## Supplementary

## Table S1 Demographic, clinical presentation, comorbid conditions, lesion site, treatment, and outcome data of patients with rectal Dieulafoy's lesion (1991–2003)

| Author                       | Region    | Year | Age/gender | Clinical presentation                                 | Comorbid conditions                                    | Endoscopic findings  | Diagnostic<br>attempts | Treatment  | Rebleed       | Treatment of recurrence             | Outcome/follow-up<br>duration    |
|------------------------------|-----------|------|------------|---|--|--|------------------------|--|---------------|-------------------------------------|----------------------------------|
| Franko <i>et al.</i> (8)     | USA       | 1991 | 20/M       | BRBPR   | No known conditions                                    | Pulsatile bleeding, 11 cm from the anal verge                                      | 1                      | Electrocoagulation + rectal packing,<br>surgical ligation              | No            | -                                   | Recovered, 9 months              |
| bdulian <i>et al.</i> (13)   | USA       | 1993 | 43/M       | Rectal bleeding                                       | Not reported   | Protuberant vessel in the rectum   | 1                      | Ethanol injection  | Yes (4 days)  | Ethanol + tetradecyl<br>sulphate    | Recovered                        |
| eoh <i>et al.</i> (14)       | Singapore | 1996 | 66/M       | Sudden acute stroke                                   | HTN, RAS, IHD, AAA, COPD                               | Protuberant vessel, 6 cm from the anal verge                                       | 1                      | Epinephrine injection  | No            | -                                   | Died of pneumonia 4 day<br>later |
| arrison <i>et al.</i> (15)   | UK        | 1997 | 68/M       | Melena  | Tongue CA, radiotherapy,<br>hemorrhoids                | Failed to diagnose, surgery showed a spurting rectal artery                        | 1                      | Surgical ligation  | No            | -                                   | Recovered                        |
| alman <i>et al.</i> (63)     | USA       | 1997 | 33/M       | Hematochezia  | Subtle coagulation defect                              | Protruding adherent blood clot,<br>10 cm from the anal verge                       | 1                      | Epinephrine + electrocoagulation                                       | Yes (7 days)  | Electrocoagulation                  | Recovered                        |
| bdelmalek <i>et al.</i> (58) | USA       | 1997 | 76/M       | Rectal bleeding                                       | Rectal mucous fistula                                  | Pulsatile bleeding   | 2                      | Epinephrine + heater probe + surgical ligation                         | No            | -                                   | Recovered                        |
| guchi <i>et al.</i> (18)     | Japan     | 1997 | 78/M       | Ureterolithiasis, hematochezia                        | Anemia   | Failed to diagnose. Surgery showed small exposed vessel, 13 cm from the anal verge | 1                      | Surgical ligation  | No            | -                                   | Recovered, 12 months             |
| eister <i>et al.</i> (17)    | USA       | 1998 | 74/M       | Rectal bleeding                                       | Constipation, DM, dementia, hypothyroidism             | Protuberant blood vessel near dentate line   | 2                      | Epinephrine + heater probe   | No            | -                                   | Recovered, 17 months             |
| eister <i>et al.</i> (17)    | USA       | 1998 | 77/M       | BRBPR   | Parkinson's disease,<br>dementia, C. difficile colitis | Small adherent clot in distal rectum   | 1                      | Heater probe   | No            | -                                   | Recovered, 17 months             |
| eister <i>et al.</i> (17)    | USA       | 1998 | 67/M       | Hematochezia  | Bilroth I procedure for PUD                            | Pulsatile bleeding, 10 cm from anal verge  | 1                      | Epinephrine + heater probe   | No            | -                                   | Recovered, 13 months             |
| obson <i>et al.</i> (91)     | UK        | 1999 | 75/F       | Leg weakness, rectal bleeding                         | Cord compression, renal<br>papillary CA                | Failed to diagnose   | 1                      | Angiographic embolization  | No            | -                                   | Recovered, 9 months              |
| naro <i>et al.</i> (45)      | USA       | 1999 | 73/M       | BRBPR   | DM, HTN, COPD, CKD, PVD with gangrenous left toe       | Protuberant vessel oozing blood,<br>7 cm from the anal verge                       | 1                      | Epinephrine + heater probe   | Yes (3 days)  | Epinephrine + heater<br>probe       | Recovered, 8 months              |
| ozoe <i>et al.</i> (47)      | Japan     | 1999 | 65/M       | Anal bleeding   | CKD  | Protuberant vessel, 5 cm from the anal verge                                       | 1                      | Endoscopic hemoclipping  | No            | -                                   | Recovered                        |
| ndervoort <i>et al.</i> (69) | USA       | 1999 | 50/M       | Hematochezia  | Lung cancer  | 4 rectal ulcers, 2 had a visible vessel with otherwise normal-appearing mucosa     | 1                      | Endoscopic band ligation   | No            | -                                   | Recovered                        |
| ajendra <i>et al.</i> (24)   | China     | 2000 | 78/M       | Hematochezia  | HTN, renal impairment                                  | Protuberant vessel, 6 cm from the anal verge                                       | 2                      | Epinephrine + electrocoagulation failed, followed by surgical ligation | No            | -                                   | Recovered, 2 months              |
| atsuoka <i>et al.</i> (31)   | Japan     | 2000 | 54/F       | Lower abdominal pain,<br>hematochezia                 | CKD, sigmoid diverticulum<br>(partial resection)       | Protuberant vessel bleeding, 1 cm above the pectinate line                         | 3                      | Ethanol + electrocoagulation   | No            | -                                   | Recovered, 72 months             |
