

Supplementary Appendix

This appendix has been provided by the authors to give readers additional information about their work.

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Table S1. Reasons for screen failure

| | |
|--|---------------|
| Screened Patients | 847 |
| Screen Failure Patients | 106/847 (13%) |
| Screen Failure Patients Who Did Not Meet Eligibility Criteria | 99/106 (93%) |
| Exclusion Criterion 3: Screening laboratory values not within acceptable ranges | 51/99 (52%) |
| Exclusion Criterion 1: History of clinically-significant illness or any other major medical disorder | 10/99 (10%) |
| Inclusion Criterion 3: HCV RNA $\geq 10^4$ IU/mL at Screening | 9/99 (9%) |
| Exclusion Criterion 7: Infection with HBV or HIV | 6/99 (6%) |
| Exclusion Criterion 2: Screening ECG with clinically significant abnormalities | 5/99 (5%) |
| Exclusion Criterion 8: Clinically-relevant alcohol or drug abuse within 12 months of screening | 5/99 (5%) |
| Inclusion Criterion 1: Willing and able to provide written informed consent | 5/99 (5%) |
| Inclusion Criterion 7: Cirrhosis Determination | 5/99 (5%) |
| Inclusion Criterion 13: Subject must be able to comply with the dosing instructions | 4/99 (4%) |
| Inclusion Criterion 4: HCV genotype 1, 2, 4, 5, 6, or indeterminate | 4/99 (4%) |
| Inclusion Criterion 6: Classification as treatment naive or treatment experienced | 3/99 (3%) |
| Exclusion Criterion 5: Pregnant or nursing female or male with pregnant female partner | 2/99 (2%) |
| Inclusion Criterion 8: Liver imaging within 6 months of Baseline/Day 1 | 2/99 (2%) |
| Inclusion Criterion 9: Negative pregnancy tests for females of childbearing potential | 2/99 (2%) |
| Exclusion Criterion 4: Prior exposure to SOF or any other NS5B or NS5A inhibitor | 1/99 (1%) |
| Inclusion Criterion 12: Subject must be of generally good health | 1/99 (1%) |
| Screen Failure Patients Who Met Eligibility Criteria | |
| Reasons for Non-Enrollment of Patients Who Met Eligibility Criterion | |
| Withdrew Consent | 4/7 (57%) |
| Lost to Follow-Up | 2/7 (29%) |
| Other | 1/7 (14%) |

