,018	Old myocardial infarction
1,020	151	Connective and other soft tissue
152	1,018	Sudden cardiac death, so described
1,020	157	Other specified general symptoms and signs
106	494	Cerebral infarction due to embolism
8	5	Colon, unspecified
1,020	166	Other specified symptoms and signs
1,020	166	Chronic ulcer of skin, not elsewhere specified
729	143	Chronic obstructive pulmonary disease
73	234	Heroin
185	1,018	Disorder of skin and subcutaneous tissue
1,020	186	Other forms of chronic ischaemic heart disease
12	21	Urinary tract infection, site not specified
1,020	194	Other secondary pulmonary hypertension
1,020	194	Connective and soft tissue of abdomen
17	31	Unspecified multiple injuries

Balances:
 47.1% total counts 52.9%
 76.0% all causes of death 75.6%
 32.1% exclusive causes of death 31.7%

50.5%—49.5%

Ω_1 : Causes of death, HK, 2008

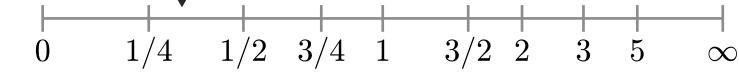
Ω_2 : Causes of death, HK, 2013

Divergence contribution $\delta D_{1/3,\tau}^R$ (%)

Instrument: Rank-Turbulence Divergence

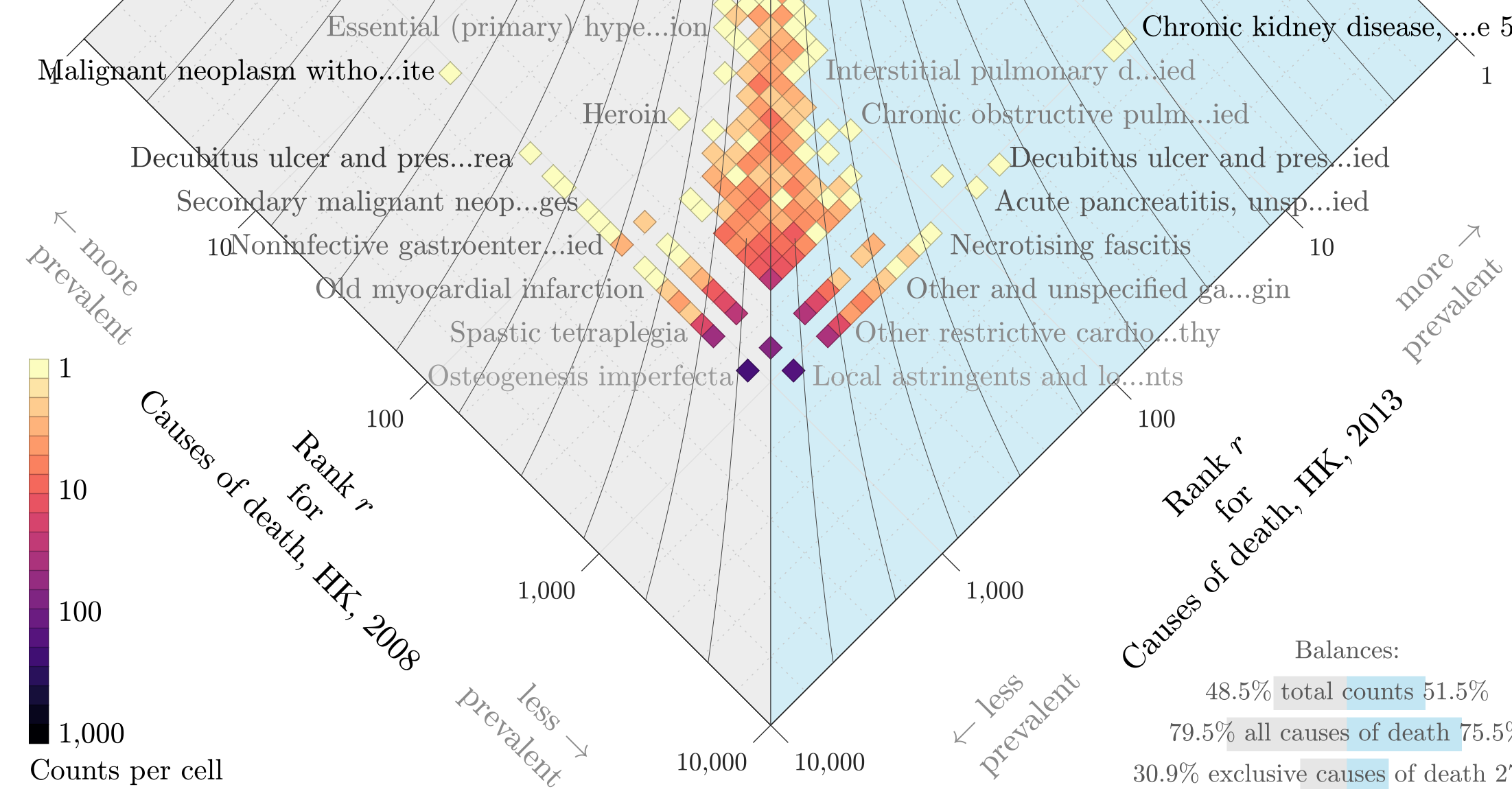
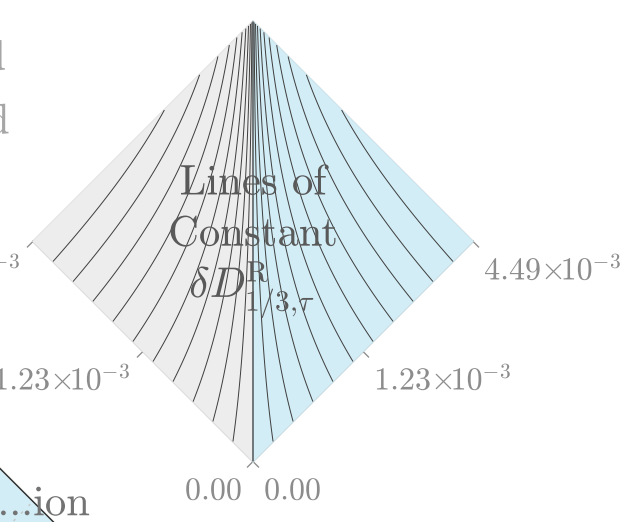


