

SUPPLEMENTARY DATA

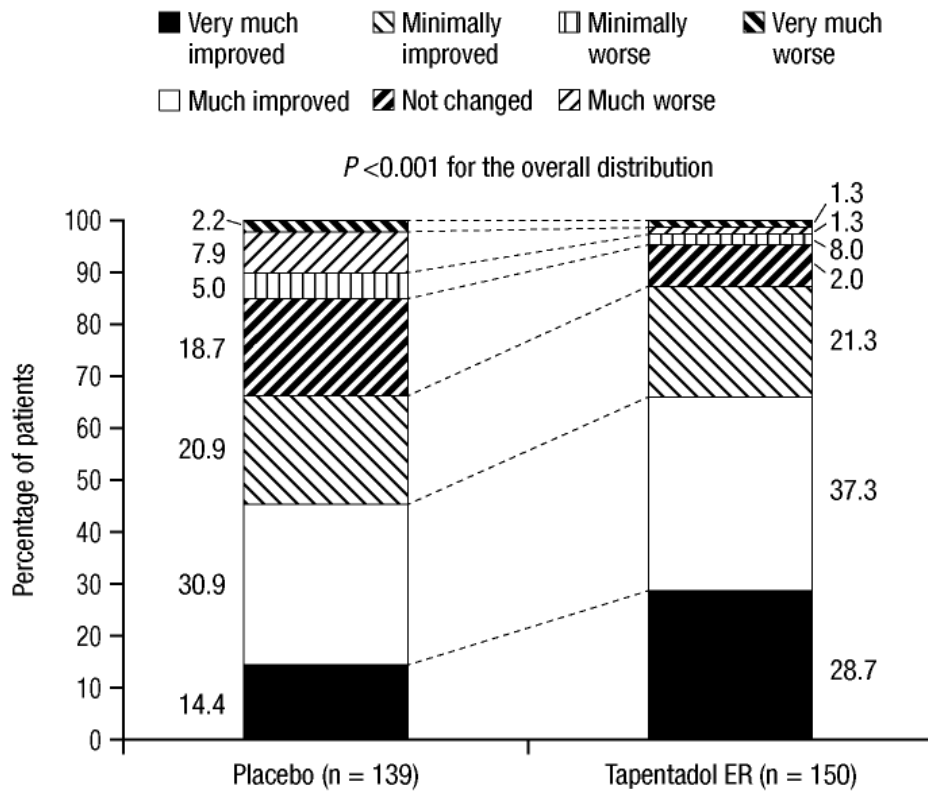
This clinical trial was conducted under the guidance of the following principal investigators: Suzan Abdel-Salam, MD, Ontario, Canada; Michael Adams, MD, MBBS, Radiant Research, Salt Lake City, Utah; Marc Afilalo, MD, MCFP(EM), FACEP, CSPQ, FRCPC(C), ED-AMR, Quebec, Canada; Laura Akright, MD, InVisions Consultants, LLC, San Antonio, Texas; Christopher D. Alftine, MD, Sunstone Medical Research, LLC, Medford, Oregon; Pamela Amador, MD, Gables Research, Miami, Florida; Ronnie Aronson, MD, FRCPC, FACE, Ontario, Canada; Armen H. Arslanian, MD, Brockton, Massachusetts; Jeffrey E. Atkinson, MD, Chesapeake Research Group, LLC, Pasadena, Maryland; Sarah Atkinson, MD, Finger Lakes Clinical Research, Rochester, New York; Maxwell Axler, MD, Clinical Trial Network, Houston, Texas; Andre Belanger, MD, Quebec, Canada; Kyra Blatt, MD, The Medical Research Network, LLC, New York, New York; Dennis Callaghan, MD, Ontario, Canada; Leonard H. S. Chuck, PhD, MD, Diablo Clinical Research Incorporated, Walnut Creek, California; John Cochran II, MD, Alexandria Fairfax Neurology, PC, Alexandria, Virginia; Michael DeSantis, MD, Clinical Trials of America, Inc., Hickory, North Carolina; Eric L. Diamond, DPM, Crossroads Research, Inc., Owings Mills, Maryland; Guiseppe D'Ignazio, MD, Clinic Source Unique Research, Ontario, Canada; Michael J. Drass, MD, Allegheny Pain Management, Altoona, Pennsylvania; Steven K. Elliott, MD, MediSphere Medical Research Center, LLC, Evansville, Indiana; William Travis Ellison, MD, Radiant Research, Inc., Greer, South Carolina; Grace Forde, MD, North American Partners in Pain Management, Valley Stream, New York; Sally Godsell, MD, Okanagan Clinical Trials, British Columbia, Canada; Arnold Greenberg, MD, Center for Clinical Research, Inc., San Francisco, California; Joe Gregory, DO, Clinical Research Advantage, Inc., Central Arizona Medical Associates, PC, Tempe, Arizona; Gregory A. Haase, MD, Tidewater Integrated Medical Research, Virginia Beach, Virginia; Charles E. Hall, MD, Horizon Research Group, Inc., Mobile, Alabama; Tami Helmer, MD, Radiant Research Inc, Edina, Minnesota; Raymond Hoofft, MD, Mountain West Clinical Trials, Eagle, Idaho; Susan E. Hotz, MD, Neurological Clinic of Texas, P.A., Dallas, Texas; Bret