| ayali <i>et al.</i> (23)     | USA       | 2000 | 77/F       | Mental status change,<br>dehydration, rectal bleeding | No known conditions                                    | Protuberant vessel   | 2                      | Epinephrine + ethanol  | No            | -                                   | Recovered                        |
| yali <i>et al.</i> (23)      | USA       | 2000 | 73/F       | LGIB  | Diverticulosis   | Protuberant vessel   | 2                      | Epinephrine + ethanol  | No            | -                                   | Recovered, 9 months              |
| ns <i>et al.</i> (10)        | Canada    | 2001 | 72/M       | SOB, BRBPR  | Extensive cardiac history                              | Spurting site of bleeding in the rectum  | 2                      | Epinephrine + electrocoagulation                                       | No            | -                                   | Recovered, 8 months              |
| ni <i>et al.</i> (59)        | Kenya     | 2001 | 60/M       | BRBPR   | HC, DVT  | Pulsating red adherent clot, 13 cm from the anal verge                             | 1                      | Epinephrine  | No            | -                                   | Recovered                        |
| uy et al. (57)               | Singapore | 2001 | 18/F       | Rectal bleeding                                       | 45% body surface area burns                            | Dieulafoy-type lesion at the anorectal junction                                    | 4                      | Gauze pack soaked in epinephrine + angiographic embolization           | Yes (3 hours) | Surgical ligation                   | Recovered, 7 weeks               |
| tsinelos <i>et al.</i> (34)  | Greece    | 2001 | 40/F       | Sudden disturbance of<br>consciousness                | Not reported   | Small mucosal defect in the superior valve of Houston                              | 1                      | Epinephrine + 50% glucose water  | No            | -                                   | Recovered, 1 month               |
| dav <i>et al.</i> (83)       | USA       | 2001 | 59/F       | Rectal bleeding, dizziness                            | DM, HTN, CVA   | An ulcerated rectal lesion   | 1                      | Surgical resection   | No            | -                                   | Recovered, 2 months              |
| ul <i>et al.</i> (51)        | Malaysia  | 2002 | 76/F       | BRBPR   | HTN, CRF, constipation                                 | Failed to diagnose (scope and angiography)   | 2                      | Surgical ligation + bupivacaine + epinephrine                          | Yes (5 days)  | FCT + epinephrine +<br>heater probe | Recovered, 12 months             |
| omura <i>et al.</i> (56)     | Japan     | 2002 | 82/M       | Hematochezia with BRBPR                               | Internal hemorrhoids                                   | Active punched-out lesion, 7 cm from the anal verge                                | 1                      | Endoscopic hemoclipping  | No            | -                                   | Recovered                        |
| zukami <i>et al.</i> (67)    | Japan     | 2002 | 85/F       | BRBPR   | Not available  | Exposed vessel in the anterior rectal wall   | 1                      | Epinephrine + endoscopic band<br>ligation                              | No            | -                                   | Recovered, 6 months              |
| e <i>et al.</i> (84)         | Korea     | 2002 | 81/M       | Hematochezia  | Not reported   | Small rectal mucosal defect with a visible vessels                                 | 2                      | Epinephrine + endoscopic<br>hemoclipping                               | No            | -                                   | Recovered                        |
| e et al. (84)                | Korea     | 2002 | 86/F       | Hematochezia  | Not reported   | Small rectal mucosal defect with a visible vessels                                 | 2                      | Epinephrine + endoscopic<br>hemoclipping                               | No            | -                                   | Recovered                        |
| pe et al. (20)               | Japan     | 2003 | 55/M       | Hematochezia  | SAH  | Protuberant bleeding vessel, 5 cm  | 4                      | Endoscopic hemoclipping  | No            |                                     | Recovered, 36 months             |

| Abe <i>et al.</i> (20)      | Japan | 2003 | 55/M | Hematochezia | SAH          | Protuberant bleeding vessel, 5 cm 1 from the anal verge   | Endoscopic hemoclipping                | No | - | Recovered, 36 months |
|-----------------------------|-------|------|------|--------------|--------------|---|--|----|---|----------------------|
| Fujimaru <i>et al.</i> (27) | Japan | 2003 | 83/F | Hematochezia | Not reported | Small arterial bleeding point, 4 cm 1 from the anal verge | Epinephrine + endoscopic band ligation | No | _ | Recovered, 6 months  |

BRBPR, bright-red blood per rectum; HTN, hypertension; RAS, renal artery stenosis; IHD, ischemic heart disease; AAA, abdominal aortic aneurysm; COPD, chronic obstructive pulmonary disease; CA, carcinoma; DM, diabetes mellitus; PUD, peptic ulcer disease; CKD, chronic kidney disease; PVD, peripheral venous disease; LGIB, lower gastrointestinal bleeding; SOB, shortness of breath; CRF, chronic renal failure; SAH, subarachnoid hemorrhage; CVA, cerebrovascular accident; NIDM, non-insulin-dependent diabetes mellitus; CA, carcinoma; SOB, shortness of breath; HC, hemorrhoidectomy; DVT, deep venous thrombosis; FCT, Foley's catheter tamponade.

| Table S2 Demographic, clinical | l presentation, comorbid conditions. | lesion site, treatment, an | nd outcome data of patie | ents with rectal Dieulafov's lesion (2004–2012) |
|--------------------------------|--------------------------------------|----------------------------|--------------------------|---|
|                                |                                      |                            |                          |   |