$\alpha=1/3$



$$D_{1/3}^R(\Omega_1 \parallel \Omega_2) = 0.258$$

$$\propto \sum_{\tau} \left| \frac{1}{r_{\tau,1}^{1/3}} - \frac{1}{r_{\tau,2}^{1/3}} \right|^{3/4}$$



1,065 \rightleftharpoons 9	Chronic kidney disease, stage 5
1,065 \rightleftharpoons 11	Malignant neoplasm, unspecified
14 \rightleftharpoons 1,041	Malignant neoplasm without specification of site
5 \rightleftharpoons 20	Chronic obstructive pulmonary disease, unspecified
40 \rightleftharpoons 1,041	Decubitus ulcer and pressure area
20 \rightleftharpoons 6	Unspecified dementia
1,065 \rightleftharpoons 53	Decubitus ulcer and pressure area, unspecified
18 \rightleftharpoons 101	Atherosclerotic heart disease
58 \rightleftharpoons 1,041	Secondary malignant neoplasm of liver
63 \rightleftharpoons 1,041	Acute pancreatitis
1,065 \rightleftharpoons 65	Acute pancreatitis, unspecified
772 \rightleftharpoons 79	Diffuse large B-cell lymphoma
96 \rightleftharpoons 1,041	Secondary malignant neoplasm of bronchus
105 \rightleftharpoons 1,041	Secondary malignant neoplasm of bone
1,065 \rightleftharpoons 117	Necrotising fasciitis
135 \rightleftharpoons 1,041	Noninfective gastroenteritis and colitis
1,065 \rightleftharpoons 139	Gastroenteritis and colitis of unspecified site
140 \rightleftharpoons 1,041	Disorder of skin and subcutaneous tissue
144 \rightleftharpoons 1,041	Secondary malignant neoplasm of pleura
151 \rightleftharpoons 1,041	Secondary malignant neoplasm of rectum
6 \rightleftharpoons 10	Chronic ischaemic heart disease, unspecified
8 \rightleftharpoons 5	Colon, unspecified
1,065 \rightleftharpoons 165	Other secondary pulmonary hypertension
22 \rightleftharpoons 12	Chronic obstructive pulmonary disease, unspecified
1,065 \rightleftharpoons 180	Acute hepatitis B without delta-agent
17 \rightleftharpoons 33	Unspecified multiple injuries
190 \rightleftharpoons 1,041	Sudden cardiac death, so described
157 \rightleftharpoons 745	Pulmonary heart disease, unspecified
157 \rightleftharpoons 745	Secondary malignant neoplasm of lung
93 \rightleftharpoons 304	Heroin
1,065 \rightleftharpoons 213	Other and unspecified gastroenteritis
10 \rightleftharpoons 16	Congestive heart failure
233 \rightleftharpoons 1,041	Old myocardial infarction
13 \rightleftharpoons 21	Sequelae of stroke, not specified as residual or disabling
1,065 \rightleftharpoons 241	Disorder of kidney and ureter, unspecified
1,065 \rightleftharpoons 241	Influenza with other respiratory manifestations
772 \rightleftharpoons 200	Chronic nephritic syndrome, unspecified
772 \rightleftharpoons 200	Intracranial injury, unspecified
306 \rightleftharpoons 112	Chronic obstructive pulmonary disease, unspecified
417 \rightleftharpoons 139	Pneumonia due to staphylococcus

Balances:
 48.5% total counts 51.5%
 79.5% all causes of death 75.5%
 30.9% exclusive causes of death 27.2%

50.1%—49.9%

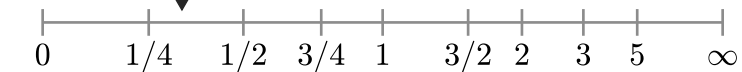
Ω_1 : Causes of death, HK, 2009

Ω_2 : Causes of death, HK, 2014

Divergence contribution $\delta D_{1/3,\tau}^R$ (%)