House, MD, AHN Research, Fishers, Indiana; William A. Kaye, MD, FACP, Metabolic Research Institute, Inc., West Palm Beach, Florida; Stephen W. Kayota, MD, Tidewater Integrated Medical Research, Virginia Beach, Virginia; Susan E. Kemp, MD, Clinical Trials of America, Inc., Shreveport, Louisiana; Melissa M. Kempf, MD, Oakwell Clinical Research, LLC, San Antonio, Texas; Howard J. Kerstein, MD, Denver, Colorado; Alan J. Kivitz, MD, CPI, Altoona Center for Clinical Research, Duncansville, Pennsylvania; Andrew Klymiuk, MD, KRK Medical Research, Dallas, Texas; Elias M. Kolettis, DO, MS, Clinical Research of West Florida, Inc., Clearwater, Florida; James Kopp, MD, Hartwell Research, Anderson, South Carolina; Dennis M. Lacey, MD, NeuroTrials Research, Inc., Atlanta, Georgia; Robert S. Lipetz, DO, Encompass Clinical Research, Spring Valley, California; Daniel L. Lorber, MD, Diabetes Care & Information Center of New York, Flushing, New York; Lon D. Lynn, DO, Clinical Research of West Florida, Inc., Tampa, Florida; Hassan Malik, MD, Radiant Research, Inc., Akron, Ohio; Michael Mann, MD, Athena Clinical Research, Bulverde, Texas; Perry Mayer, MD, MB, BCh, BAO, The Mayer Institute, Ontario, Canada; Andre Michon, MD, CCFP, Medicor Research Inc., Ontario, Canada; Martin Mollen, MD, Arizona Research Center, Phoenix, Arizona; Bruce Nicholson, MD, Lehigh Valley Health Network Pain Research, Lehigh Valley Health Network Center for Pain Management, and Lehigh Valley Health Network Clinical Pharmacy, Allentown, Pennsylvania; Paul Norwood, MD, Valley Research, Fresno, California; Michael Noss, MD, Radiant Research, Cincinnati, Ohio; Margarita Nunez, MD, Comprehensive Neurosciences, Inc., St. Petersburg, Florida; Michael O'Mahony, MD, London Road Diagnostic Clinic and Medical Centre, Ontario, Canada; Ashokkumar Patel, MD, MPH, Radiant Research, St. Louis, Missouri; Kashyap Patel, MD, Peninsula Research Inc, Ormond Beach, Florida; Patrick Peters Jr., MD, Texas Medical Research Associates, LLC, San Antonio, Texas; Lew Pliamm, MD, CCFP, FCFP, Canadian Phase Onward Inc., Ontario, Canada; Bryan Pogue, MD, Selah Medical Center, Boise, Idaho; Alan J. Reichman, MD, Clinical Trial Network, Houston, Texas; William Reilly, MD, Basin Orthopedic Surgical, Odessa, Texas; Joshua Rosenthal, MD, Capital Research Associates,