| Index   Matchine   Model and File     Cale of Col   Sine   Sine   Sine   Sine   Sine   Sine and File  | Author                                  | Region  | Year | Age/gender | Clinical presentation     | Comorbid conditions       | Endoscopic findings                     | Diagnostic<br>attempts | Treatment                        | Rebleed       | Treatment of recurrence | Outcome/follow-up<br>duration     |
|---|---|---------|------|------------|---------------------------|---------------------------|---|------------------------|----------------------------------|---------------|-------------------------|-----------------------------------|
| International symbol   Normal Mathematical Symbol   International Symbol   In   | Tseng <i>et al.</i> (19)                | Taiwan  | 2004 | 74/F       | Rectal bleeding           | Cerebral hemorrhage       | •                                       | 1                      | Gauze tamponade                  | No            | _                       | Recovered                         |
| network   ipart   ipart  <  | lseng <i>et al.</i> (19)                | Taiwan  | 2004 | 78/F       | Rectal bleeding           | , , ,                     | 0                                       | 1                      | Gauze tamponade                  | No            | -                       | 0                                 |
| Instruct of all all set of the state of a set of | Chiu <i>et al.</i> (35)                 | Taiwan  | 2004 | 81/M       | Pneumonia                 | CRF, HTN                  |   | 2                      |                                  | No            | -                       | Died of pneumonia 18 day<br>later |
| Answer   Answer   Answer   Restance   | .ee et al. (90)                         | USA     | 2004 | 73/M       | Hematochezia              | Not reported              | <b>e</b> .                              | 1                      | Angiographic embolization        | Yes (5 hours) |                         | Recovered, 12 months              |
| bandNo.  | <sup>-</sup> ukumori <i>et al.</i> (68) | Japan   | 2004 | 76/M       | LGIB                      | CRF                       | Active bleeding focus in the rectum     | 1                      | Endoscopic hemoclipping          | No            | -                       | Recovered                         |
| InstructureInstructur   | lokama <i>et al.</i> (65)               | Japan   | 2005 | 76/M       | Rectal bleeding           | Bladder + cecal CA, CVA   | Exposed vessel in the distal rectum     | 2                      | Endoscopic band ligation         | No            | -                       | Recovered                         |
| trace   trace   teach starting   teach starting   start start start   start start   | Casella <i>et al.</i> (29)              | Italy   | 2005 | 81/F       | Anemia, hematochezia      |                           | 0 1                                     | 2                      | Epinephrine + electrocoagulation | No            | -                       | Recovered, 36 months              |
| No.   Normal Sector   | Gupta <i>et al.</i> (11)                | India   | 2006 | 45/F       | Hematochezia              | Fecal impaction           | ,                                       | 2                      |                                  | No            | -                       | Recovered, 2 months               |
| instructure   | Berretti <i>et al.</i> (52)             | Italy   | 2006 | 80/F       | Rectal bleeding           | 1 7 7 7 7                 | 1 ,                                     | 1                      | hemoclipping + tattooing with    | No            | 1                       | Recovered, 12 months              |
| control   baraneed lucidant   baraneed lucidant   baraneed lucidant     Line 44.0 [G]   Locano   200   95P   Maske 95PP/M   DM, HTN, Het henping   Produce 943 (5 on State 943)   Schephthe + coldscale 0   No   -   Recovered 3 constate     In 44 400   Kona   200   72P   Rotal Debeding   CABC   Debelowes 3, 5 on State 943   Schephthe + coldscale 0   No   -   Recovered 3 for State 943     In ed 400   Kona   2007   87P   Actio LOB   Fill   Recovered 1 for State 943   Recovered 1 for State  | ′oshikumi <i>et al.</i> (75)            | Canada  | 2006 | 44/M       |                           | HTN, DM, HLD, fatty liver |   | 1                      | Endoscopic hemoclipping          | Yes (4 days)  |                         | Recovered, 12 months              |
| and magine   and magine   bit was were were were were were were were wer  | piratpracha <i>et al.</i> (43)          | Canada  | 2006 | 67/F       |                           | Cadaveric OLT, on IMS     | 0                                       | 1                      | Epinephrine + electrocoagulation | No            | -                       | Recovered, 4 months               |
| in r 42 (8) Kees 207 7.4° Acute LGB ITM Polouding vessel with active Beesing Note protein Significant and stations Note protein Significant and st  | lim <i>et al.</i> (85)                  | Lebanon | 2006 | 58/F       | Massive BRBPR             | DM, HTN, left hemiplegia  | <b>e</b>                                | 2                      | Epinephrine + polidocanol        | No            | -                       | Recovered, 23 months              |
| mt at 1680Kora200775FAute LGIBCFFPortuding vessel with active bleeding<br>location bein<br>location<br>location<br>locationNot sported<br>location<br>location<br>locationSugleal lgatomRecovered, 0 months<br>location<br>location<br>   | lim <i>et al.</i> (85)                  | Lebanon | 2006 | 72/F       | Rectal bleeding           | CABG                      | Visible vessel, 5 cm from anal verge    | 1                      | Epinephrine + heater probe       | No            | -                       | Recovered, 18 months              |
| Market   Market   State Aulie   Market   Ma   | im <i>et al.</i> (86)                   | Korea   | 2007 | 77/F       | Acute LGIB                | HTN                       | Protruding vessel                       | Not reported           | Endoscopic band ligation         | No            | -                       | Recovered, 18 months              |