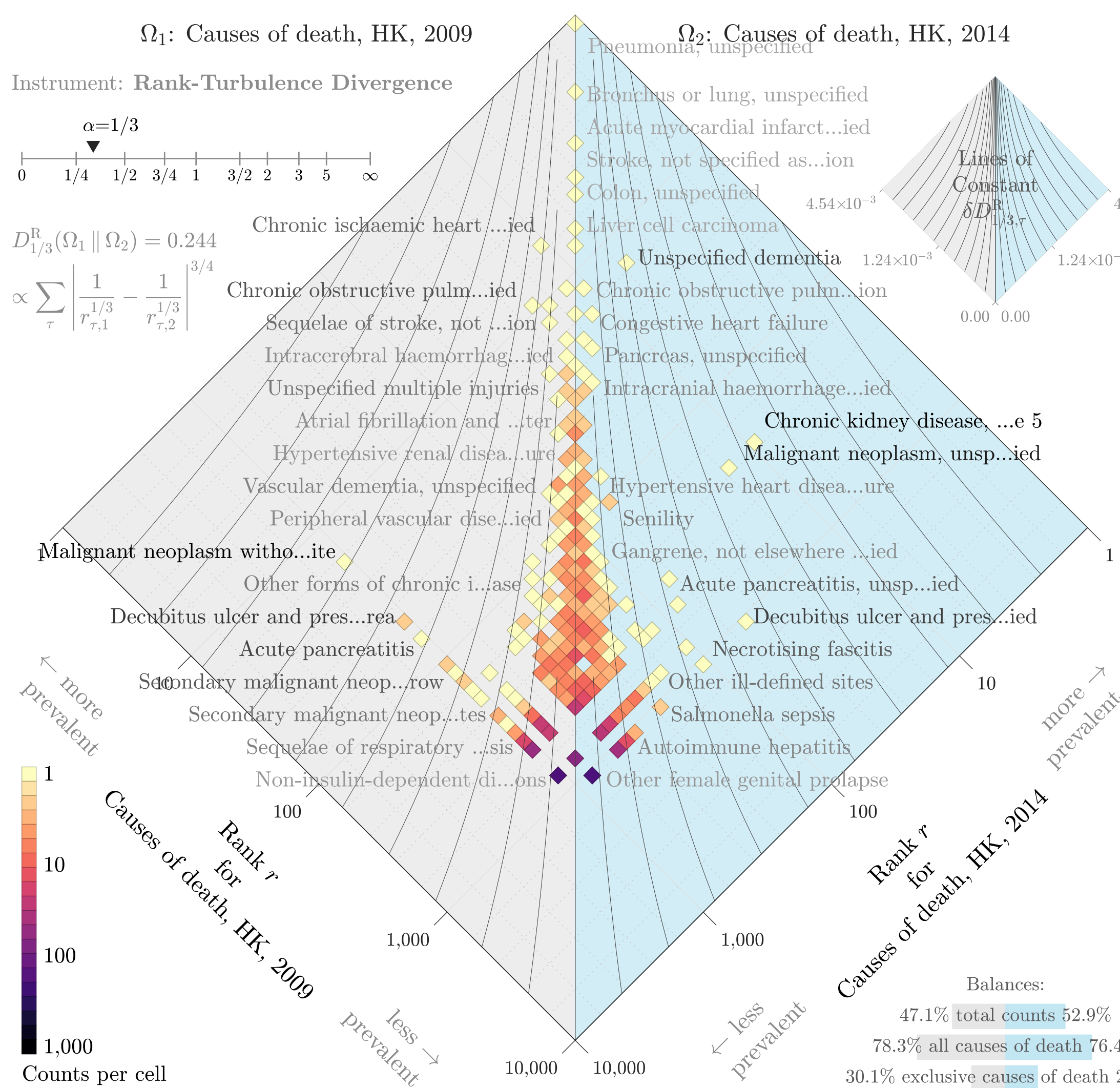
Instrument: Rank-Turbulence Divergence

$\alpha=1/3$



$$D_{1/3}^R(\Omega_1 \parallel \Omega_2) = 0.244$$

$$\propto \sum_{\tau} \left| \frac{1}{r_{\tau,1}^{1/3}} - \frac{1}{r_{\tau,2}^{1/3}} \right|^{3/4}$$