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Rockville, Maryland; Stuart Ross, MD, FRACP, FRCPC, Alberta, Canada; Jamshid Saleh, MD, Northern California Clinical Research Center, Redding, California; Andrew Schreiber, MD, SDS Clinical Trials, Orange, California; Randall Severance, MD, Radiant Research Phoenix, Chandler, Arizona; Timothy Smith, MD, Mercy Health Research, St. Louis, Missouri; Mary Louise Stedman, MD, Stedman Clinical Trials, Tampa, Florida; Ronald Stegemoller, MD, American Health Network, Avon, Indiana; Davis Steiner, MD, Five Towns Neuroscience Research, Cedarhurst, New York; Donald Taylor, MD, Taylor Research, LLC, Marietta, Georgia; Haydn Mikel Thomas, MD, Clinical Trials Technology, Prairie Village, Kansas; Cory Toth, MD, FRCPC, University of Calgary, Heritage Medical Research Clinic, Alberta, Canada; Christine Truitt, MD, Clinical Trials of Texas, San Antonio, Texas; Aaron Vinik, MD, PhD, EVMS-Strelitz Diabetes Center, Norfolk, Virginia; Walter Walthall IV, MD, North San Antonio Healthcare Associates, San Antonio, Texas; Arnold Weil, MD, Georgia Institute for Clinical Research, LLC, Marietta, Georgia; James Wild, MD, Upstate Clinical Research Associates, Williamsville, New York; Kerri Wilks, MD, MD Clinical, Hallandale Beach, Florida; Douglas Young, MD, Northern California Research, Sacramento, California.

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Supplementary Figure 1. Patient global impression of change (PGIC) at endpoint of the double-blind maintenance phase (ITT population).^a



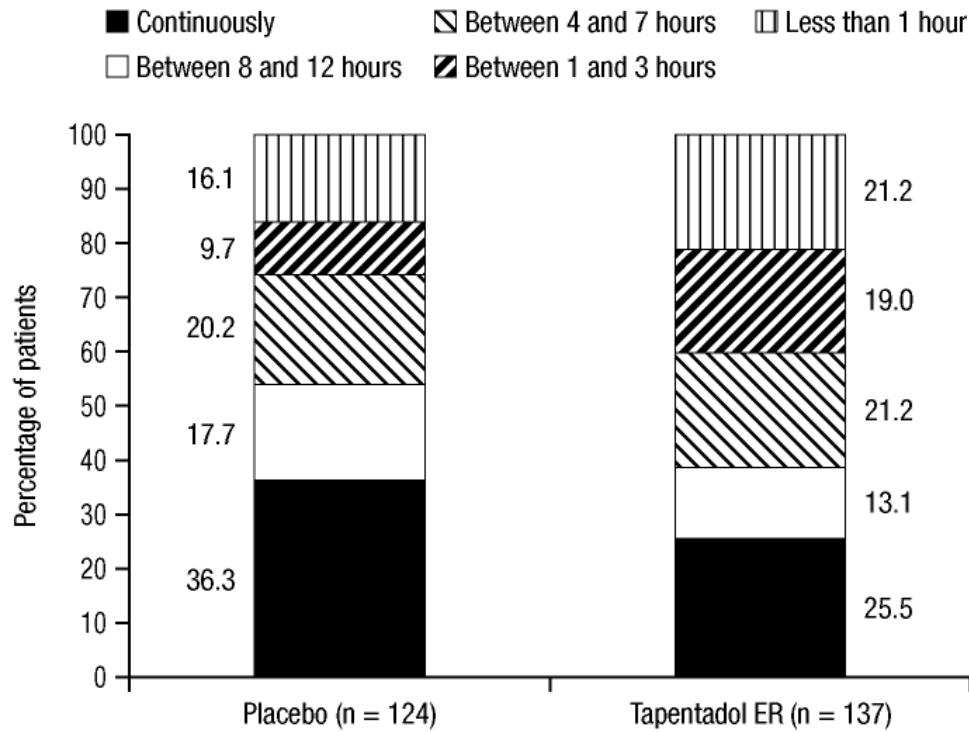
ITT, intent-to-treat; ER, extended release.