| in at al. (8)Kosa90761.00Acta LGIBOFFPortuding vessel with activablesNote postelEndoscopic hand ligationNot  | üm <i>et al.</i> (86)                   | Korea   | 2007 | 78/F       | Acute LGIB                | CRF                       | Protruding vessel with active bleeding  | Not reported           |                                  | Yes           | Surgical ligation       | Recovered, 10 months              |
| im 41 (8) Korea 207 4/F Acute LGIB None Portuding vessel Not reported Epinephrine + endoscopic No - Recovered, 20 months   im er 4. (8) Korea 2007 5/M Acute LGIB None Portuding vessel No treported Epinephrine + endoscopic No - Recovered, 16 months   uchizabi et 4. (8) Japan 2007 5/M Acute LGIB None No vo sposed retal spuring vessel 1 Endoscopic hemocipiping No - Recovered   uchizabi et 4. (8) Japan 2007 6/F Rectal bleeding CABC Puint exposed vessel in the nect 1 Endoscopic hemocipiping No - Recovered   uchizabi et 4. (8) Japan 2007 6/F Rectal bleeding CABC Puint exposed vessel in the nect 1 Endoscopic hand ligation No - Recovered Recovered   uchizabi et 4. (7) Japan 2008 7/F Recovered   | ïm <i>et al.</i> (86)                   | Korea   | 2007 | 85/F       | Acute LGIB                | HTN                       | Protruding vessel                       | Not reported           | Endoscopic band ligation         | Yes           | Surgical ligation       | Recovered, 6 months               |
| Image: discription   Note of the second problem   Note of   | ïm <i>et al.</i> (86)                   | Korea   | 2007 | 61/M       | Acute LGIB                | CRF                       | Protruding vessel with active bleeding  | Not reported           | Endoscopic band ligation         | No            | -                       | Recovered, 7 months               |
| Luchizaki et al. (87) Japan 207 54/M Hematochezia Sigmoid cancer, si  | (im <i>et al.</i> (86)                  | Korea   | 2007 | 42/F       | Acute LGIB                | None                      | Protruding vessel                       | Not reported           |                                  | No            | -                       | Recovered, 20 months              |
| uchicade (A)   Japan   2007   50.Fe   Reclaideding   Note Appendencial Suppring Appendencis Suppring Appendencial Suppring Appendencial Supprino  | ïm <i>et al.</i> (86)                   | Korea   | 2007 | 61/M       | Acute LGIB                | None                      | Protruding vessel                       | Not reported           | Epinephrine + electrocoagulation | No            | -                       | Recovered, 16 months              |
| uch/zaki et al. (87)Japan200786/FIE, rectal bleedingNMSpurting exposed vessel in the rectur1Endoscopic band ligationNo-Recovereduch/zaki et al. (87)Japan200776/MAcute MI, rectal bleedingCABGPulsatile bleeding from a rectal vessel 1Endoscopic band ligationNo-Recoveredghenta et al. (82)USA200845/MUpper abdominal pain,<br>nausea, emesis, melanaAlcohol abuse, HCV<br>infection, cirrhosisActive spurting of blood, 4 cm from<br>the anal verge1Epinephrine + eldoscopic<br>hemoclppingNo-Died, family withdrew of<br>hemoclppinglutoro-Mensah<br>t al. (42)UK200876/MBRBPR, hypovolemic shockNo te portedPulsatile bleeding lesion just over the<br>anorectal junction1Epinephrine + eldotcocagulationNo-Recoveredutiz-Tovar et al. (48)Spain200876/MRectal bleeding,<br>hemodynami instabilityLung massFailed to diagnose, anoscopy<br>revealed rectal aterial bleeding point<br>revealed rectal aterial bleeding point1Surgical ligationNo-Recoveredluta et al. (46)Japan200970/FRectal bleedingCVD, DM, HTNMultiple Dielafory-like lesion1Surgical ligationNo-Recoveredluta et al. (46)Japan200970/FRectal bleedingCAD, CVD, HTN, DMSolitary Dielafory-like lesion1Surgical ligationNo-Recoveredluta et al. (46)Japan2009 <td>uchizaki <i>et al.</i> (87)</td> <td>Japan</td> <td>2007</td> <td>54/M</td> <td>Hematochezia</td> <td>-</td> <td>1 6 1</td> <td>1</td> <td>Endoscopic hemoclipping</td> <td>No</td> <td>-</td> <td>Recovered</td>  | uchizaki <i>et al.</i> (87)             | Japan   | 2007 | 54/M       | Hematochezia              | -                         | 1 6 1                                   | 1                      | Endoscopic hemoclipping          | No            | -                       | Recovered                         |
| uch/zaki ef al. (87)Japan200776/MAcute MI, rectal bleedingCABGPuisatib bleeding from a rectal vessel1Endoscopic band ligationNo-Recoveredghenta ef al. (32)USA200845/MUpper abdominal pain,<br>nausea, emeas, melenaAlcohol abuse, HCV<br>infection, cirrhosisActive spuring of blood, 4 cm from1Epinephrine + endoscopic<br>hemoclippingNo-Died, family withdrew or<br>hemoclippingunoo-Mensah<br>t at. (42)UK200876/MBRBPR, hypovolemic shockNo reportedPuisatib bleeding fision just over the<br>anorectal junctionEpinephrine + electrocoagulationNo-Recoveredtat. (42)200876/MBRBPR, hypovolemic shockNo reportedPuisatib bleeding fision just over the<br>anorectal junctionEpinephrine + electrocoagulationNo-Recoveredtat. (42)Taiwan200877/FHematocheziaHTN, DM, SCF, DH, CESMCCT detected and colonoscopy<br>confirmed the lesionEndoscopic band ligationNo-Recoveredtuiz-Tovar et al. (49)Spain200864/MRectal bleedingCVD, DM, HTNMultiple Dielafoy-like lesions1Surgical ligationNo-Recoveredtuiz-Tovar et al. (46)Japan200985/FRectal bleedingCVD, DM, HTNMultiple Dielafoy-like lesion1Surgical ligationNo-Recoveredtuiz-tovar et al. (46)Japan200985/FRectal bleedingCAD, OLD, Ingr disease, cancerSolitary Dieula   | uchizaki <i>et al.</i> (87)             | Japan   | 2007 | 50/F       | Rectal bleeding           | CVA, brain surgery        | Two exposed rectal spurting vessels     | 1                      | Endoscopic hemoclipping          | No            | -                       | Recovered                         |