219 \Rightarrow 9	Chronic kidney disease, stage 5
\triangleleft Malignant neoplasm without specific site	17 \Rightarrow 1,032
235 \Rightarrow 14	Malignant neoplasm, unspecified
\triangleleft Decubitus ulcer and pressure area	50 \Rightarrow 1,032
1,043 \Rightarrow 52	Decubitus ulcer and pressure area, unspecified
\triangleleft Secondary malignant neoplasm of liver	52 \Rightarrow 1,032
15 \Rightarrow 6	Unspecified dementia
\triangleleft Acute pancreatitis	70 \Rightarrow 1,032
Chronic obstructive pulmonary disease	9 \Rightarrow 21
1,043 \Rightarrow 108	Necrotising fasciitis
\triangleleft Secondary malignant neoplasm of bronchus	108 \Rightarrow 1,032
\triangleleft Secondary malignant neoplasm of pleura	116 \Rightarrow 1,032
358 \Rightarrow 67	Acute pancreatitis, unspecified
\triangleleft Secondary malignant neoplasm of bone	119 \Rightarrow 1,032
520 \Rightarrow 84	Diffuse large B-cell lymphoma
\triangleleft Noninfective gastroenteritis and colitis	136 \Rightarrow 1,032
752 \Rightarrow 115	Acute hepatitis B without delta-agent
\triangleleft Secondary malignant neoplasm of rectum	145 \Rightarrow 1,032
Chronic ischaemic heart disease, unspecified	6 \Rightarrow 10
\triangleleft Secondary malignant neoplasm of lung	169 \Rightarrow 1,032
\triangleleft Disorder of skin and subcutaneous tissue	185 \Rightarrow 1,032
520 \Rightarrow 124	Chronic ulcer of skin, not elsewhere specified
Chronic hepatitis, unspecified	162 \Rightarrow 736
752 \Rightarrow 174	Other ill-defined sites
Sequelae of stroke, not specified as atherosclerotic	11 \Rightarrow 18
1,043 \Rightarrow 228	Salmonella sepsis
1,043 \Rightarrow 228	Chronic myelomonocytic leukaemia
752 \Rightarrow 194	Other specified disorders of peritoneum
Acute ischaemic heart disease, unspecified	12 \Rightarrow 19
520 \Rightarrow 155	Other secondary pulmonary hypertension
414 \Rightarrow 137	Influenza with pneumonia, virus not specified
\triangleleft Secondary malignant neoplasm of other sites	254 \Rightarrow 1,032
317 \Rightarrow 118	Gastroenteritis and colitis of unspecified origin
752 \Rightarrow 215	Other specified cerebrovascular diseases
Gum, unspecified	219 \Rightarrow 736
Sudden cardiac death, so described	149 \Rightarrow 421
\triangleleft Ventricular tachycardia	279 \Rightarrow 1,032
\triangleleft Other gastroenteritis and colitis of unspecified origin	279 \Rightarrow 1,032
Unspecified diabetes mellitus with complications	177 \Rightarrow 520
752 \Rightarrow 228	Influenza with other respiratory manifestations

Balances:
 47.1% total counts 52.9%
 78.3% all causes of death 76.4%
 30.1% exclusive causes of death 28.4%