^aPercentages may not total 100.0% because of rounding.

^b $P < 0.001$ for the overall distribution

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Supplementary Figure 2. Duration of spontaneous pain during the past 24 hours at endpoint of the double-blind maintenance phase (ITT population).



ITT, intent-to-treat; ER, extended release.

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Supplementary Table 1. Patient Demographic and Baseline Characteristics

Characteristic	OL safety population	DB safety population	
	Tapentadol ER (n = 459)	Placebo (n = 152)	Tapentadol ER (n = 166)
Gender, n (%)			
Male	266 (58.0)	88 (57.9)	99 (59.6)
Female	193 (42.0)	64 (42.1)	67 (40.4)
Race, n (%)			
White	370 (80.6)	120 (78.9)	138 (83.1)
Black or African American	60 (13.1)	22 (14.5)	23 (13.9)
Asian	9 (2.0)	2 (1.3)	3 (1.8)
American Indian or Alaskan Native	4 (0.9)	2 (1.3)	1 (0.6)
Other	16 (3.5)	6 (3.9)	1 (0.6)
Age, y			
Mean (SD)	59.8 (10.30)	59.0 (9.00)	58.5 (10.63)
Range	28-86	28-82	30-83
Age category, n (%)			
<65 y	305 (66.4)	109 (71.7)	122 (73.5)
≥65 y	154 (33.6)	43 (28.3)	44 (26.5)
Prior opioid use, n (%) ^a			
Yes	148 (32.2)	48 (31.6)	52 (31.3)
No	311 (67.8)	104 (68.4)	114 (68.7)
Body mass index, kg/m ²			
Mean (SD)	34.8 (9.22)	34.5 (7.84)	35.1 (11.47)
Range	17-146	20-63	17-146
Start of OL pain intensity score ^{b,c}			
Category, n (%)			
Mild	1 (0.2)	0	0
Moderate	58 (12.6)	14 (9.2)	23 (13.9)
Severe	400 (87.1)	138 (90.8)	143 (86.1)
Mean (SD)	7.3 (1.30)	7.5 (1.27)	7.4 (1.27)
Baseline pain intensity score (end of OL) ^{b,d,e}			
Category, n (%)			
None	7 (1.5)	5 (3.3)	2 (1.2)
	172 (37.5)	84 (55.3)	88 (53.0)

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Mild	92 (20.0)	39 (25.7)	52 (31.3)
Moderate	48 (10.5)	24 (15.8)	23 (13.9)
Severe	3.6 (1.99)	3.5 (2.17)	3.7 (1.78)
Mean (SD)			

OL, open-label; DB, double-blind; ER, extended release; SD, standard deviation; DPN, diabetic peripheral neuropathy.

^aPrior opioid use was defined as any previous opioid analgesic use for the treatment of painful DPN for ≥ 3 weeks.

^bPain intensity is defined as none = 0, mild = >0 to <4 , moderate = 4 to <6 , and severe = ≥ 6 on the 11-point numerical rating scale.

^cAverage of pain scores over 3 days prior to the start of titration.

^dAverage of pain scores over 72 hours prior to randomization.

^en = 319 for OL safety population; n = 165 for tapentadol ER DB safety population.

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Supplementary Table 2. Average Pain Intensity Changes From Start to Week 12 of the DB Maintenance Phase Using Different Imputation Methods: Sensitivity Analyses of the Primary Endpoint (ITT Population)