| Accord Accord Accord Accord Spring Spring Spring No - Died, family withdrew of the anal verge   unnoo-Mensaha<br>(al. (42) UK 208 76/M BRBPR, hypovolemic shock No teported Active spurting of blood, 4 cm from 1 Epinephrine + edoscopic No - Died, family withdrew of the anal verge   unnoo-Mensaha<br>(al. (42) UK 208 76/M BRBPR, hypovolemic shock No teported Pulsatile bleeding lesion just over the 1 Epinephrine + edoscopic No - Recovered, 1   hen et al. (78) Taiwan 208 77/F Hematochezia HTN, DM, SCF, DH, CES McChol dauges, anoscopy confirmed the lesion 2 Endoscopic band ligation No - Recovered, 1 month factor active factor active factor active factor fa  | uchizaki <i>et al.</i> (87)             | Japan   | 2007 | 86/F       | IE, rectal bleeding       | NM                        | Spurting exposed vessel in the rectum   | 1                      | Endoscopic band ligation         | No            | -                       | Recovered                         |
| nausea, emesis, melenainfection, cirrhosisthe anal vergehemoclippinglunco-klensah<br>t al. (42)200876/MBRBPR, hypovolemic shockNot reportedplastile bleeding lesion just over the<br>anorectal junctionEpinephrine + electrocoagulationNo-Recoveredshen et al. (78)Taiwan200877/FHematocheziaHTN, DM, SCF, DH, CESMDCT detected and colonoscopy<br>confirmed the lesion1Surgical ligationNo-Recovered, 1 monthkuiz-Tovar et al. (49)Spain200864/MRectal bleeding,<br>hemodynamic instabilityLung massFaled to diagnose, anoscopy<br>revealed rectal arterial bleeding point1Surgical ligationNo-Recovered, 1 monthkolta et al. (46)Japan200970/FRectal bleedingCVD, DM, HTNMultiple Dieulatoy-like lesion1Surgical ligationNo-Recoveredkolta et al. (46)Japan200986/MRectal bleedingCAD, lung disease, canceSolitary Dieulafoy-like lesion1Surgical ligationNo-Recoveredkolta et al. (46)Japan200971/MRectal bleedingCAD, lung disease, canceSolitary Dieulafoy-like lesion1Surgical ligationNo-Recovered, 6 monthskolta et al. (46)Japan200971/MRectal bleedingCAD, lung disease, canceSolitary Dieulafoy-like lesion1Surgical ligationNo-Recovered, 6 monthskolta et al. (46)Japan200971/M <td>uchizaki e<i>t al.</i> (87)</td> <td>Japan</td> <td>2007</td> <td>76/M</td> <td>Acute MI, rectal bleeding</td> <td>CABG</td> <td>Pulsatile bleeding from a rectal vessel</td> <td>1</td> <td>Endoscopic band ligation</td> <td>No</td> <td>-</td> <td>Recovered</td>   | uchizaki e <i>t al.</i> (87)            | Japan   | 2007 | 76/M       | Acute MI, rectal bleeding | CABG                      | Pulsatile bleeding from a rectal vessel | 1                      | Endoscopic band ligation         | No            | -                       | Recovered                         |
| t al. (42)anorectal junctionanorectal junctionanorectal junctionwhen et al. (78)Taiwan200877/FHematocheziaHTN, DM, SCF, DH, CESMDCT detected and colonoscopy<br>confirmed the lesion2Endoscopic band ligationNo-Recovered, 1 monthhulz-Tovar et al. (49)Spain200864/MRectal bleeding,<br>hemodynamic instabilityLung massFailed to diagnose, anoscopy<br>reveled rectal arterial bleeding provide reveled rectal arterial bleeding provide1Surgical ligationNo-Recovered, 1 monthlotta et al. (46)Japan200970/FRectal bleedingCVD, DM, HTNMultiple Dieulafoy-like lesions1Surgical ligationNo-Recoveredlotta et al. (46)Japan200986/FRectal bleedingCAD, Lung disease, canceSolitary Dieulafoy-like lesion1Surgical ligationNo-Recoveredlotta et al. (46)Japan200971/MRectal bleedingCAD, Lung disease, canceSolitary Dieulafoy-like lesion1Endoscopic hemoclippingNo-Recoveredlatal et al. (46)Japan200971/MRectal bleedingCAD, CVD, HTN, DMSolitary Dieulafoy-like lesion1Endoscopic hemoclippingNo-Recovered, 6 monthslatal et al. (46)Japan201336/MBRBRNoneA rectal Dieulafoy Siesion1TAMISNo-Recovered, 6 monthslatal et al. (46)USA201271/MRotine visit, history  | ghenta <i>et al.</i> (32)               | USA     | 2008 | 45/M       |                           | ·                         |   | 1                      |                                  | No            | -                       | Died, family withdrew ca          |
| Main Spain 2008 64/M Rectal bleeding, hemodynamic instability Lung mass Failed to diagnose, anoscopy revealed rectal arterial bleeding point 1 Surgical ligation No - Recovered   lotta et al. (46) Japan 2009 70/F Rectal bleeding CVD, DM, HTN Multiple Dieulafoy-like lesions 1 Surgical ligation No - Recovered   lotta et al. (46) Japan 2009 86/M Rectal bleeding CAD, DM, HTN Multiple Dieulafoy-like lesions 1 Surgical ligation No - Recovered   lotta et al. (46) Japan 2009 86/M Rectal bleeding CAD, Lung disease, cance Solitary Dieulafoy-like lesion 1 Endoscopic hemoclipping No - Recovered   lotta et al. (46) Japan 2009 71/M Rectal bleeding CAD, CVD, HTN, DM Solitary Dieulafoy-like lesion 1 Surgical ligation No - Recovered, 6 months   latlat et al. (43) Japan 2013 38/M BRBPR None Arctal Dieulafoy's lesion 1 TAMIS No - Recovered, 6 months   |   | UK      | 2008 | 76/M       | BRBPR, hypovolemic shock  | Not reported              | с ,                                     | 1                      | Epinephrine + electrocoagulation | No            | -                       | Recovered                         |
| hemodynamic instability revealed rectal arterial bleeding point   Iotta <i>et al.</i> (46) Japan 2009 70/F Rectal bleeding CVD, DM, HTN Multiple Dieulafoy-like lesions 1 Surgical ligation No - Recovered   Iotta <i>et al.</i> (46) Japan 2009 88/M Rectal bleeding Renal, orthopedic Solitary Dieulafoy-like lesions 1 Surgical ligation No - Recovered   Iotta <i>et al.</i> (46) Japan 2009 85/F Rectal bleeding CAD, lung disease, cancer Solitary Dieulafoy-like lesion 1 Endoscopic hemoclipping No - Recovered   Iotta <i>et al.</i> (46) Japan 2009 71/M Rectal bleeding CAD, CVD, HTN, DM Solitary Dieulafoy-like lesion 1 Surgical ligation No - Recovered   Iotta <i>et al.</i> (43) USA 2013 38/M BRBPR None Arctal Dieulafoy's lesion 1 TAMIS No - Recovered, 36 months   Iatale <i>t al.</i> (49) USA 2012 71/M Routine visit, history of<br>BRBPR AF, CAD, CABG, ZD, BE,<br>SD, SH Failed to diagnose. Surgery showed<br>exposed rectal vessel   | Chen <i>et al.</i> (78)                 | Taiwan  | 2008 | 77/F       | Hematochezia              | HTN, DM, SCF, DH, CES     |   | 2                      | Endoscopic band ligation         | No            | -                       | Recovered, 1 month                |
