



Figure S1 Terminal ileum images from xenograft study 2. Representative images of H&E stained terminal ileum sections from mice at euthanasia that were treated with vehicle or 400 mg/kg/d NG without abdominal irradiation. Photomicrographs are $\times 20$ or $\times 4$ magnification as specified. H&E, hematoxylin and eosin; NG, nano-genistein.

Table S1 Histopathological effects of the tumor from animals treated with thoracic irradiation

Tumor implant microscopic observations	Treatment group																							
	No RT/vehicle			12.5 Gy RT/vehicle			No RT/NG (200 mg/kg)			12.5 Gy RT/NG (200 mg/kg)			No RT/NG (400 mg/kg)			12.5 Gy RT/NG (400 mg/kg)								
Lymphocytic infiltrate								2M	2M	1M														
Mixed cellular exudate								2M	1M	1M	1M							3M						
Mixed cellular infiltrate		3M	3M	2M	2M	1M	1M	1M	2M				1M	1M				2M	1M	1M	1M	2M	1M	
Multinodular mass with cystic degeneration/necrosis	4M	3M	3M	4M	3M		2M	1M	1M	1M	2M	3M	1M	3M	1M	3M	2M	1M	3M	3M	3M	3M	2M	2M
Multinodular mass with diffuse degeneration/necrosis	4D																							
Multinodular mass with large central area degeneration/necrosis							3M																	
Multinodular mass with total degeneration/necrosis														3M										4M
Neutrophilic infiltrate		4M																	4F					
Purulent exudate		4M																	4F					4F
Skin ulcer over tumor		P	P																P					P

Each column represents an individual animal. Severity: 0, normal; 1, minimal; 2, mild; 3, moderate; 4, severe. Distribution: F, focal; M, multifocal; D, diffuse; P, present. RT, radiation; NG, nano-genistein.

Table S2 Histopathological effects in the skin and terminal ileum of animals treated with abdominal irradiation

Skin and terminal ileum microscopic observations	Treatment group																							
	No RT/vehicle			12.5 Gy RT/vehicle			12.5 Gy RT/NG (200 mg/kg)			No RT/NG (400 mg/kg)			12.5 Gy RT/NG (400 mg/kg)											
Amyloid, lamina propria (ileum)	1M	2D	2D	2D	2D	2D	2D	1M	1M	1M	1M	2M	2D	2D	2D	2M								
Mixed cellular infiltrate, deep hypodermis, skeletal muscle (skin)													1M											
Mixed cellular infiltrate, sebaceous gland (skin)	1F						1F																	
Unremarkable (no findings) (skin)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Each column represents an individual animal. Severity: 0, normal; 1, minimal; 2, mild; 3, moderate; 4, severe. Distribution: F, focal; M, multifocal; D, diffuse; P, present. RT, radiation; NG, nano-genistein.