	Placebo (n = 152)	Tapentadol ER (n = 166)
LOCF		
Mean (SD) score at start of DB phase	3.53 (2.17)	3.70 (1.78)
Mean (SD) change at Week 12 of DB phase	1.30 (2.43)	0.28 (2.04)
LSMD vs placebo (95% CI)		-0.95 (-1.42 to -0.49)
<i>P</i> value (minus placebo)		<0.001
BOCF		
Mean (SD) score at start of DB phase	3.53 (2.17)	3.70 (1.78)
Mean (SD) change at Week 12 of DB phase	0.68 (1.82)	-0.00 (1.57)
LSMD vs placebo (95% CI)		-0.64 (-1.01 to -0.28)
<i>P</i> value (minus placebo)		<0.001
Modified BOCF		
Mean (SD) score at start of DB phase	3.53 (2.17)	3.70 (1.78)
Mean (SD) change at Week 12 of DB phase	0.77 (2.03)	0.05 (1.78)
LSMD vs placebo (95% CI)		-0.65 (-1.05 to -0.26)
<i>P</i> value (minus placebo)		0.001
PMI		
Mean (SD) score at start of DB phase	3.53 (2.17)	3.70 (1.78)
Mean (SD) change at Week 12 of DB phase	0.94 (2.22)	0.17 (1.90)
LSMD vs placebo (95% CI)		-0.67 (-1.04 to -0.30)
<i>P</i> value (minus placebo)		<0.001
WOCF		
Mean (SD) score at start of DB phase	3.53 (2.17)	3.70 (1.78)
Mean (SD) change at Week 12 of DB phase	2.00 (2.58)	0.87 (2.17)
LSMD vs placebo (95% CI)		-1.10 (-1.58 to -0.61)
<i>P</i> value (minus placebo)		<0.001
Observed case		
Mean (SD) score at start of DB phase	3.53 (2.17)	3.70 (1.78)
Mean (SD) change at Week 12 of DB phase	1.05 (2.31)	-0.04 (1.97)
LSMD vs placebo (95% CI)		-1.11 (-1.65 to -0.57)
<i>P</i> value (minus placebo)		<0.001

DB, double-blind; ITT, intent-to-treat; ER, extended release; LOCF, last observation carried forward; SD, standard deviation; LSMD, least-squares mean difference; CI, confidence interval; BOCF, baseline observation carried forward; PMI, placebo mean imputation; WOCF, worst observation carried forward.

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Supplemental Table 3. Average Pain Intensity and Change in Pain Intensity by Supplemental Tapentadol ER Use During Double-blind Treatment (LOCF; ITT Population)^a

	Placebo		Tapentadol ER	
	Supplemental tapentadol ER used (n = 112)	Supplemental tapentadol ER not used (n = 40)	Supplemental tapentadol ER used (n = 106)	Supplemental tapentadol ER not used (n = 59)
Mean (SD) pain intensity				
Mean (SD) pain intensity at the start of open-label titration	7.6 (1.32)	7.1 (1.30)	7.5 (1.23)	7.2 (1.10)
Mean (SD) pain intensity at the start of double-blind treatment	3.7 (2.26)	3.2 (1.88)	3.8 (1.84)	3.5 (1.66)
Mean (SD) pain intensity at Week 12 of double-blind treatment	5.2 (2.58)	3.9 (2.46)	4.3 (2.35)	3.5 (1.81)
Mean (SD) change in pain intensity from the start to Week 12 of double-blind treatment	1.5 (2.53)	0.7 (2.03)	0.4 (2.28)	0.0 (1.52)

ER, extended release; LOCF, last observation carried forward; ITT, intent-to-treat; SD, standard deviation.

^aIn both treatment groups, supplemental tapentadol ER 25 mg bid was permitted as additional analgesia during the first 4 days and once per day from Day 5 onward during the double-blind treatment period.

Supplementary Table 4. Brief Pain Inventory (BPI) Mean Pain Intensity and Pain Interference Score Changes From Start of the OL Phase to DB Endpoint (ITT Population)^a

	Placebo (n = 137)	Tapentadol ER (n = 147)
Pain intensity subscale score		
Mean (SD) score at start of OL phase	6.8 (1.54)	6.6 (1.52)
Mean (SD) change at DB endpoint	-2.3 (2.33)	-3.0 (2.16)
<i>P</i> value (minus placebo) ^b		0.003
Pain interference score		
Mean (SD) score at start of OL phase	5.9 (2.30)	5.6 (2.32)
Mean (SD) change at DB endpoint	-2.6 (2.38)	-3.0 (2.07)
<i>P</i> value (minus placebo) ^b		0.050

ITT, intent-to-treat; ER, extended release; SD, standard deviation; OL, open-label; DB, double-blind.