| And a al. (46)Japan200988/MRectal bleedingRenal, orthopedicSolitary Dieulafoy-like lesion1Surgical ligationNo-RecoveredIotta et al. (46)Japan200985/FRectal bleedingCAD, lung disease, cancerSolitary Dieulafoy-like lesion1Endoscopic hemoclippingNo-RecoveredIotta et al. (46)Japan200971/MRectal bleedingCAD, CVD, HTN, DMSolitary Dieulafoy-like lesion1Surgical ligationNo-RecoveredIotta et al. (43)USA201338/MBRBPRNoneA rectal Dieulafoy's lesion1TAMISNo-Recovered, 6 monthsIaccaro et al. (9)USA201271/MRoutine visit, history of<br>BRBPRAF, CAD, CABG, ZD, BE,<br>SD, SHFailed to diagnose. Surgery showed<br>spoed rectal vessel3Surgical ligationNo-Recovered, 6 monthsIm et al. (44)Korea201289/MBRBPR, hematocheziaHTN, DMPulsatile beeding from an exposed1Epinephrine + endoscopicNo-Recovered, 6 months  | Ruiz-Tovar <i>et al.</i> (49)           | Spain   | 2008 | 64/M       | 0.                        | Lung mass                 | <b>o</b>                                | 1                      | Surgical ligation                | No            | -                       | Recovered                         |
| Add and a leftAdd a leftRectal bleedingCAD, lung disease, cancerSolitary Dieulafoy-like lesion1Endoscopic hemoclippingNo-Recoveredotta et al. (46)Japan200971/MRectal bleedingCAD, CVD, HTN, DMSolitary Dieulafoy-like lesion1Surgical ligationNo-Recoveredtallah et al. (93)USA201338/MBRBPRNoneA rectal Dieulafoy's lesion1TAMISNo-Recovered, 6 monthsaccaro et al. (9)USA201271/MRoutine visit, history of<br>BRBPRAF, CAD, CABG, ZD, BE,<br>SD, SHFailed to diagnose. Surgery showed<br>exposed rectal vessel3Surgical ligationNo-Recovered, 6 monthsim et al. (44)Korea201289/MBRBPR, hematocheziaHTN, DMPulsatile bleeding from an exposed1Epinephrine + endoscopicNo-Recovered, 6 months   | otta <i>et al.</i> (46)                 | Japan   | 2009 | 70/F       | Rectal bleeding           | CVD, DM, HTN              | Multiple Dieulafoy-like lesions         | 1                      | Surgical ligation                | No            | -                       | Recovered                         |
| otta et al. (46)Japan200971/MRectal bleedingCAD, CVD, HTN, DMSolitary Dieulafoy-like lesion1Surgical ligationNo-Recoveredtallah et al. (93)USA201338/MBRBPRNoneA rectal Dieulafoy's lesion1TAMISNo-Recovered, 6 monthsaccaro et al. (9)USA201271/MRoutine visit, history of<br>BRBPRAF, CAD, CABG, ZD, BE,<br>SD, SHFailed to diagnose. Surgery showed<br>exposed rectal vessel3Surgical ligationNo-Recovered, 36 monthsim et al. (44)Korea201289/MBRBPR, hematocheziaHTN, DMPulsatile bleeding from an exposed1Epinephrine + endoscopicNo-Recovered, 6 months  | otta <i>et al.</i> (46)                 | Japan   | 2009 | 88/M       | Rectal bleeding           | Renal, orthopedic         | Solitary Dieulafoy-like lesion          | 1                      | Surgical ligation                | No            | -                       | Recovered                         |
| tallah et al. (93)USA201338/MBRBPRNoneA rectal Dieulafoy's lesion1TAMISNo-Recovered, 6 monthsaccaro et al. (9)USA201271/MRoutine visit, history of<br>BRBPRAF, CAD, CABG, ZD, BE,<br>SD, SHFailed to diagnose. Surgery showed<br>exposed rectal vessel3Surgical ligationNo-Recovered, 36 monthsim et al. (44)Korea201289/MBRBPR, hematocheziaHTN, DMPulsatile bleeding from an exposed1Epinephrine + endoscopicNo-Recovered, 6 months   | otta <i>et al.</i> (46)                 | Japan   | 2009 | 85/F       | Rectal bleeding           | CAD, lung disease, cancer | Solitary Dieulafoy-like lesion          | 1                      | Endoscopic hemoclipping          | No            | -                       | Recovered                         |
| accaro et al. (9)USA201271/MRoutine visit, history of<br>BRBPRAF, CAD, CABG, ZD, BE,<br>SD, SHFailed to diagnose. Surgery showed3Surgical ligationNo-Recovered, 36 monthsim et al. (44)Korea201289/MBRBPR, hematocheziaHTN, DMPulsatile bleeding from an exposed1Epinephrine + endoscopicNo-Recovered, 6 months   | otta <i>et al.</i> (46)                 | Japan   | 2009 | 71/M       | Rectal bleeding           | CAD, CVD, HTN, DM         | Solitary Dieulafoy-like lesion          | 1                      | Surgical ligation                | No            | -                       | Recovered                         |
| BRBPRSD, SHexposed rectal vesselSim et al. (44)Korea201289/MBRBPR, hematocheziaHTN, DMPulsatile bleeding from an exposed1Epinephrine + endoscopicNo-Recovered, 6 months   | tallah <i>et al.</i> (93)               | USA     | 2013 | 38/M       | BRBPR                     | None                      | A rectal Dieulafoy's lesion             | 1                      | TAMIS                            | No            | -                       | Recovered, 6 months               |
|   | accaro <i>et al.</i> (9)                | USA     | 2012 | 71/M       |                           | , , , , ,                 | ° ° ,                                   | 3                      | Surgical ligation                | No            | -                       | Recovered, 36 months              |
|   | (im <i>et al.</i> (44)                  | Korea   | 2012 | 89/M       | BRBPR, hematochezia       | HTN, DM                   |   | 1                      |                                  | No            | -                       | Recovered, 6 months               |

## Nishimuta et al. (92) Japan 2012 50/M Hematochezia Alcoholic cirrhosis, laryngeal Protruding vessel in the lower rectum 2 Angiographic embolization No – Recovered CA, prior CVA but no active bleeding but no active bleeding

BRBPR, bright-red blood per rectum; HTN, hypertension; CRF, chronic renal failure; NA, not available; LGIB, lower gastrointestinal bleeding; CA, carcinoma; CVA, cerebrovascular accident; PUD, peptic ulcer disease; CKD, chronic kidney disease; NIDM, non-insulin-dependent diabetes mellitus; DM, diabetes mellitus; IHD, ischemic heart disease; CCY, cholecystectomy; AH, abdominal hysterectomy; GIB, gastrointestinal bleeding; HLD, hyperlipidemia; OLT, orthotropic liver transplant; IMS, immunosuppressive therapy; CABG, coronary artery bypass grafting; NR, not reported; IE, infective endocarditis; NM, not mentioned; HCV, hepatitis C virus; SCF, spinal compression fracture; DH, disc herniation; CES, cauda equina syndrome; MDCT, multidetector-row computed tomography; CVD, cardiovascular disease; CAD, coronary artery disease; TAMIS, transanal minimally invasive surgery; AF, atrial fibrillation; CAD, coronary artery bypass grafting; ZD, Zenker's diverticulum; BE, Barrett's esophagus; SD, sigmoid diverticulum; SH, stapled hemorrhoidectomy; CA, carcinoma.