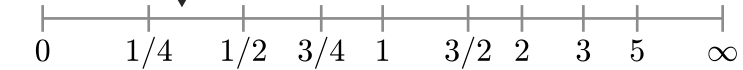
49.6%—50.4%

Ω_1 : Causes of death, HK, 2010

Ω_2 : Causes of death, HK, 2015

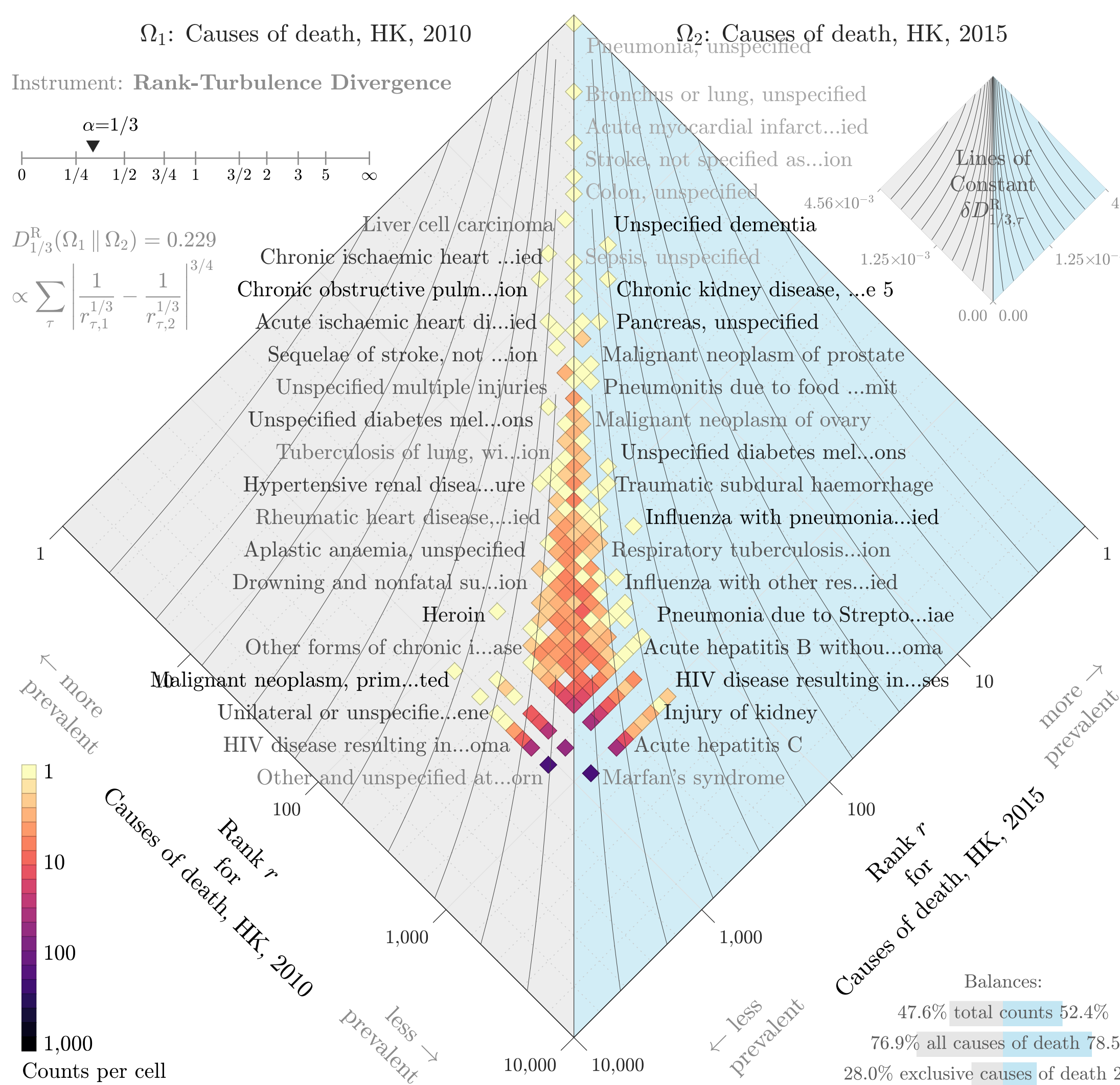
Instrument: Rank-Turbulence Divergence

$\alpha=1/3$

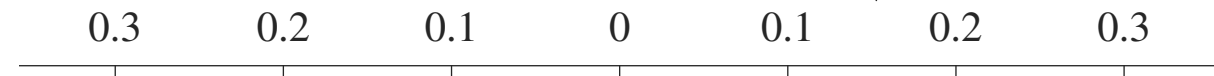


$$D_{1/3}^R(\Omega_1 \parallel \Omega_2) = 0.229$$

$$\propto \sum_{\tau} \left| \frac{1}{r_{\tau,1}^{1/3}} - \frac{1}{r_{\tau,2}^{1/3}} \right|^{3/4}$$



Divergence contribution $\delta D_{1/3,\tau}^R$ (%)



◁ Malignant neoplasm, primary site u...ted	134 ⇌ 1,034
Chronic obstructive pulmon...ion	8 ⇌ 15
10 ⇌ 6	Unspecified dementia
14 ⇌ 8	Chronic kidney disease, stage 5
163 ⇌ 55	Influenza with pneumonia, virus no...ied
Heroin	106 ⇌ 427
21 ⇌ 12	Pancreas, unspecified
1,024 ⇌ 201	HIV disease resulting in other inf...ses ▷
◁ Chronic hepatitis, unspecified	205 ⇌ 1,034
496 ⇌ 136	Pneumonia due to Streptococcus pne...iae
1,024 ⇌ 215	Haemorrhage of anus and rectum ▷
Acute ischaemic heart disease, uns...ied	12 ⇌ 19
1,024 ⇌ 248	Injury of kidney ▷
Injury, unspecified	205 ⇌ 753
Chronic ischaemic heart disease, u...ied	7 ⇌ 10
1,024 ⇌ 266	Aneurysm and dissection of unspeci...ite ▷
1,024 ⇌ 266	Nephrotic syndrome, unspecified ▷
Hypertensive renal disease with re...ure	48 ⇌ 94
◁ Unilateral or unspecified femoral ...ene	273 ⇌ 1,034
79 ⇌ 42	Unspecified diabetes mellitus with...ons
Sequelae of stroke, not specified ...ion	16 ⇌ 25
Unspecified diabetes mellitus with...ons	26 ⇌ 45
496 ⇌ 175	Acute hepatitis B without delta-ag...oma
1,024 ⇌ 290	Cystic disease of liver ▷
725 ⇌ 231	Other specified disorders of peritoneum
725 ⇌ 231	Legionnaires' disease
725 ⇌ 231	Cerebral infarction due to embolis...ies
725 ⇌ 231	Unspecified diabetes mellitus with...ons
◁ Systemic lupus erythematosus, unsp...ied	304 ⇌ 1,034
Unspecified diabetes mellitus with coma	247 ⇌ 753
Alveolar and parietoalveolar conditions	247 ⇌ 753
345 ⇌ 143	Influenza with other respiratory m...ied
725 ⇌ 248	Major salivary gland, unspecified
304 ⇌ 133	Malignant neoplasm of ureter
1,024 ⇌ 319	Salmonella sepsis ▷
1,024 ⇌ 319	Splenic flexure ▷
496 ⇌ 201	Chronic nephritic syndrome, unspecified
Sequelae of respiratory and unspec...sis	273 ⇌ 753
230 ⇌ 113	Influenza with other respiratory m...ied
◁ Bacterial pneumonia, unspecified	345 ⇌ 1,034

Balances:
 47.6% total counts 52.4%
 76.9% all causes of death 78.5%
 28.0% exclusive causes of death 29.5%

50.1%—49.9%

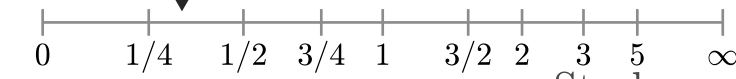
Ω_1 : Causes of death, HK, 2011

Ω_2 : Causes of death, HK, 2016

Divergence contribution $\delta D_{1/3,\tau}^R$ (%)