Figure S1. Patient disposition

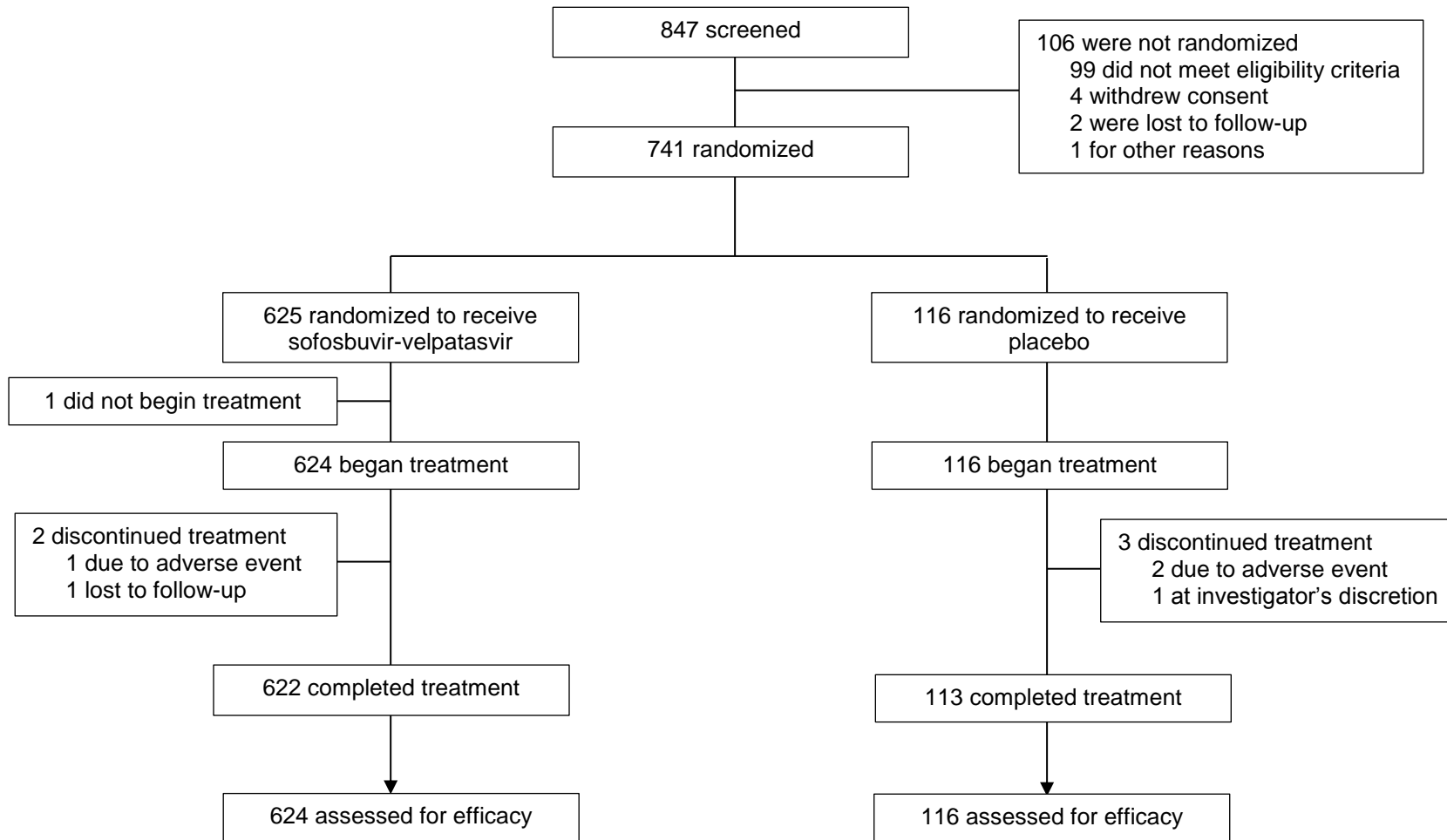


Table S2. Sustained virologic response by subgroups: genotype 1 patients

| | SOF/GS-5816 12 Weeks | | | |
|--------------------------------|-------------------------------------|------------------|------------------|--------------------------|
| | Total (All Genotypes) (N=624) | GT-1a (N=210) | GT-1b (N=118) | GT-1 Total (N=328) |
| Overall | 618/624 (99.0%) | 206/210 (98.1%) | 117/118 (99.2%) | 323/328 (98.5%) |
| 95% CI | 97.9% to 99.6% | 95.2% to 99.5% | 95.4% to 100.0% | 96.5% to 99.5% |
| Age at Baseline (Years) | | | | |
| < 65 | 530/536 (98.9%) | 187/191 (97.9%) | 100/101 (99.0%) | 287/292 (98.3%) |
| 95% CI | 97.6% to 99.6% | 94.7% to 99.4% | 94.6% to 100.0% | 96.0% to 99.4% |
| >= 65 | 88/88 (100.0%) | 19/19 (100.0%) | 17/17 (100.0%) | 36/36 (100.0%) |
| 95% CI | 95.9% to 100.0% | 82.4% to 100.0% | 80.5% to 100.0% | 90.3% to 100.0% |
| Sex at Birth | | | | |
| Male | 369/374 (98.7%) | 136/139 (97.8%) | 57/58 (98.3%) | 193/197 (98.0%) |
| 95% CI | 96.9% to 99.6% | 93.8% to 99.6% | 90.8% to 100.0% | 94.9% to 99.4% |
| Female | 249/250 (99.6%) | 70/71 (98.6%) | 60/60 (100.0%) | 130/131 (99.2%) |
| 95% CI | 97.8% to 100.0% | 92.4% to 100.0% | 94.0% to 100.0% | 95.8% to 100.0% |
| Race | | | | |
| White | 488/493 (99.0%) | 177/181 (97.8%) | 98/98 (100.0%) | 275/279 (98.6%) |
| 95% CI | 97.6% to 99.7% | 94.4% to 99.4% | 96.3% to 100.0% | 96.4% to 99.6% |
| Black | 51/52 (98.1%) | 18/18 (100.0%) | 6/7 (85.7%) | 24/25 (96.0%) |
| 95% CI | 89.7% to 100.0% | 81.5% to 100.0% | 42.1% to 99.6% | 79.6% to 99.9% |
| Other | 76/76 (100.0%) | 9/9 (100.0%) | 13/13 (100.0%) | 22/22 (100.0%) |
| 95% CI | 95.3% to 100.0% | 66.4% to 100.0% | 75.3% to 100.0% | 84.6% to 100.0% |
| Baseline BMI (kg/m2) | | | | |
| < 30 | 484/489 (99.0%) | 155/158 (98.1%) | 99/100 (99.0%) | 254/258 (98.4%) |
| 95% CI | 97.6% to 99.7% | 94.6% to 99.6% | 94.6% to 100.0% | 96.1% to 99.6% |
| >= 30 | 134/135 (99.3%) | 51/52 (98.1%) | 18/18 (100.0%) | 69/70 (98.6%) |
| 95% CI | 95.9% to 100.0% | 89.7% to 100.0% | 81.5% to 100.0% | 92.3% to 100.0% |
| Cirrhosis | | | | |
| Yes | 120/121 (99.2%) | 49/49 (100.0%) | 23/24 (95.8%) | 72/73 (98.6%) |
| 95% CI | 95.5% to 100.0% | 92.7% to 100.0% | 78.9% to 99.9% | 92.6% to 100.0% |
| No | 496/501 (99.0%) | 157/161 (97.5%) | 94/94 (100.0%) | 251/255 (98.4%) |
| 95% CI | 97.7% to 99.7% | 93.8% to 99.3% | 96.2% to 100.0% | 96.0% to 99.6% |