## Table S3 Demographic, clinical presentation, comorbid conditions, lesion site, treatment, and outcome data of patients with rectal Dieulafoy's lesion (2014–2019)

| Author   | Region       | Year         | Age/gender   | Clinical presentation                    | Comorbid conditions   | Endoscopic findings  | Diagnostic<br>attempts | Treatment   | Rebleed        | Treatment of recurrence  | Outcome/follow-up<br>duration            |
|--|--------------|--------------|--------------|--|---|--|------------------------|---|----------------|--------------------------|--|
| ark <i>et al.</i> (53)                                   | Korea        | 2014         | 65/F         | Hematochezia                             | DM, constipation, femoral neck surgery                                  | A 3-mm protuberance and an adherent clot   | 3                      | Endoscopic band ligation                                  | No             | -                        | Recovered, 2 month                       |
| ark <i>et al.</i> (53)                                   | Korea        | 2014         | 68/M         | Hematochezia                             | HTN, metastatic SCLC, constipation                                      | A 2-mm protuberance with an adherent clot in the rectum  | 1                      | Endoscopic band ligation                                  | Yes            | Endoscopic hemoclipping  | Recovered, 6 month                       |
| ark <i>et al.</i> (53)                                   | Korea        | 2014         | 75/M         | Hematochezia                             | HTN, DM, CKD, constipation  | Protruding vessel and adherent clot  | 2                      | Epinephrine   | Yes (few hours | Endoscopic hemoclipping  | Recovered                                |
| ark <i>et al.</i> (53)                                   | Korea        | 2014         | 71/M         | Hematochezia                             | HTN, DM, CVA, CHF, CKD, constipation                                    | Exposed vessel in the distal rectum  | 1                      | Endoscopic hemoclipping                                   | Yes (4 days)   | Endoscopic band ligation | Recovered                                |
| ark <i>et al.</i> (53)                                   | Korea        | 2014         | 65/F         | BRPRB                                    | Tongue cancer   | Protruding vessel, 8 cm above the anal verge   | 1                      | Endoscopic band ligation                                  | No             | -                        | Recovered, 22 mor                        |
| ark <i>et al.</i> (53)                                   | Korea        | 2014         | 68/F         | Hematochezia                             | HTN, constipation   | Small adherent clot in the distal rectum   | 2                      | Heater probe  | No             | -                        | Recovered, 1 mont                        |
| ila e <i>t al.</i> (80)                                  | Spain        | 2014         | 68/M         | Severe LGIB, hemodynamic<br>instability  | RCC (stage IV)  | Pulsatile bleeding vessel, 3 cm above the anal verge   | 2                      | Epinephrine + endoscopic<br>hemoclipping                  | Yes (5 days)   | Polidocanol              | Died 2 months later<br>tumor progression |
| ogan <i>et al.</i> (50)                                  | Turkey       | 2014         | 75/F         | Rectal bleeding                          | HTN, DM, CKD  | Failed to diagnose   | 1                      | Epinephrine + surgical ligation                           | No             | -                        | Recovered                                |
| <i>l</i> ells <i>et al.</i> (72)                         | USA          | 2014         | 44/M         | Hematochezia                             | Alcoholism, HTN, PUD  | A protruding visible rectal vessel with a blood clot   | 1                      | Endoscopic hemoclipping +<br>India ink tattooing          | No             | -                        | Recovered                                |
| oldkamp <i>et al.</i> (71)                               | USA          | 2014         | 60/M         | Hematochezia                             | CAD, GERD   | Upon suctioning, active arterial squirting   | 1                      | Epinephrine + endoscopic<br>hemoclipping                  | No             | -                        | Recovered                                |
| ee et al. (76)   | Taiwan       | 2015         | 84/F         | Hematochezia                             | CHF, HTN, AF, VHD   | CTA detected, colonoscopy confirmed active protruding vessel, 5 cm from the anal verge                           | 2                      | Epinephrine + endoscopic<br>hemoclipping                  | No             | -                        | Recovered                                |
| íiran <i>et al.</i> (77)                                 | India        | 2016         | 34/M         | Hematochezia                             | Blood loss anemia   | CEMRI detected, colonoscopy confirmed a spurting site, 8 cm from the anal verge                                  | 3                      | Sodium tetradecyl sulfate                                 | No             | -                        | Recovered, 12 mor                        |
| rya <i>et al.</i> (33)                                   | UK           | 2016         | 82/F         | Lower abdominal pain,<br>diarrhea, BRBPR | HTN, recurrent UTI  | Failed to diagnose. Active rectal lesion just above the dentate line at 5'oclock                                 | 1                      | Surgical ligation   | No             | -                        | Recovered                                |
| attista <i>et al.</i> (26)                               | USA          | 2016         | F            | Hematochezia                             | Not reported  | Voluminous, arterial, pulsatile, rectal spurting   | 1                      | Epinephrine + endoscopic<br>hemoclipping                  | No             | -                        | Recovered                                |
| 1alik <i>et al.</i> (48)                                 | USA          | 2017         | 91/M         | BRBPR                                    | Hemorrhoids, PUD, HTN, CKD,<br>AF, CHF and SSS sp. pacemaker            | A bleeding rectal submucosal artery  | 1                      | Endoscopic hemoclipping                                   | No             | -                        | Recovered                                |
| ayat <i>et al.</i> (25)                                  | USA          | 2017         | 79/F         | Melena, BRBPR                            | No known comorbidities  | Pulsatile bleeding vessel in the rectum  | 1                      | Endoscopic hemoclipping                                   | No             | -                        | Recovered, 1 mon                         |
| ırsi <i>et al.</i> (64)                                  | Italy        | 2017         | 28/M         | Rectal bleeding                          | No comorbidities  | Pulsatile bleeding from exposed nipple-like vessel   | 1                      | Endoscopic hemoclipping                                   | No             | -                        | Recovered                                |
| adhem <i>et al.</i> (28)                                 | USA          | 2017         | 53/F         | BRBPR, hematochezia                      | DM, HTN   | Single spurting lesion in the rectum   | 1                      | Endoscopic hemoclipping                                   | No             | -                        | Recovered, 1 mon                         |