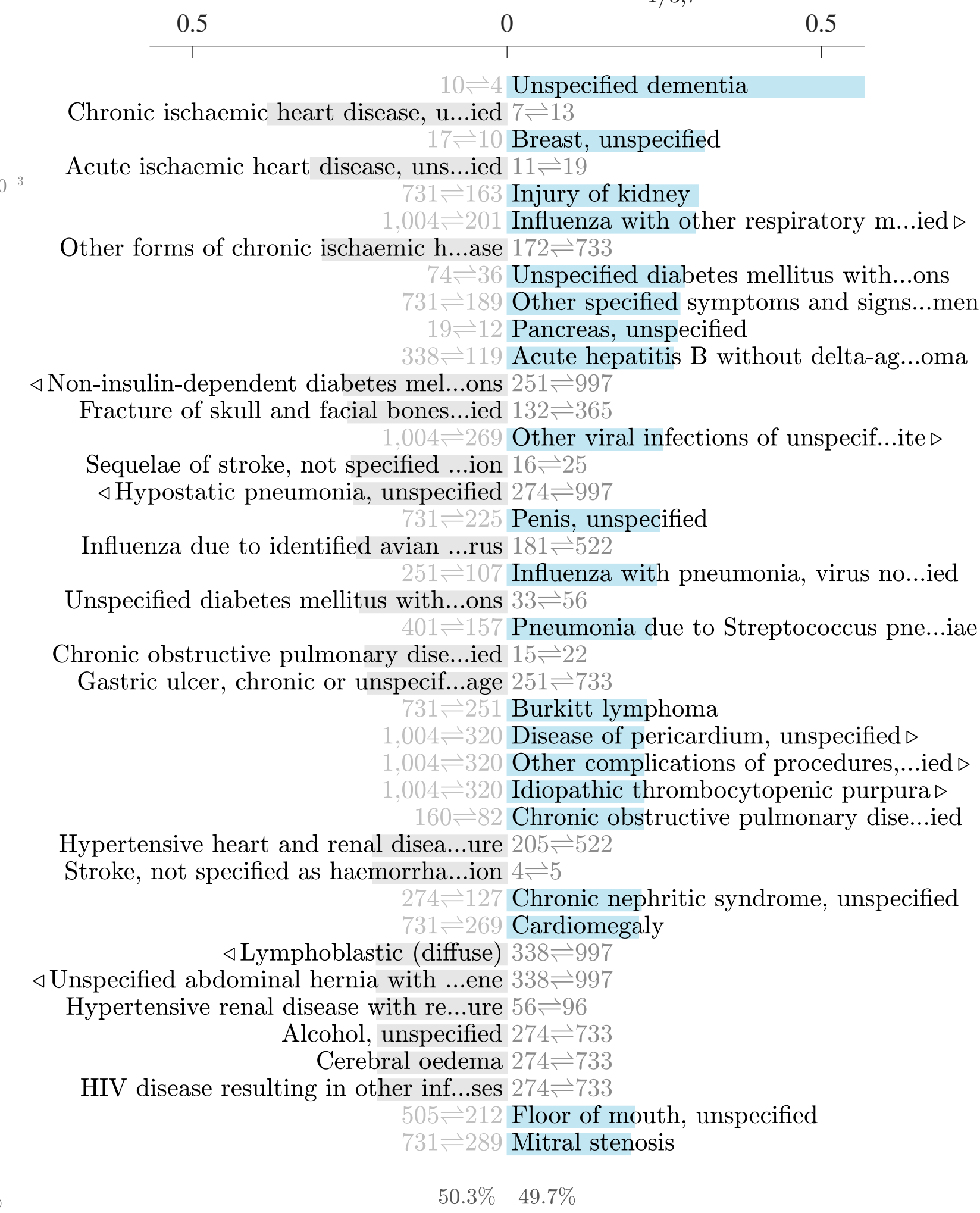
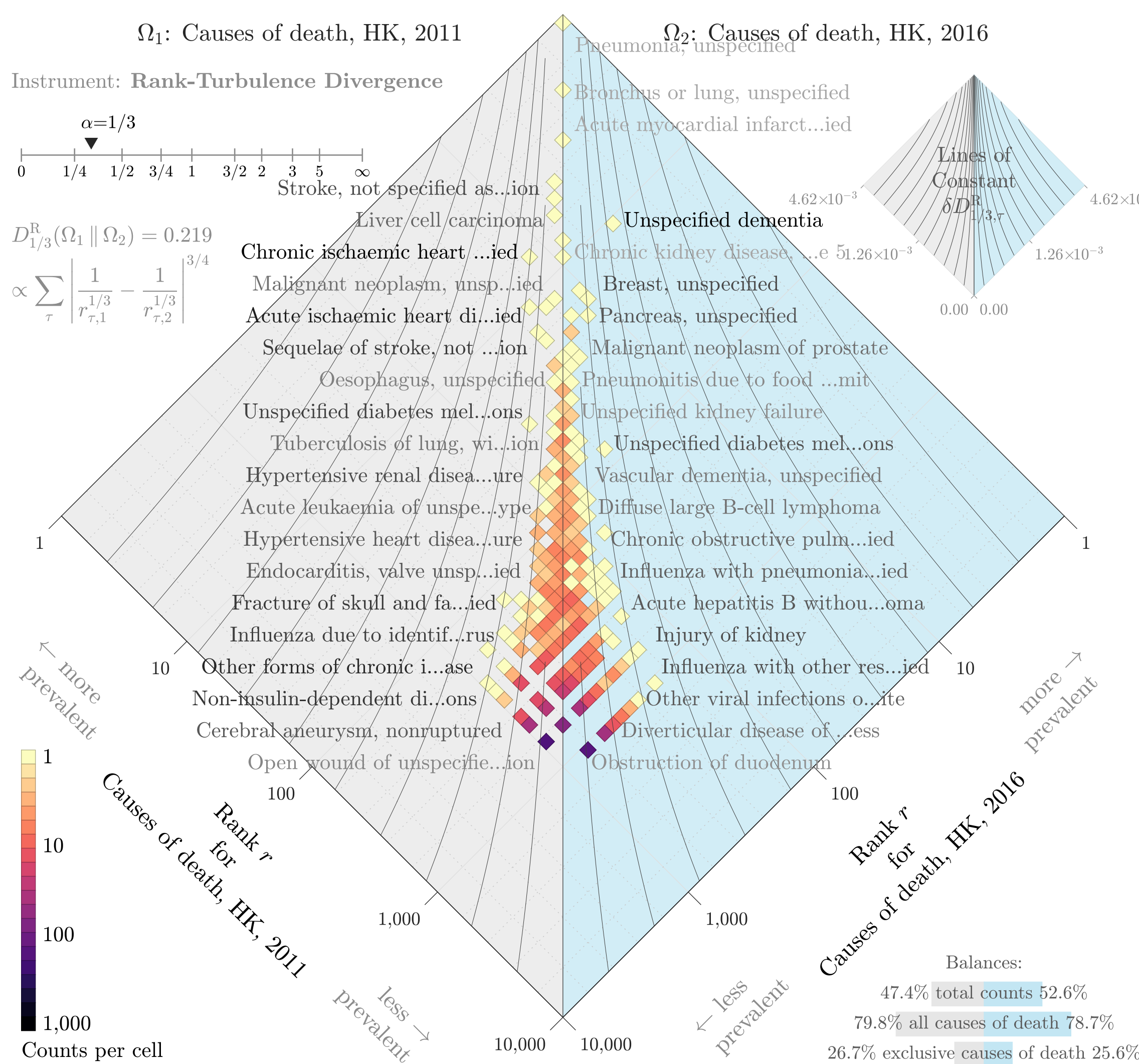
Instrument: Rank-Turbulence Divergence