Table S2. Sustained virologic response by subgroups: genotype 1 patients (continued)

| | SOF/GS-5816 12 Weeks | | | |
|---------------------------------------|-------------------------------------|------------------|------------------|--------------------------|
| | Total (All Genotypes) (N=624) | GT-1a (N=210) | GT-1b (N=118) | GT-1 Total (N=328) |
| IL28B | | | | |
| CC | 185/186 (99.5%) | 47/48 (97.9%) | 42/42 (100.0%) | 89/90 (98.9%) |
| 95% CI | 97.0% to 100.0% | 88.9% to 99.9% | 91.6% to 100.0% | 94.0% to 100.0% |
| Non-CC | 428/433 (98.8%) | 156/159 (98.1%) | 75/76 (98.7%) | 231/235 (98.3%) |
| 95% CI | 97.3% to 99.6% | 94.6% to 99.6% | 92.9% to 100.0% | 95.7% to 99.5% |
| CT | 336/339 (99.1%) | 122/125 (97.6%) | 59/59 (100.0%) | 181/184 (98.4%) |
| 95% CI | 97.4% to 99.8% | 93.1% to 99.5% | 93.9% to 100.0% | 95.3% to 99.7% |
| TT | 92/94 (97.9%) | 34/34 (100.0%) | 16/17 (94.1%) | 50/51 (98.0%) |
| 95% CI | 92.5% to 99.7% | 89.7% to 100.0% | 71.3% to 99.9% | 89.6% to 100.0% |
| Baseline HCV RNA (IU/mL) | | | | |
| < 800,000 | 161/163 (98.8%) | 41/41 (100.0%) | 31/32 (96.9%) | 72/73 (98.6%) |
| 95% CI | 95.6% to 99.9% | 91.4% to 100.0% | 83.8% to 99.9% | 92.6% to 100.0% |
| >= 800,000 | 457/461 (99.1%) | 165/169 (97.6%) | 86/86 (100.0%) | 251/255 (98.4%) |
| 95% CI | 97.8% to 99.8% | 94.1% to 99.4% | 95.8% to 100.0% | 96.0% to 99.6% |
| Prior HCV Treatment Experience | | | | |
| Treatment-Naive | 418/423 (98.8%) | 128/132 (97.0%) | 86/86 (100.0%) | 214/218 (98.2%) |
| 95% CI | 97.3% to 99.6% | 92.4% to 99.2% | 95.8% to 100.0% | 95.4% to 99.5% |
| Treatment-Experienced | 200/201 (99.5%) | 78/78 (100.0%) | 31/32 (96.9%) | 109/110 (99.1%) |
| 95% CI | 97.3% to 100.0% | 95.4% to 100.0% | 83.8% to 99.9% | 95.0% to 100.0% |
| Prior HCV Treatment | | | | |
| DAA+Peg-IFN+RBV | 56/56 (100.0%) | 37/37 (100.0%) | 11/11 (100.0%) | 48/48 (100.0%) |
| 95% CI | 93.6% to 100.0% | 90.5% to 100.0% | 71.5% to 100.0% | 92.6% to 100.0% |
| Peg-IFN+RBV | 121/122 (99.2%) | 37/37 (100.0%) | 13/14 (92.9%) | 50/51 (98.0%) |
| 95% CI | 95.5% to 100.0% | 90.5% to 100.0% | 66.1% to 99.8% | 89.6% to 100.0% |
| Other | 23/23 (100.0%) | 4/4 (100.0%) | 7/7 (100.0%) | 11/11 (100.0%) |
| 95% CI | 85.2% to 100.0% | 39.8% to 100.0% | 59.0% to 100.0% | 71.5% to 100.0% |