^aResults are presented for all patients who had observations at both the start of the OL phase and at the endpoint of the DB maintenance phase.

^bTested using an analysis of covariance model with treatment, pooled analysis site, and dose category as factors and start of OL value as a covariate.

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Supplementary Table 5. Short Form-36 (SF-36) Mean Subscale and Summary Scores Changes From Start of the DB Phase to Endpoint of the DB Maintenance Phase (ITT Population)

SF-36 subscale or summary score	Placebo (n = 131)	Tapentadol ER (n = 146)
Physical functioning subscale		
Mean (SD) score at start of DB phase	38.2 (11.35)	37.3 (10.49)
Mean (SD) change at DB endpoint	-1.7 (7.44)	0.1 (7.50)
LSMD vs placebo (95% CI)		1.5 (-0.21 to 3.23)
<i>P</i> value (minus placebo)		0.085
Role-physical subscale		
Mean (SD) score at start of DB phase	41.9 (10.33)	41.7 (9.89)
Mean (SD) change at DB endpoint	-2.1 (7.14)	0.8 (8.12)
LSMD vs placebo (95% CI)		2.6 (0.85 to 4.29)
<i>P</i> value (minus placebo)		0.004
Bodily pain subscale		
Mean (SD) score at start of DB phase	44.2 (7.34)	42.4 (7.03)
Mean (SD) change at DB endpoint	-3.9 (8.80)	-0.0 (7.55)
LSMD vs placebo (95% CI)		3.0 (1.24 to 4.69)
<i>P</i> value (minus placebo)		<0.001
General health subscale		
Mean (SD) score at start of DB phase	42.2 (9.02)	42.0 (9.35)
Mean (SD) change at DB endpoint	-0.8 (6.39)	-0.4 (6.04)
LSMD vs placebo (95% CI)		0.6 (-0.87 to 1.99)
<i>P</i> value (minus placebo)		0.444
Vitality subscale		
Mean (SD) score at start of DB phase	45.8 (9.11)	45.5 (9.13)
Mean (SD) change at DB endpoint	-0.6 (8.00)	0.3 (8.85)
LSMD vs placebo (95% CI)		1.0 (-0.95 to 3.01)
<i>P</i> value (minus placebo)		0.307
Social functioning subscale		
Mean (SD) score at start of DB phase	44.0 (10.54)	44.4 (9.10)
Mean (SD) change at DB endpoint	-1.2 (8.81)	0.1 (8.65)
LSMD vs placebo (95% CI)		1.7 (-0.29 to 3.59)
<i>P</i> value (minus placebo)		0.095
Role-emotional subscale		
Mean (SD) score at start of DB phase	43.4 (11.72)	43.6 (11.02)
Mean (SD) change at DB endpoint	-1.9 (11.21)	0.5 (10.15)
LSMD vs placebo (95% CI)		2.2 (-0.22 to 4.53)
<i>P</i> value (minus placebo)		0.075
Mental health subscale		
Mean (SD) score at start of DB phase	47.5 (10.20)	47.2 (10.24)
Mean (SD) change at DB endpoint	-1.1 (10.03)	-0.1 (8.66)
LSMD vs placebo (95% CI)		1.0 (-1.16 to 3.11)
<i>P</i> value (minus placebo)		0.371
Physical component summary		
Mean (SD) score at start of DB phase	40.1 (8.87)	39.1 (8.52)
Mean (SD) change at DB endpoint	-2.3 (6.40)	0.1 (6.52)

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LSMD vs placebo (95% CI) <i>P</i> value (minus placebo)		2.1 (0.67 to 3.57) 0.004
Mental component summary		
Mean (SD) score at start of DB phase	47.7 (10.79)	48.1 (10.12)
Mean (SD) change at DB endpoint	-0.8 (9.37)	0.2 (9.00)
LSMD vs placebo (95% CI)		1.1 (-0.97 to 3.18)
<i>P</i> value (minus placebo)		0.296

^aResults are presented for all patients who had observations at both the start of the DB phase and at the endpoint of the DB maintenance phase.