$\alpha=1/3$



$$D_{1/3}^R(\Omega_1 \parallel \Omega_2) = 0.219$$

$$\propto \sum_{\tau} \left| \frac{1}{r_{\tau,1}^{1/3}} - \frac{1}{r_{\tau,2}^{1/3}} \right|^{3/4}$$



Balances:

47.4% total counts 52.6%
 79.8% all causes of death 78.7%
 26.7% exclusive causes of death 25.6%

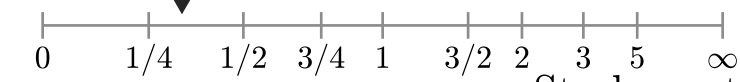
50.3%—49.7%

Ω_1 : Causes of death, HK, 2012

Ω_2 : Causes of death, HK, 2017

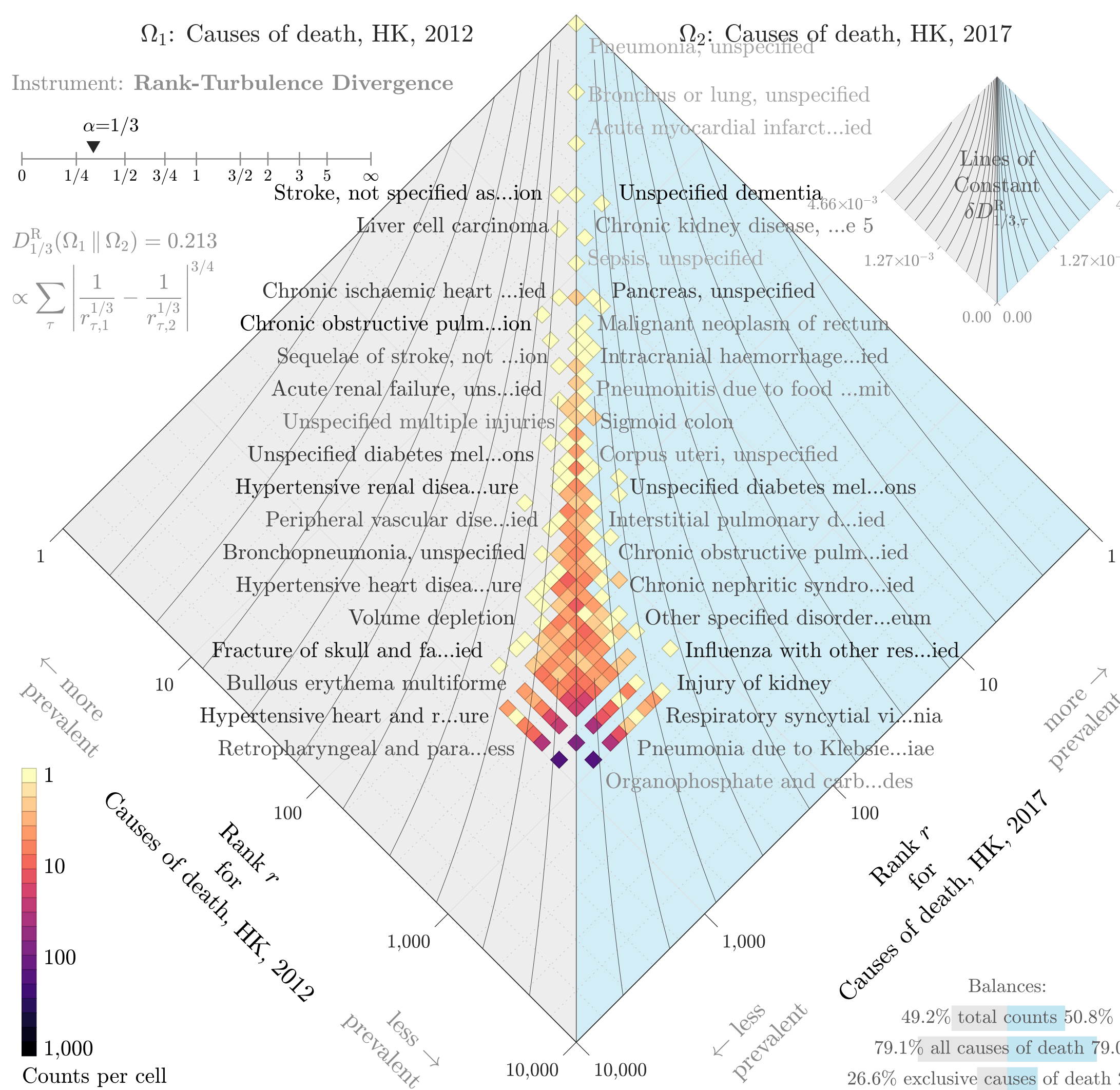
Instrument: Rank-Turbulence Divergence

$\alpha=1/3$



$$D_{1/3}^R(\Omega_1 \parallel \Omega_2) = 0.213$$

$$\propto \sum_{\tau} \left| \frac{1}{r_{\tau,1}^{1/3}} - \frac{1}{r_{\tau,2}^{1/3}} \right|^{3/4}$$



Divergence contribution $\delta D_{1/3,\tau}^R$ (%)



	7 \rightleftharpoons 4	Unspecified dementia
	714 \rightleftharpoons 124	Influenza with other respiratory m...ied
Chronic obstructive pulmonary dise...ion	11 \rightleftharpoons 20	
Stroke, not specified as haemorrha...ion	4 \rightleftharpoons 6	
	992 \rightleftharpoons 199	Injury of kidney \triangleright
Fracture of skull and facial bones...ied	166 \rightleftharpoons 723	
Hypertensive renal disease with re...ure	52 \rightleftharpoons 120	
	93 \rightleftharpoons 44	Unspecified diabetes mellitus with...ons
	17 \rightleftharpoons 11	Pancreas, unspecified
	992 \rightleftharpoons 244	Respiratory syncytial virus pneumonia \triangleright
	992 \rightleftharpoons 244	Accessory sinus, unspecified \triangleright
	992 \rightleftharpoons 244	Diverticular disease of intestine,...ess \triangleright
	992 \rightleftharpoons 244	Follicular lymphoma, unspecified \triangleright
\triangleleft Hypertensive heart and renal disea...ure	253 \rightleftharpoons 992	
Diffuse brain injury	166 \rightleftharpoons 507	