Table S3. Sustained virologic response by subgroups: genotype 2, 4, 5, 6 patients

| (Continued) | SOF/GS-5816 12 Weeks | | | |
|-------------------------|----------------------|------------------|-----------------|-----------------|
| | GT-2 (N=104) | GT-4 (N=116) | GT-5 (N=35) | GT-6 (N=41) |
| Overall | 104/104 (100.0%) | 116/116 (100.0%) | 34/35 (97.1%) | 41/41 (100.0%) |
| 95% CI | 96.5% to 100.0% | 96.9% to 100.0% | 85.1% to 99.9% | 91.4% to 100.0% |
| Age at Baseline (Years) | | | | |
| < 65 | 79/79 (100.0%) | 105/105 (100.0%) | 18/19 (94.7%) | 41/41 (100.0%) |
| 95% CI | 95.4% to 100.0% | 96.5% to 100.0% | 74.0% to 99.9% | 91.4% to 100.0% |
| >= 65 | 25/25 (100.0%) | 11/11 (100.0%) | 16/16 (100.0%) | 0/0 |
| 95% CI | 86.3% to 100.0% | 71.5% to 100.0% | 79.4% to 100.0% | |
| Sex at Birth | | | | |
| Male | 57/57 (100.0%) | 86/86 (100.0%) | 13/14 (92.9%) | 20/20 (100.0%) |
| 95% CI | 93.7% to 100.0% | 95.8% to 100.0% | 66.1% to 99.8% | 83.2% to 100.0% |
| Female | 47/47 (100.0%) | 30/30 (100.0%) | 21/21 (100.0%) | 21/21 (100.0%) |
| 95% CI | 92.5% to 100.0% | 88.4% to 100.0% | 83.9% to 100.0% | 83.9% to 100.0% |
| Race | | | | |
| White | 82/82 (100.0%) | 96/96 (100.0%) | 34/35 (97.1%) | 1/1 (100.0%) |
| 95% CI | 95.6% to 100.0% | 96.2% to 100.0% | 85.1% to 99.9% | 2.5% to 100.0% |
| Black | 13/13 (100.0%) | 14/14 (100.0%) | 0/0 | 0/0 |
| 95% CI | 75.3% to 100.0% | 76.8% to 100.0% | | |
| Other | 8/8 (100.0%) | 6/6 (100.0%) | 0/0 | 40/40 (100.0%) |
| 95% CI | 63.1% to 100.0% | 54.1% to 100.0% | | 91.2% to 100.0% |
| Baseline BMI (kg/m2) | | | | |
| < 30 | 84/84 (100.0%) | 80/80 (100.0%) | 26/27 (96.3%) | 40/40 (100.0%) |
| 95% CI | 95.7% to 100.0% | 95.5% to 100.0% | 81.0% to 99.9% | 91.2% to 100.0% |
| >= 30 | 20/20 (100.0%) | 36/36 (100.0%) | 8/8 (100.0%) | 1/1 (100.0%) |
| 95% CI | 83.2% to 100.0% | 90.3% to 100.0% | 63.1% to 100.0% | 2.5% to 100.0% |
| Cirrhosis | | | | |
| Yes | 10/10 (100.0%) | 27/27 (100.0%) | 5/5 (100.0%) | 6/6 (100.0%) |
| 95% CI | 69.2% to 100.0% | 87.2% to 100.0% | 47.8% to 100.0% | 54.1% to 100.0% |
| No | 93/93 (100.0%) | 89/89 (100.0%) | 28/29 (96.6%) | 35/35 (100.0%) |
| 95% CI | 96.1% to 100.0% | 95.9% to 100.0% | 82.2% to 99.9% | 90.0% to 100.0% |