| hoi <i>et al.</i> (55)                                   | Korea        | 2017         | 57/M         | SOB                                      | Alcoholic cirrhosis   | Blood gushing from exposed vessel in the distal rectum   | 2                      | Endoscopic hemoclipping                                   | No             | -                        | Recovered                                |
| lang et al. (21)   | China        | 2017         | 21/M         | Hematochezia                             | Anal receptive intercourse  | Nipple-like protuberance, 5 cm from the anal verge   | 1                      | Endoscopic hemoclipping                                   | No             | -                        | Recovered, 6 mont                        |
| agnik <i>et al.</i> (16)<br>latarajan <i>et al.</i> (54) | India<br>USA | 2017<br>2018 | 60/M<br>84/F | BRBPR<br>BRBPR                           | DM, IHD<br>Anemia, hemorrhoids, rectal                                  | Protuberant rectal lesion<br>An area of active bleeding in the distal  | 2                      | Epinephrine<br>Endoscopic hemoclipping                    | No<br>No       | -                        | Recovered, 12 mol                        |
| latarajan <i>et al.</i> (54)                             | USA          | 2018         | 54/M         | BRBPR                                    | prolapse<br>Alcoholism, PUD   | rectum<br>A Dieulafoy's lesion of the rectum   | 2                      | Epinephrine + endoscopic<br>hemoclipping                  | No             | -                        | Recovered                                |
| smadi <i>et al.</i> (66)                                 | USA          | 2018         | 22/F         | BRBPR                                    | No comorbidities  | Pedunculated "polyp" with superficial erosion in the rectum  | 1                      | Epinephrine + endoscopic<br>hemoclipping                  | No             | -                        | Recovered                                |
| aneko <i>et al.</i> (79)                                 | Japan        | 2018         | 82/M         | Hematochezia                             | AF, CHF, DM, hyperuricemia  | MDCT detected and colonoscopy confirmed bleeding nipple-like vessel  | 1                      | Electrocoagulation  | No             | -                        | Recovered, 6 mon                         |
| aber <i>et al.</i> (37)                                  | KSA          | 2018         | 63/F         | Admitted for TSSH, BRBPR                 | DM, HTN, pituitary adenoma  | Failed to localize. CTA pinpointed but intraoperative anoscope confirmed the culprit                             | 3                      | Surgical ligation   | No             | -                        | Died due to prior c<br>morbidities       |
| ludspath <i>et al.</i> (61)                              | USA          | 2019         | 59/F         | Hematochezia, shock                      | IST for GPS DM, HTN, anemia, stercoral ulcer                            | arteriole at the anorectal junction<br>A single, pulsatile, visible rectal artery                                | 4                      | Epinephrine + endoscopic<br>hemoclipping + site tattooing | No             | -                        | Recovered, 2 mon                         |
| hilipose <i>et al.</i> (60)                              | USA          | 2019         | 59/M         | Rectal bleeding                          | DVT   | An actively bleeding protruding vessel   | 1                      | Endoscopic hemoclipping                                   | No             | _                        | Recovered                                |
| amora-Nava<br>t al. (30)                                 | Mexico       | 2018         | 38/F         | Rectal bleeding                          | Subtotal colectomy  | A visible rectal vessel  | 2                      | Endoscopic hemoclipping                                   | No             | -                        | Recovered                                |
| hen <i>et al.</i> (38)                                   | USA          | 2019         | 84/F         | SOB, fatigue                             | HTN, CVA, ESRD  | Actively spurting lesion just proximal to the<br>pectinate line  | 1                      | Epinephrine + endoscopic<br>hemoclipping                  | No             | -                        | Recovered                                |
| nem <i>et al.</i> (70)                                   | Turkey       | 2019         | 80/M         | Hematochezia                             | DM, HTN, atrial fibrillation  | A protruding and oozing rectal vessel  | 2                      | Adrenaline + endoscopic<br>hemoclipping                   | No             | -                        | Recovered                                |
| ineda-De Paz<br>t <i>al.</i> (39)                        | Mexico       | 2019         | 44/F         | Vascular access infection                | CKD, HTN, 2 C-sections, appendectomy, renal transplant                  | Active bleeding from small bulgy rectal vessel   | 1                      | Endoscopic hemoclipping                                   | No             | -                        | Recovered                                |
| lehta <i>et al.</i> (41)                                 | USA          | 2019         | 58/F         | DKA                                      | Necrotizing pneumonia requiring VATS, trach/PEG insertion               | Continued irrigation and careful endoscopic inspection showed an actively spurting small vessel                  | 5                      | Endoscopic hemoclipping + site tattooing                  | No             | -                        | Recovered                                |
| 'han <i>et al.</i> (40)                                  | USA          | 2019         | 79/M         | Bilateral leg weakness,<br>melena        | Prostate cancer, HTN gout,<br>degenerative joint disease,<br>alcoholism | CTA pinpointed rectal-wall vascular<br>malformation. Colonoscopy showed a stream<br>of pulsatile rectal bleeding | 2                      | Epinephrine + endoscopic<br>hemoclipping                  | No             | -                        | Recovered                                |
| ingh <i>et al.</i> (36)                                  | USA          | 2019         | 94/M         | Sepsis (osteomyelitis),<br>hematochezia  | Multiple CV and pulmonary conditions                                    | A visible rectal Dieulafoy's lesion  | 1                      | Epinephrine + endoscopic<br>hemoclipping                  | No             | -                        | Recovered                                |
| ingh <i>et al.</i> (36)                                  | USA          | 2019         | 91/M         | Hematochezia                             | Dementia, COPD  | A visible Dieulafoy's lesion in the rectum   |                        | Endoscopic hemoclipping                                   | No             |                          | Recovered                                |

BRBPR, bright-red blood per rectum; HTN, hypertension; DM, diabetes mellitus; SCLC, small-cell lung cancer; CKD, chronic kidney disease; CHF, congestive heart failure, RCC, renal cell carcinoma; PUD, peptic ulcer disease; GERD, gastroesophageal reflux disease; VHD, valvular heart disease; CTA, computed tomography angiography; CEMRI, contrast-enhanced magnetic resonance imaging; UTI, urinary tract infection; NM, not mentioned; MDCT, multi-detector computed tomography; SSS, sick sinus syndrome; IHD, ischemic heart disease; TSSH, trans-sphenoidal hypophysectomy; IST, immunosuppressive therapy; GPS, Goodpasture syndrome; DVT, deep vein thrombosis; SOB, shortness of breath; ESRD, end-stage renal disease; VATS, video-assisted thoracoscopic surgery; PEG, percutaneous endoscopic gastrostomy; CV; cardiovascular; COPD, chronic pulmonary obstructive disease.