	992 \rightleftharpoons 266	Tuberculous pleurisy, confirmed ba...lly \triangleright
	402 \rightleftharpoons 144	Other specified disorders of peritoneum
Chronic obstructive pulmonary dise...ied	15 \rightleftharpoons 23	
\triangleleft Perforation of oesophagus	277 \rightleftharpoons 992	
\triangleleft Tuberculous pleurisy, without ment...ion	277 \rightleftharpoons 992	
\triangleleft Alcohol, unspecified	277 \rightleftharpoons 992	
	104 \rightleftharpoons 54	Influenza with pneumonia, other in...ied
Unspecified diabetes mellitus with...ons	35 \rightleftharpoons 61	
	992 \rightleftharpoons 288	Unspecified diabetes mellitus with...ons \triangleright
	992 \rightleftharpoons 288	Atrial septal defect \triangleright
Liver cell carcinoma	6 \rightleftharpoons 8	
Chronic ischaemic heart disease, u...ied	10 \rightleftharpoons 14	
	14 \rightleftharpoons 10	Breast, unspecified
	714 \rightleftharpoons 244	Cutaneous abscess, furuncle and ca...imb
\triangleleft Acute hepatitis C	307 \rightleftharpoons 992	
Bronchopneumonia, unspecified	87 \rightleftharpoons 178	
Volume depletion	166 \rightleftharpoons 408	
	992 \rightleftharpoons 313	Biliary tract, unspecified \triangleright
Bullous erythema multiforme	253 \rightleftharpoons 723	
Miliary tuberculosis, unspecified	253 \rightleftharpoons 723	
Muscular dystrophy	253 \rightleftharpoons 723	
Hypertensive heart disease with (c...ure	121 \rightleftharpoons 266	
	234 \rightleftharpoons 111	Chronic nephritic syndrome, unspecified
	221 \rightleftharpoons 106	Disorder of kidney and ureter, uns...ied
	307 \rightleftharpoons 139	Female genital organ, unspecified

Balances:

49.2% total counts 50.8%

79.1% all causes of death 79.0%

26.6% exclusive causes of death 26.5%

50.0%—50.0%