Table S3. Sustained virologic response by subgroups: genotype 2, 4, 5, 6 patients (continued)

| (Continued) | SOF/GS-5816 12 Weeks | | | |
|---------------------------------------|----------------------|-----------------|-----------------|-----------------|
| | GT-2 (N=104) | GT-4 (N=116) | GT-5 (N=35) | GT-6 (N=41) |
| IL28B | | | | |
| CC | 30/30 (100.0%) | 27/27 (100.0%) | 11/11 (100.0%) | 28/28 (100.0%) |
| 95% CI | 88.4% to 100.0% | 87.2% to 100.0% | 71.5% to 100.0% | 87.7% to 100.0% |
| Non-CC | 74/74 (100.0%) | 89/89 (100.0%) | 23/24 (95.8%) | 11/11 (100.0%) |
| 95% CI | 95.1% to 100.0% | 95.9% to 100.0% | 78.9% to 99.9% | 71.5% to 100.0% |
| CT | 56/56 (100.0%) | 68/68 (100.0%) | 21/21 (100.0%) | 10/10 (100.0%) |
| 95% CI | 93.6% to 100.0% | 94.7% to 100.0% | 83.9% to 100.0% | 69.2% to 100.0% |
| TT | 18/18 (100.0%) | 21/21 (100.0%) | 2/3 (66.7%) | 1/1 (100.0%) |
| 95% CI | 81.5% to 100.0% | 83.9% to 100.0% | 9.4% to 99.2% | 2.5% to 100.0% |
| Baseline HCV RNA (IU/mL) | | | | |
| < 800,000 | 29/29 (100.0%) | 42/42 (100.0%) | 8/9 (88.9%) | 10/10 (100.0%) |
| 95% CI | 88.1% to 100.0% | 91.6% to 100.0% | 51.8% to 99.7% | 69.2% to 100.0% |
| >= 800,000 | 75/75 (100.0%) | 74/74 (100.0%) | 26/26 (100.0%) | 31/31 (100.0%) |
| 95% CI | 95.2% to 100.0% | 95.1% to 100.0% | 86.8% to 100.0% | 88.8% to 100.0% |
| Prior HCV Treatment Experience | | | | |
| Treatment-Naive | 79/79 (100.0%) | 64/64 (100.0%) | 23/24 (95.8%) | 38/38 (100.0%) |
| 95% CI | 95.4% to 100.0% | 94.4% to 100.0% | 78.9% to 99.9% | 90.7% to 100.0% |
| Treatment-Experienced | 25/25 (100.0%) | 52/52 (100.0%) | 11/11 (100.0%) | 3/3 (100.0%) |
| 95% CI | 86.3% to 100.0% | 93.2% to 100.0% | 71.5% to 100.0% | 29.2% to 100.0% |
| Prior HCV Treatment | | | | |
| DAA+Peg-IFN+RBV | 0/0 | 6/6 (100.0%) | 2/2 (100.0%) | 0/0 |
| 95% CI | | 54.1% to 100.0% | 15.8% to 100.0% | |
| Peg-IFN+RBV | 22/22 (100.0%) | 39/39 (100.0%) | 7/7 (100.0%) | 3/3 (100.0%) |
| 95% CI | 84.6% to 100.0% | 91.0% to 100.0% | 59.0% to 100.0% | 29.2% to 100.0% |
| Other | 3/3 (100.0%) | 7/7 (100.0%) | 2/2 (100.0%) | 0/0 |
| 95% CI | 29.2% to 100.0% | 59.0% to 100.0% | 15.8% to 100.0% | |

Table S4. Characteristics of patients with virologic relapse

| Age | Sex | Race | BMI | GT | Cirrhosis | IL28B | HCV RNA | Timing of VF | HCV treatment history | Resistance-associated variants | | | |
|-----|-----|-------|-----|----|-----------|-------|---------|--------------|-----------------------|--|---|------|------|
| | | | | | | | | | | NS5A | | NS5B | |
| | | | | | | | | | | BL | FU | BL | FU |
| 56 | M | White | 22 | 1a | No | CT | 6.5 | FU wk 4 | Naive | Q30R (2.6%) | Y93N (>99%) | None | None |
| 58 | M | Black | 27 | 1b | Yes | TT | 6.8 | FU wk 4 | Prev Peg/RBV | Q30L (1.1%) Q30R (98.7%) L31M (>99%) | Q30R (>99%) L31I (2.8%) L31M (88.4%) L31V (8.6%) Y93H (72.3%) | None | None |

BMI denotes body mass index; GT, genotype; VF, virologic failure; BL, baseline; FU, follow-up.

Table S5. Patients Receiving Sofosbuvir-Velpatasvir Who Experienced Serious Adverse Events

| Age | Sex | Race | Genotype | Cirrhosis | Serious Adverse Event | Date of Onset | Relevant History |
|-----|-----|-------|----------|-----------|---------------------------------------|-----------------------|---|
| 63 | M | White | 1a | No | Abscess in left foot | Post-treatment day 4 | Type 2 diabetes mellitus with peripheral neuropathy, radiculopathy and bilateral foot pain. |
| | | | | | Cellulitis in left foot | | |
| | | | | | Necrosis in left foot | | |
| 66 | F | White | 2b | No | Acute myocardial infarction | Post-treatment day 10 | Low hypertension with underlying coronary artery disease. Acute STEMI (complete left anterior descending artery occlusion) and ischemic cardiomyopathy (left ventricular ejection fraction 35 to 40%) |
| 59 | M | Asian | 1b | No | Recurring appendicitis | Treatment day 43 | Diverticular disease with ruptured appendix 5 months earlier |
| 50 | M | White | 4 | No | Bronchitis | Post-treatment day 26 | Long term smoker (60 pack years) with likely underlying chronic obstructive pulmonary disease |
| 60 | F | White | 1a | No | Chronic obstructive pulmonary disease | Post-treatment day 20 | Chronic obstructive pulmonary disease, splenectomy with COPD exacerbation due to influenza during the flu season |
| | | | | | Influenza | | |
| 64 | M | White | 2b | No | Epileptic seizure | Treatment day 50 | Hypertension, aneurysm with epileptic seizure (CT with hypodense left periventricular lesions) |
| 63 | M | ND | 1a | No | Gastroenteritis | Treatment day 79 | None |
| 48 | M | Asian | 6a/6b | No | Ligament sprain in right arm | Treatment day 48 | Accidental fall from height |
| | | | | | Rotator cuff syndrome | | |
| 66 | F | White | 2a/2c | No | Lung cancer | Treatment day 82 | Long-term smoker (100 pack years) |
| 45 | F | White | 1a | No | Mania | Post-treatment day 10 | Anxiety and sleep disorder |
| 55 | M | White | 1a | No | Palpitations | Treatment day 30 | Ventricular extrasystoles and sarcoidosis. |
| 65 | F | Black | 1b | No | Small bowel obstruction | Post-treatment day 12 | Obesity, colon adenoma and Roux en Y gastric bypass |
| 55 | M | White | 5a | No | Sudden death during sleep | Post-treatment day 8 | Dyslipidemia on simvastatin and ezetimibe |
| 56 | F | White | 1b | No | Upper limb fracture | Treatment day 48 | Fall while ice skating |
| 69 | F | White | 5a | No | Vestibular neuronitis | Treatment day 72 | History of hypertension, diagnosed with hypertensive crisis and vertigo 9 days earlier |

ND denotes not disclosed.